PAPIO-MISSOURI RIVER
NATURAL
RESOURCES
DISTRICT

8901 S. 154TH ST.
OMAHA, NE 68138-3621
(402) 444-6222
FAX (402) 895-6543
www.papionrd.org

Platte River Ice Thickness
Along Union Dike
Near Valley

Date		Average Thickness (Inches)
2004	February 4	11
	February 11	15
2003	January 29	12
	February 12	13
	February 26	14
2001	January 3	15
	January 10	15
	January 24	16
	February 7	17
	February 21	19
	March 7	20
1997	February 11	17
1996	February 6	18
1994	February 8	25
	February 28	18
1993	January 27	12
	March 1	18

Memorandum

To: File 536

From: Ron Lehman, O&M Superintendent

Date: February 11, 2004

Re: Platte River Ice Thickness Measurement Along Union Dike

On February 11, 2004, the writer performed ice thickness measurements on the Platte River. The measurements were taken perpendicular to the river flow, near the dike on the Werner Property, at approximately Station 155+00 (1.1 miles upstream of Highway 64).

A gas powered auger was used to drill the holes. The location of the holes on the table below were measured (stepped off) from the east bank of the Platte River. The snow cover on the ice varied from 1" to 8" in depth with a slush layer on top of ice.

Distance From East Bank (Feet)	Ice Thickness (Inches)	Depth From Top Of Ice To River Bed (Inches)
36	21.0	42.0
136	13.5	41.0
286	15.0	53.0
436	13.0	18.0
586	15.0	19.0
786*	10.5	43.0

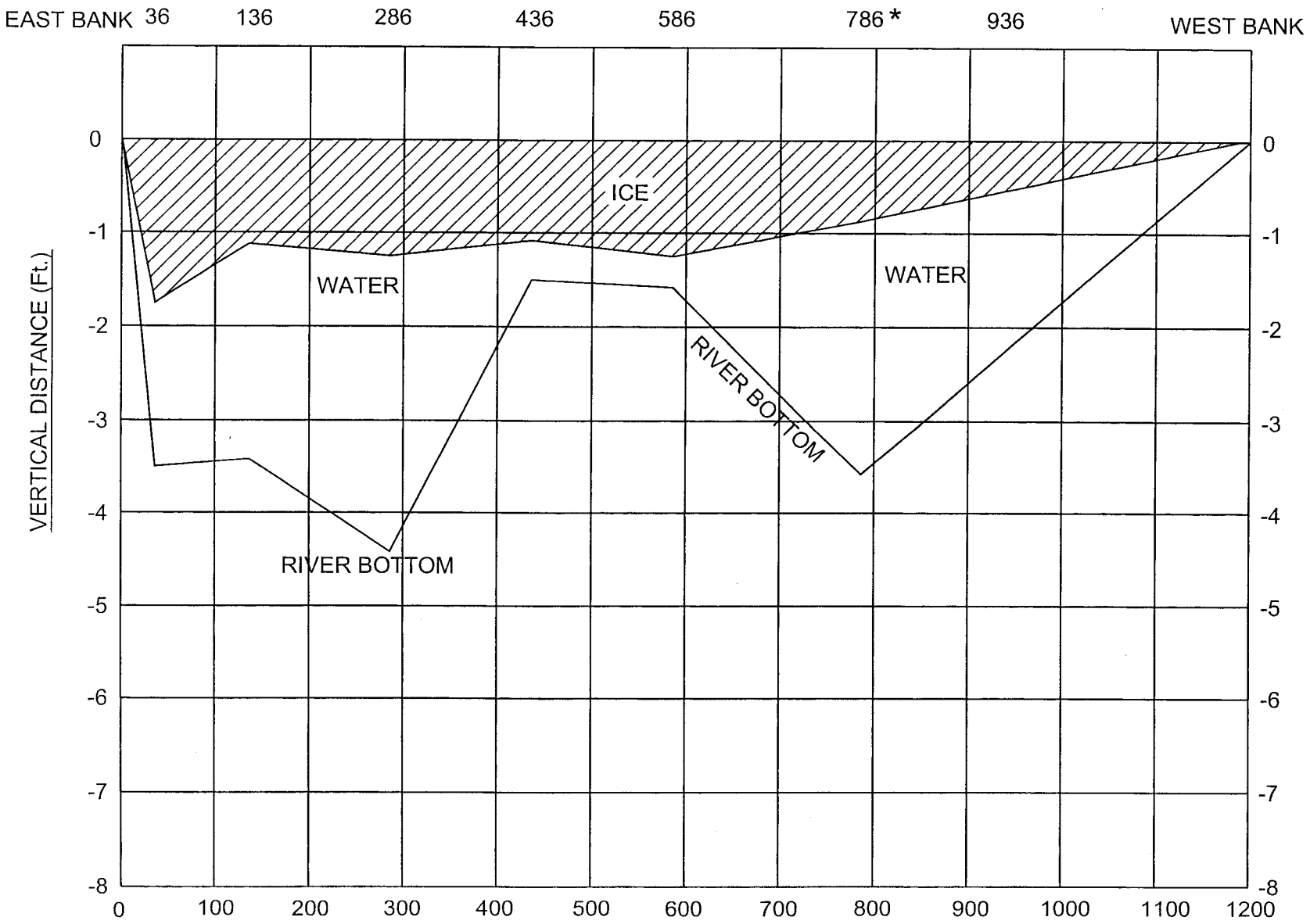
*This hole is located about 200 feet from the west bank of the river.

The average ice thickness is **14.7 inches**.

cc: Steve Oltmans, Marlin Petermann, Martin Cleveland, Paul Woodward, P-MRNRD
Cindy Newsham, NEMA
Brian Dunnigan, NDNR
Jeff Reese, NWS
Janelle Mavis, COE

18204 RL:MC: pb File: 536

PLATTE RIVER: 1.1 Miles Upstream of Hwy. 64 (STA. 155+00, UNION DIKE)



PAPIO–MISSOURI RIVER
NATURAL
RESOURCES
DISTRICT
8901 S. 154th St.
Omaha, NE 68138–3621

WEST
Looking Downstream

* Hole location is approx. 200' from the west bank.

February 11th, 2004

Memorandum

To: File 536

From: Ron Lehman, O&M Superintendent

Date: February 11, 2004

Re: Platte River Ice Thickness Measurement Along Western Sarpy Dike

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On February 11, 2004, the writer performed ice thickness measurements on the Platte River. The measurements were taken perpendicular to the river flow, near Fairview Road (Lyman Richey Sandpit Area), approximately 3.1 miles upstream of Highway 6.

A gas powered auger was used to drill the holes. The location of the holes on the table below were measured (stepped off) from the East bank of the Platte River. There was a 20' open channel along the west bank of the river and approximately 1 to 6 inches of snow cover on river ice with a slush layer on top of ice.

Distance From East Bank (Feet)	Ice Thickness (Inches)	Depth From Top Of Ice To River Bed (Inches)
50	12.0	74.0
250	7.0	71.0
450	12.0	50.0
650	9.5	44.0
850	10.5	40.0
1,050	13.0	17.0
1,250*	11.5	23.0

*This hole is located about 200 feet from the west bank (Saunders County Side) of the river.

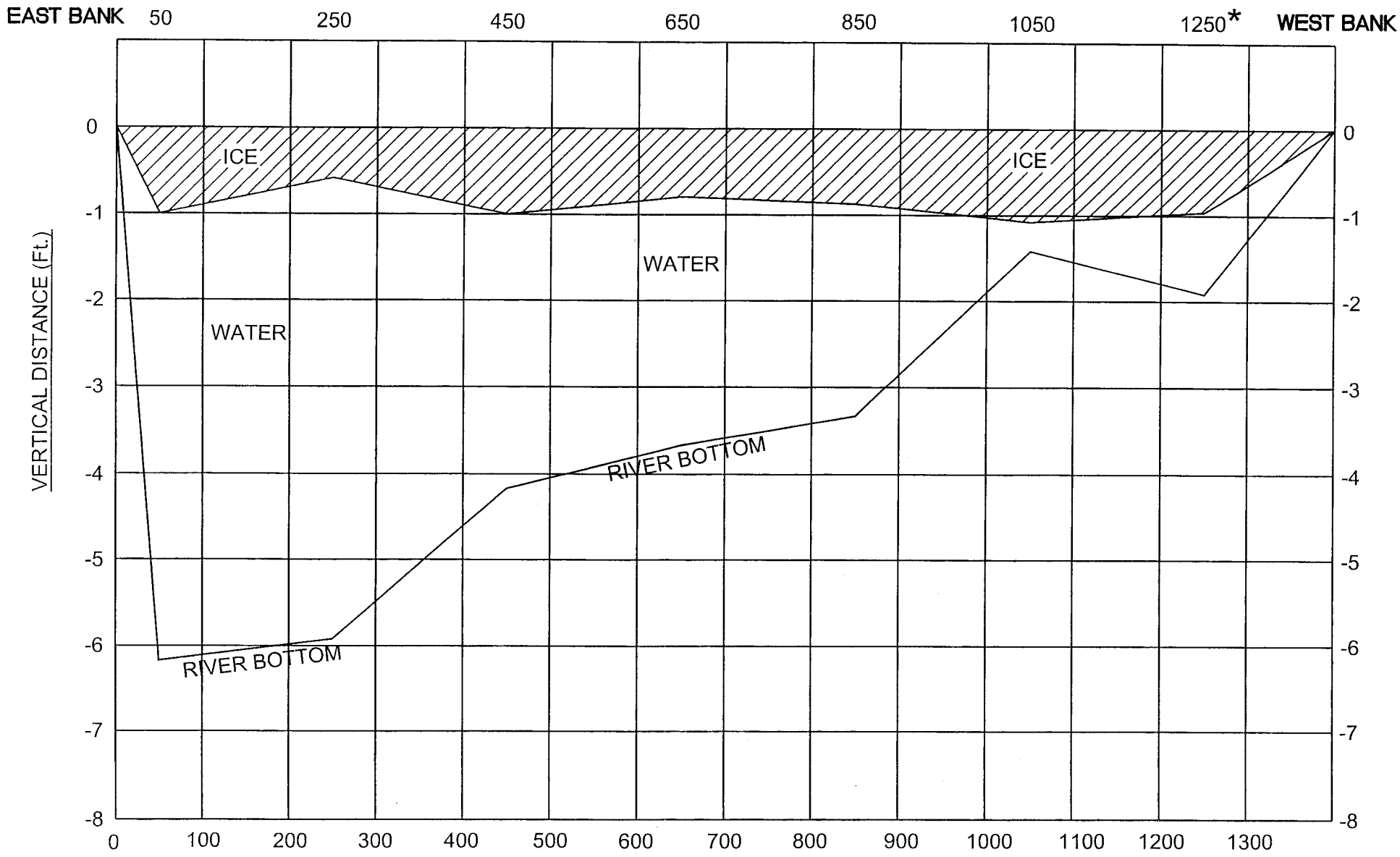
The average ice thickness is **10.7 inches**.

cc: Steve Oltmans, Marlin Petermann, Martin Cleveland, Paul Woodward, P-MRNRD
Cindy Newsham, NEMA
Brian Dunnigan, NDNR
Jeff Reese, NWS
Janelle Mavis, COE

18404 RL:MC: pb File: 536

PLATTE RIVER: Near Fairview Road
3.1 Miles Upstream of Highway 6.

(North of Lyman Richey Quarry)



PAPIO–MISSOURI RIVER NATURAL RESOURCES DISTRICT
8901 S. 154th St.
Omaha, NE 68138–3621

WEST
Looking Downstream

*Hole location is approx. 200' from the west bank.
(Saunders County Side)

February 11th, 2004

Memorandum

To: File 536

From: Ron Lehman, O&M Superintendent

Date: February 11, 2004

Re: Platte River Ice Thickness Measurement Along Western Sarpy Dike

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On February 11, 2004, the writer performed ice thickness measurements on the Platte River. The measurements were taken perpendicular to the river flow, near Camp Ashland, approximately 0.5 miles upstream of Highway 6.

A gas powered auger was used to drill the holes. The location of the holes on the table below were measured (stepped off) from the west bank of the Platte River. There was 1 to 6 inches of snow cover on the ice with a slush layer on top.

Distance From West Bank (Feet)	Ice Thickness (Inches)	Depth From Top Of Ice To River Bed (Inches)
50	13.0	24.0
250	Sandbar	Sandbar
450	10.0	15.0
650	12.0	32.0
850	12.5	26.0
1050*	7.0	21.0

*This hole is located about 125 feet from the East bank of the river.

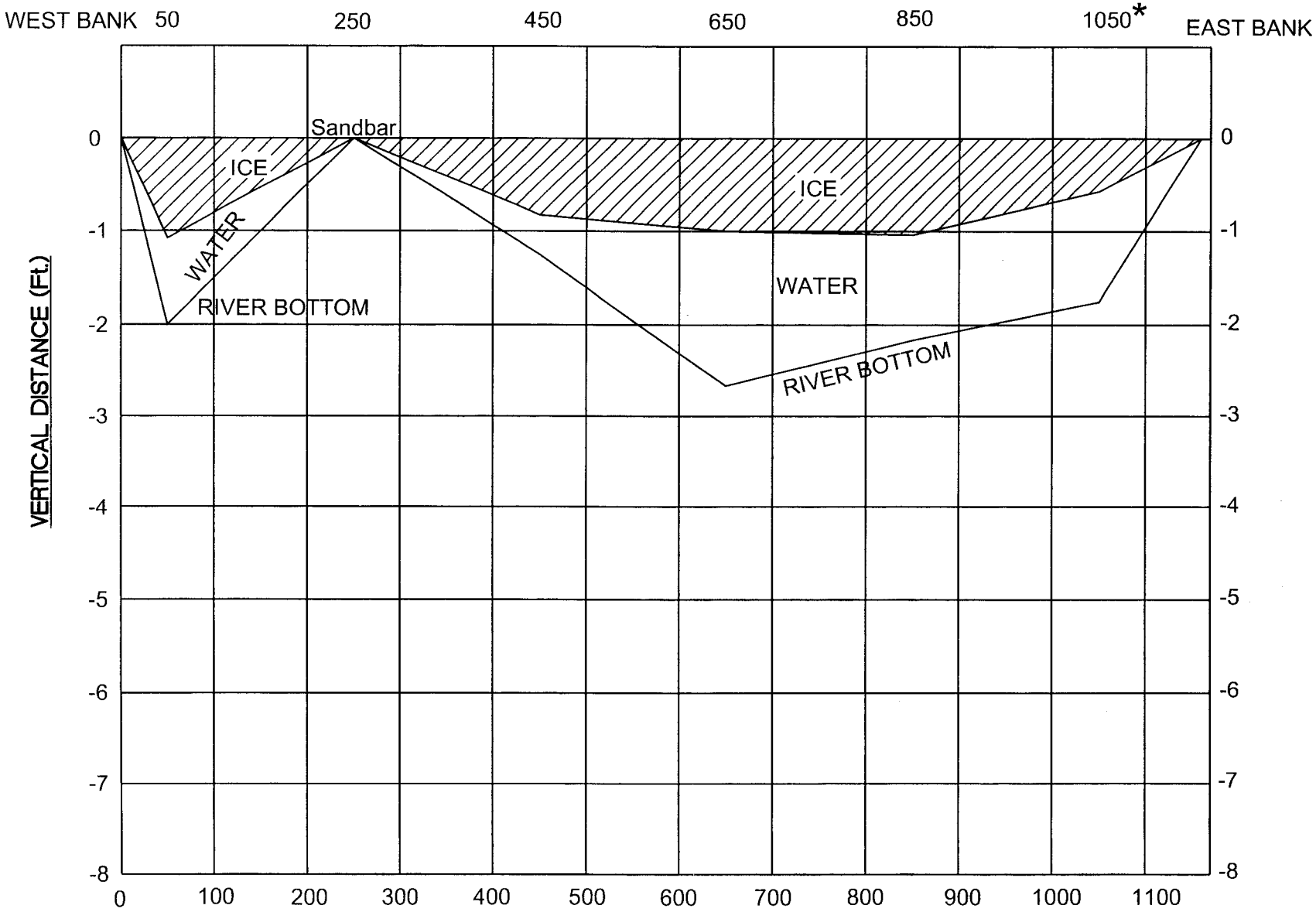
The average ice thickness is **10.9 inches**.

cc: Steve Oltmans, Marlin Petermann, Martin Cleveland, Paul Woodward, P-MRNRD
Cindy Newsham, NEMA
Brian Dunnigan, NDNR
Jeff Reese, NWS
Janelle Mavis, COE

18304 04 RL:MC: pb File: 536

PLATTE RIVER: 0.5 MILES UPSTREAM OF HWY. 6

(NEAR CAMP ASHLAND)



PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT
8901 S. 154th St.
Omaha, NE 68138-3621

EAST
Looking Upstream

*Hole Location is approx. 125' from the East bank.
February 11th, 2004

Snow brings flood worry

PHIL JOHNSON/THE WORLD-HERALD

Papio-Missouri River Natural Resources District employees Jason Schnell, left, and Ron Lehman slog through deep snow to reach the ice-covered Platte River to take ice samples for assessing prospects for spring flooding.

Eastern Nebraska river watchers think thaw

PHIL JOHNSON/THE WORLD-HERALD

Lehman and Schnell bore into the frozen Platte River to measure the thickness of the ice.

2-12-04

By Joe Dejka

WORLD-HERALD STAFF WRITER

Record snow depths blanketing eastern Nebraska and unyielding cold could pose a risk for spring ice jams and flooding on area rivers, authorities said.

The risk, however, is not as great as it would appear from all the mounds of snow.

"I guess to some extent it depends on how Mother Nature wants to melt this," said Jeff Reese, hydrologist with the National Weather Service in Omaha. "If it's instantaneous, then we're really going to have a problem."

Most state and local officials said that barring an extraordinary warm-up, the likelihood of massive flooding is fairly low.

But they are concerned that new snow and sustained cold would thicken the river ice and inhibit the gradual melting of the widespread snowpack.

If those conditions persisted for several weeks, a rapid spring thaw — or, even worse, an early thunderstorm — could cause large cakes of ice to break up and jam along bridges downstream. Snowmelt would build up behind the ice dams, eventually spilling over banks.

Areas at greatest risk are near the confluence of the Platte and Elkhorn Rivers in western Sarpy County and along the Elkhorn in northern Dodge County.

State agencies are ready to dust the Platte River ice with fly ash to induce a controlled breakup, if the need arises.

February may seem early to be thinking of flooding, but in late

See Flood: Page 2

Inside

How to keep your car rolling in the snow and cold. **Midlands, Page 5**

Tips for cleaning up leaks and preventing mold. **Living**

Flood: Deep snow, rapid thaw would increase risk

Continued from Page 1

February 1997 authorities were blasting ice jams on the Platte River.

Jams that year caused flooding in northeast Nebraska on the Elkhorn River from Wisner to Winslow in Dodge and Cuming Counties.

Eleven years ago eastern Nebraska experienced a massive early March thaw.

During 11 days beginning March 6, 1993, the National Weather Service issued 187 flood notices as snow up to 18 inches deep in east-central Nebraska started melting.

With the near-record inflows blocked by ice jams, the Platte and Elkhorn Rivers and area streams jumped their banks and destroyed levees.

Floodwaters routed 1,400 people from their homes, swept away bridges, cut gaping holes in highways and railroads, scoured thousands of acres of farmland, broke up businesses and killed two sightseers.

Wednesday morning, snow depth was 20 inches at Omaha's Eppley Airfield, down from the February record of 26 inches Friday morning, according to the National Weather Service.

The best weather situation would be a slow transition to spring weather: 40 degrees during the day, temperatures in the teens at night, said Steve Oltmans, manager of the Papio-Missouri River Natural Resources District.

The good news is that, so far, the snowfall has been relatively dry.

Becky Griffis, a meteorologist with the National Weather Service in Valley, Neb., said snow from the trio of storms that struck Omaha contained about 2 to 2.5 inches of water.

The bad news is that the snow is widespread.

Because of drought conditions upstream, the Platte thus far has lower flows than is normal for this time of year. Although that could mean less water building up behind ice jams, the lower flows could also make jams more likely.

"You can't float ice out unless you have water underneath it," Oltmans said.

Last Wednesday, Ron Lehman, 59, the district's maintenance superintendent, measured Platte River ice for the first time this season — a late-winter routine since 1987.

At Union Dike near Valley, Neb., Lehman used an ice auger to make a hole in the ice, then lowered a pole to measure the thickness.

The thickness ranged from 9 inches to 15 inches, averaging 10.6 inches.

Last year on Feb. 6, ice at the same location measured an average of 13.9 inches thick.

Lehman took additional borings Wednesday at Union Dike and found that the ice had thickened, despite an insulating snow cover.

Ice ranged in thickness from 10.5 to 21 inches, an average of 14.7 inches.

During ice-jam floods in 1997 and 1993, the ice averaged 20 inches thick, an measured as much as 24 inches in some places, Oltmans said.

Even 10 inches of ice can cause a jam, said Paul Woodward, a water resources engineer for the district.

"It's fairly thick, and that means there's enough of it that it might cause a decent jam," Woodward said. "We've got that potential."

Ed Gilbert has lived at Hanson's Lakes along the Platte River south of Bellevue since 1968.

Gilbert, who in years past has witnessed giant slabs of ice beaching by his community, said he isn't worried at this point.

"It's just not that thick," he said. "We're going to start coming out of this in 14 days."

Randy Behm, chief of the floodplain management services section for the Army Corps of Engineers in Omaha, expects sloppy conditions when the snowcover melts.

But Behm, too, sees good news in the dry snow.

"An August rainstorm dropping two inches of rainfall is probably going to cause a heck of a lot more damage than what we'll see coming out of this," he said.

River flow rates

At selected locations Wednesday morning:

Platte River at Louisville, Neb., 13,680 cubic feet per second; 20 percent of flood flow (the amount of water flowing through the river at flood stage).

Two-thirds of the flow in the lower Platte River — the last 110 miles — comes from the Loup and Elkhorn Rivers. The rest comes from areas of Wyoming and western Nebraska. The Platte River is running lower than normal because of drought-stricken headwaters.

Elkhorn River at Waterloo, Neb., 1,523 cubic feet per second; 3 percent of flood flow.

The Elkhorn River is flowing nearly normally for this time of year, and its basin is snow-covered with depths in the double digits.

Loup River near North Bend, Neb., 8,227 cubic feet per second; 18 percent of flood flow.

The Loup basin has less snowfall, and the river is running slightly below normal levels.

Source: National Weather Service

Omaha By Design has green in mind

2-3-04

Preserving open spaces is priority

Flood control an issue

By Nancy Gaarder
WORLD-HERALD STAFF WRITER

It's the simple beauty and quiet that you notice in this patch of prairie and woods — a world away from busy Omaha.

Adrift in the whiteness of snow, prairie grass burnishes the hillside into a golden sheen. Through a woody thicket, birds trill to each other and roller-coaster from tree to tree. Allwine Prairie, near 144th and State Streets, is indeed a refuge.

But development is encroaching, and soon city and prairie will meet. Just as the prairie's director, Tom Bragg, seeks the money to create a buffer around this oasis, a new community group is looking for ways to protect green spaces threatened by development. The organization, Omaha By Design, believes that preserving the environment will make a more attractive city.

Omaha By Design also is studying ways to make area streams and trails prettier and more useful for recreation.

A privately funded initiative, Omaha By Design includes urban planners, developers and local officials. Its goal is to create standards and government regulations for future development.

In some cases, the city already has taken the right steps, urban planners say. In other cases, Omaha has missed opportunities. If history is any indicator, the group will have a tough time carrying out aggressive goals.

Bragg remembers the 1970s, when the plan was to preserve a

See Green: Page 2

Next Tuesday
Metro-wide design

What's your opinion?

Town hall meeting on Omaha's green spaces: 6:30 p.m. Feb. 18 at the Scott Conference Center, 6450 Pine St.

E-mail your own thoughts about Omaha By Design's green space ideas to news@owh.com.

(over)

Green: Design group sees potential in Papio Creeks

Continued from Page 1

green belt around the city. Those plans have turned to dust, and that land has turned into subdivisions.

"Deep down, we're all interested in improving Omaha, making money and having the good life," said Bragg, a professor of biology at the University of Nebraska at Omaha. "But for this to work, we all need to come together on a plan, stick to it and treat everyone fairly."

Among the positive steps already taken in the Omaha area:

- The city's suburban parks plan includes 51 parks and a system of trails and boulevards. New neighborhood parks have been created, but money to buy land for larger parks has been harder to come by.
- A nonprofit organization has formed to preserve land while keeping it in private hands. The Nebraska Land Trust directs landowners toward tax benefits for restricting development. The trust is targeting land along the Elkhorn and Platte Rivers.
- Omaha's hiking and biking trails have evolved from narrow strips running next to businesses on the Keystone Trail to the wider, more natural green spaces of the West Papio Trail.
- Flood control measures are doubling as parks, thus increasing recreational opportunities. Tranquility Park near 120th Street and West Maple Road, for example, is home to ballfields during dry periods but can hold floodwater during heavy rains.

But much remains to be done, and some of thorniest issues involve better flood control, possibly higher taxes and questions of property rights.

Flood control fits into Omaha By Design's plans because the best way to reduce flood damage is to set aside green space and build reservoirs.

Flooding in the 1960s killed eight people along the Papio Creek. Dams were built and other changes were made to lessen the danger, but rapid development has erased those gains.

"People think we're in good shape," said Steve Oltmans, general manager of the Papio-Missouri River Natural Resources District. "But we've got a very dangerous watershed."

Oltmans said Omaha would be well-served by looking to other cities for tougher flood control.

Tulsa, Okla., is nationally known for its aggressive flood control and green space program. The city's standards for construction in flood plains are stricter than Omaha's, and it has enacted a storm water fee to pay for some improvements.

Tulsa made its changes after 14 people died in flooding during the 1980s.

In Omaha, by contrast, opposition led local leaders years ago to shelve plans for additional dams along the Papio Creek system.

And just this year, an effort to create a storm water fee similar to Tulsa's died in the Nebraska Legislature in the face of intense opposition.

Ideas for changes along the Papio corridor range from the simple to the sublime.

Some folks would be content with a few more shade trees and wildflowers along the hiking and biking trails. But some see greater possibilities.

"This creek system has tremendous potential value," said urban planner Jonathan Barnett, who serves as a consultant for Omaha By Design.

"People need to see it as waterfront property," he said, "rather than simply a creek in their backyard."

Waterfront property? Is Barnett talking about that grassy ditch along the Keystone Trail? Yes, he says. A small lake could be built along the Keystone, and property values would rise.

Omaha's parks director, Larry Foster, also sees greater potential in the Papio. The creek carries enough water for fishing and floating, Foster said, but those characteristics have been lost over the years.

How much luck the initiative will have depends not only on what planners come up with, but with money and support.

Mike McMeekin, president of Lamp Rynearson & Associates and a member of the Omaha By Design committee, sees potential for enhancing existing trails but cautions against expecting too much in highly developed areas.

"People have businesses along the creek," he said, "and that has to be respected."

What to do?

How can Omaha's corridor of streams and trails be improved?

Add shaded benches, bike racks, picnic tables and water fountains.

Paint murals along warehouses and fences that abut trails.

Plant shade trees, shrubs and wildflowers.

Carve ponds into existing stream channels.

Change flow and elevation of streams to make stretches more suitable for boating and fishing.

Develop sites for cafes and apartments.

Protect wetlands and farm fields along future trails.

ON OMAHA.COM
Changing Omaha News Extra

Rush to dig wells puts new focus on water, drought

Seven NRDs have suspended new drilling. Nebraska now has 85,847 irrigation wells, more than one per square mile.

2-9-04

By Paul Hammel
WORLD-HERALD BUREAU

LINCOLN — Drilling of irrigation wells hit a 22-year high in 2003 as anxiety grew about continued drought and the expansion of moratoriums on new irrigation wells.

Seven natural resources districts, covering all of the Republican River basin and most of the Platte River west of Columbus, Neb., have suspended drilling of new irrigation wells.

An eighth district, the Twin Platte Natural Resources District, based in North Platte, Neb., is in the process of enacting a moratorium.

Farmers rushed to beat the bans and to provide more protection against lack of rainfall.

Nebraska now has 85,847 active irrigation wells. That is more than one per square mile.

The rush to mine groundwater for crops is one of the reasons the state needs to adopt a new strategy to resolve water shortages and conflicts between surface water and groundwater users, said two water authorities.

A strategy devised by a state task force and outlined in Legislative Bill 962 would require the state to annually evaluate whether water resources in a river basin are being overused. If they are, no new irrigation or water use would be allowed until a management plan is adopted.

Ann Bleed, deputy director of the Nebraska Natural Resources Department, said it's clear that the Republican and Platte River basins no longer can sustain the current irrigation levels.

The latest area to enact a temporary ban on new wells is the state's largest area for groundwater irrigation, the Central Platte NRD, based in Grand Island. It enacted a three-year moratorium in November because of concerns about water shortages.

That sparked a flurry of well-drilling activity before the ban went into effect. The 329 new wells drilled in the Central Platte NRD were the most of any district in the state.

Many were drilled to supplement older, less productive wells or to compensate for the lack of water being delivered from irrigation canals, said Ron Bishop, general manager of the Central Platte district.

"It was a tough year, tough not only on surface water supplies, but groundwater supplies," he said. "We stressed a bunch of the wells. They couldn't keep up."

The three-year ban, he said, will allow his district to determine whether water resources are being overused and then plan how to resolve that.

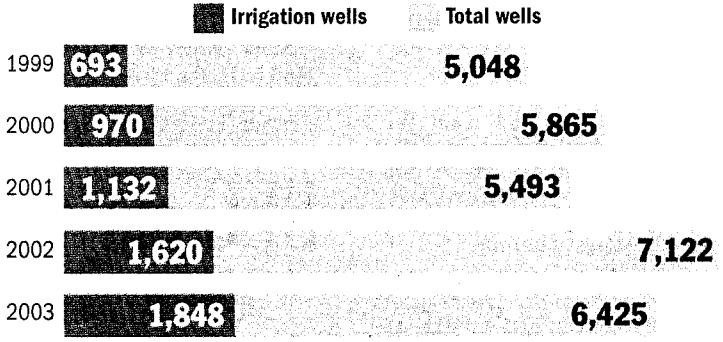
As of Feb. 2, 1,848 new irrigation wells had been registered as constructed during 2003. That figure could rise — well drillers have 60 days to register a new well.

The 2003 figure was the most new irrigation wells sunk since 1981, which marked the end of a surge in well drilling prompted by the development of the center-pivot irrigation system.

One system can pump about 52 million gallons of water a year to irrigate 160 acres of crops. That would supply, on average, the needs of about 570 people.

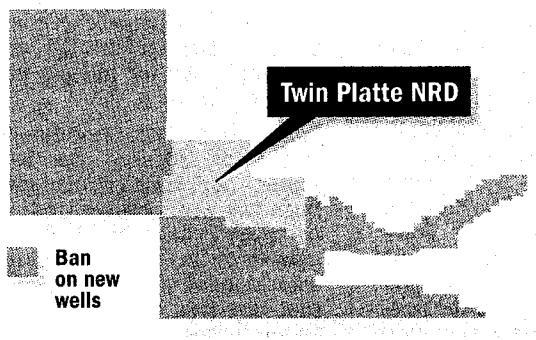
Nebraska well construction

Drilling of irrigation wells hit a 22-year high last year, spurred by fears of drought and moratoriums on well drilling. The numbers are subject to increase because well drillers have 60 days to register new wells.



Moratoriums on well drilling

Seven Nebraska Natural Resource Districts have banned new wells. An eighth district, the Twin Platte, is in the process of enacting a ban.



SOURCE: Nebraska Dept. of Natural Resources

DAVE CROY/THE WORLD-HERALD

Nebraska Communities Partner to Plan

A Papillion Creek Watershed Planning Project in eastern Nebraska has been a success because it has established the tools needed for long-term watershed planning and assessment.

By Lyle Christensen, P.E.

Several communities and two counties in eastern Nebraska have joined forces to improve water quality in the Papillion Creek Watershed and facilitate the Phase II EPA stormwater permitting process. The Papillion Creek Watershed consists of 402 square miles of drainage area, with a complex mixture of urban and rural agronomic land uses.

New growth in the densely populated area—the three counties in the watershed represent more than one-third of the state's population—is currently consuming approximately 4½ square miles per year, causing increased imperviousness and higher resultant surface runoff and water-borne pollution. The Nebraska Department of Environmental Quality has placed many of the area reservoirs on its 303(d) impairment list for sediment and nutrients, and the lower, urban segments of the Big Papillion Creek are listed as impaired for pathogens (fecal coliform contamination).

The consequences of such impairment listings will be the issuance of corresponding Total Maximum Daily Load (TMDL) determinations. TMDLs involve a rather complex process of deriving "safe" allocations of "point" and "non-point" pollution for a particular contaminant. TMDL determinations, in turn, are intended to provide the regulatory basis for either voluntary best management practices or enforceable compliance through the issuance of discharge permits. Therefore, such pollution sources as existing combined sewer overflows (CSOs), concentrated animal feeding operations, active construction sites, and others are problematic with respect to their negative impact on recreation, aesthetics, and fisheries on the streams and reservoirs throughout the watershed.

PHOTOS: HDR

Papillion Creek in eastern Nebraska suffers from sediment, nutrients, and fecal coliform bacteria contamination as a result of surface runoff.

PLANNING PARTNERS

In August 2001, nine cities within the watershed formed a partnership with officials from the Papio-Missouri River Natural Resources District (P-MRNRD), Douglas County, and Sarpy County to discuss key surface water issues and facilitate the regulatory processes on a watershed-wide basis.

Dubbed the Papillion Creek Watershed Partnership, the group meets monthly to address impairment issues in a community-based, watershed-specific manner, aimed at producing cleaner water while sharing resources. The assistant general manager for the district, Marlin J. Petermann, P.E., sees benefits in the partnership. "Utilizing the watershed approach makes sense to the partnership members. Some of them could make tremendous strides toward addressing their own stormwater issues, but yet have very little impact on the overall water quality in the basin," he says.

Among the goals of the Partnership is to identify the probable sources and extent of targeted pollution and recommend realistic best management practices that can have mutual benefits among the various regulatory programs.

Background fecal coliform levels in the mixed-use Papillion Creek watershed may present substantial hurdles.

their communities directly in the near future and how we as a watershed could effectively and efficiently address those regulations," he recalls.

CHALLENGES MOUNT

The Phase I inventory presented serious challenges to the project team and required 4 to 5 months for collecting and piecing together all information and accurately discerning follow-up action items.

Land use information existed in several forms that had to be put in a GIS format with common land use categories and a 2040 planning window. Hydrology and hydraulic (H&H) information was also difficult to gather, due to age.

Gathering information that could be applied to best practices under EPA regulations required a concerted effort among all the partners. Progress was accelerated using the concept of an innovative, standardized Notice of Intent/Permit Application template, created by HDR and the Partnership.

A master database was created for tracking proposed best practices projects and related Stormwater Phase II compliance activities, such as site inspections and project photos. This tied the information relationally to

Corps' efforts are known as Nex-Gen models, referring to a new—or next—generation of modeling techniques. This includes models that can accept GIS-based information, real-time rainfall data, and advanced dynamic routing routines.

Then, the Nex-Gen models were calibrated to 19 rainfall/streamflow gauges placed within the basin. Three high-intensity rainfall events were captured and reconstituted within the models. At the end of the calibration process, the models were used to estimate both existing and future flood flows, volumes, and stages (levels).

To more easily explain the complex H&H and water quality modeling findings, a series of color gradient watershed maps were created that clearly show the "hot spots"—impacts from the metropolitan area growth and changes in land use. These findings suggest that an aggressive program of surface runoff attenuation must be continued to mitigate future flooding and erosion problems.

Several forms of water quality modeling were used to assess both present and future fecal coliform contamination within the watershed: historical trend line evaluations by both time and stream mile; statistical regressions, mass loading analyses; and dynamic modeling. A facilitated selection process with City of Omaha and P-MRNRD staff was used to evaluate and select the best dynamic modeling approach for the multiplicity of the water quality issues. The initial focus was on dynamic simulation of tions as well as a variety of other water quality parameters, including sediment. The integration of the HEC-HMS and HEC-RAS, and WASP5 models, although not seamless, is facilitated using a relational database that links them together.

DIFFICULT ISSUES LOOM

Modeling for fecal coliform bacteria demonstrated that bacteria levels are highly dependent on surface runoff and sediment transport events. Levels exist well above the state's surface water quality standards for primary contact recreation for the majority of the watershed—even above the metropolitan area.

It is possible that background fecal coliform levels from wildlife alone may be higher than standards currently allow, which would raise troublesome questions from a regulatory enforcement perspective. As a result, it will take a concerted effort among stakeholders and innovative inter-jurisdictional financing to methodically implement best practices to mitigate the H&H and water quality impacts from growth.

For his part, Sink is equally impressed. "Regardless of the size of the jurisdiction, the challenges and hurdles to overcome are remarkably similar, differing primarily on the scope," he says. "The common solutions can therefore be uniformly developed and applied to all communities. This commonality should result in lower costs to the communities and the entities affected by the new requirements." **PW**

—This article was adapted from the winter 2003 issue of Waterscapes, *a publication of HDR. Christensen, the firm's manager for this project, can be reached at 402-399-1329 or e-mail lychrist @hdrinc.com.*

PAPIO-MISSOURI RIVER
NATURAL
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DISTRICT

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www.papionrd.org

February 12, 2004

Mr. Craig Krause
Structures Manager
Burlington Northern Santa Fe Railroad
201 North Seventh Street
Lincoln, NE 68508
CERTIFIED MAIL 7002 3150 0006 2312 6615

Re: Debris obstructing flow of water under BNSF RR bridge over Platte River near Ashland, NE.

Dear Mr. Krause:

A considerable amount of logs and other debris has accumulated against the upstream side of the referenced bridge, obstructing the flow of Platte River water under the same and leading to fears that ice jams and flooding will occur as a result of such obstructions.

Over the past six months and recently, you have had several phone calls from Martin Cleveland of this agency alerting you to the flood threat at this location if the obstructing debris is not removed from the bridge prior to ice formation and breakup on the Platte River.

In accordance with the law of the State of Nebraska, a natural watercourse cannot be obstructed. As was said in the case of Bristol v. Rasmussen, 249 Neb. 854, 547 N.W.2d 120 (1996):

> "The flow of water cannot be interfered with to the detriment of the upper proprietor. Romshek v. Osantowski, 237 Neb. 426, 466 N.W.2d 482 (1991). In Nebraska, the principle is well established that it is the duty of those who build structures in a natural watercourse to provide for the passage through such obstruction of all waters which may reasonably be anticipated to flow or be carried therein, and this is a continuing duty. Wilson Concrete Co. v. County of Sarpy, 189 Neb. 312, 202 N.W.2d 597 (1972)."
>
> See also Belsky v. County of Dodge, 220 Neb. 76, 369 N.W.2d 46 (1985) and Gruber v. County of Dawson, 232 Neb. 1, 439 N.W.2d 446 (1989).

We have always enjoyed our working relationships with your company as we cooperatively fight our common enemy, floodwater. We want those good relationships to continue. At the same time, we must request that BNSF RR remove the obstructions at this bridge to prevent catastrophic flood damages such as were sustained in 1993.

Thank you for your cooperation. Please contact me, Marlin Petermann or Martin Cleveland of my staff at the above address or phone number.

Optimistically,

STEVEN G. OLTMANS
General Manager

CC: Paul Peters, NRD Legal Counsel

18704 MC:pb:file Debris BNSF RR bridge

Paul F. Peters, P.C., L.L.O.
Taylor, Peters & Drews
Suite 940 Omaha Tower
2120 South 72nd Street
Omaha, NE 68124-2374
(402) 391-3712 FAX (402) 391-3714
E-mail: paul.peters@mindspring.com

To: Steven G. Oltmans, General Manager
Ralph Puls
Papio-Missouri River Natural Resources District
Fax 895-6543

Copy: Steven A. Riley, AIA, Executive Vice President
Prochaska & Associates
Fax 334-0868

Date: February 11, 2004

Subject: Natural Resources Center for NRD, Dakota County and City of Dakota City; Agreement with Prochaska & Associates

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This reports my phone negotiations today with Steve Riley concerning the Abbreviated Standard Form of Agreement Between Owner and Architect (AIA Document B151-1997) submitted by Prochaska & Associates.

It was tentatively agreed that

- Section 2.3 should be amended as follows:

2.3. DESIGN DEVELOPMENT PHASE

2.3.1. Based on the approved Schematic Design Documents and any adjustments authorized by the Owner in the program, schedule or construction budget, the Architect shall prepare and personally present, for approval by the Owner, Design Development Documents consisting of drawings and other documents to fix and describe the character of the Project as to architectural, structural, mechanical and electrical systems, materials and such other elements as may be appropriate

2.3.2. The Architect shall advise the Owner of any adjustments to the preliminary estimate of Construction Cost.

- Paragraph 11.3.2 should be further amended as follows:

  11.3.2 *.**

  Maximum ~~Compensation~~compensation for the following Additional Services rendered (see paragraphs 12.2.1 through 12.2.4) shall be ~~stipulated sums~~ as follows:

Programming	$4,420
Owner/Tenant On-Site Investigations	1,020
Record Drawings (AutoCAD) format	4,080
Total Additional Services	$11,220
Total Basic Services	67,840
TOTAL BASIC AND ADDITIONAL SERVICES	$79,060

  which shall not be exceeded except in the instance of an Owner approved Change of Scope.

  Compensation for Additional Services ~~other than the above~~ shall be based upon the hourly rates set forth in the Wage Rate Schedule listed in Paragraph 12.9.

In addition to these tentative agreements, and based upon requirements you specified, I recommend that a new paragraph should be added to the agreement, providing as follows:

_____. The Architect, at its own, unreimbursed cost and expense, shall purchase, and maintain until the expiration of two years after completion of the work, the following policies of insurance with minimum requirements as shown:

a) Workmens Compensation and Employers Liability
   - i) Workers' Compensation: statutory minimum
   - ii) Longshore and Harbor Workers' Compensation Act endorsement and Admiralty Law endorsements (required if the work involves maritime operations)
   - iii) Employer's Liability: $100,000.00 per accident

b) Professional malpractice: 1,000,000.00 claim/aggregate

c) Commercial General Liability
   - i) $500,000.00 each occurrence
   - ii) $1,000,000.00 general aggregate
   - iii) $1,000,000.00 products – completed operations aggregate

iv) $500,000.00 personal & advertising injury

v) $10,000.00 medical expense

d) Business Auto Liability - Owned, Non-Owned & Hired vehicles
$500,000.00 combined single limit

e) General Provisions:

i) All policies shall be endorsed to provide 30 days written notice to the OWNER prior to termination or change in the coverage provided.

ii) The OWNER reserves the right to approve the 's insurers.

iii) Workers Compensation and Commercial General Liability policies shall be endorsed to provide Waiver of Subrogation in favor of the OWNER.

iv) The Commercial General Liability policy shall be endorsed to include the OWNER as Additional Insured (form CG 20 10).

Prior to commencement of the work, and from time to time thereafter at the OWNER'S reasonable request, the Architect shall submit certificates in form acceptable to the OWNER evidencing that all the above such insurance policies are in effect.

A copy of the certificate of liability insurance, provided by the Architect, is attached hereto

Keystone Trail power line wins initial OK amid opposition

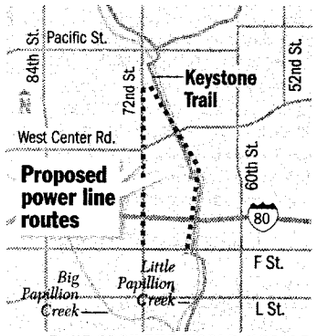
2-12-04

By Nancy Gaarder
WORLD-HERALD STAFF WRITER

A local natural resources board committee has given an initial OK to a proposed high-voltage power line along one of Omaha's busiest trails.

The Omaha Public Power District line would run along the Keystone Trail from about Interstate 80 to the Ak-Sar-Ben campus. A number of trees would be removed.

The operations subcommittee of the Papio-Missouri River Natural Resources Board voted 4-0 Tuesday night to recommend to the full board that the utility be allowed to use the trail. The 11-person board is scheduled to vote today.



DAVE CROY/THE WORLD-HERALD

Larry Troutman, OPPD's manager of transmission and engineering, told the committee that construction would be easier and less disruptive along the trail. Traffic and a number of businesses would be affected if the line were placed along the alternative route of 72nd Street.

Construction costs are similar for the two routes, he said, but what is not known is the difference in right-of-way costs.

At the meeting, five citizens spoke out against the trail, and Karen Rock of the Sierra Club presented a petition with 28 signatures opposing it. NRD board member Melissa Gardner read a letter from the Ak-Sar-Ben Future Trust.

The trust owns more than 150 acres along the trail and intends to develop the site into a "first-class" community asset, Kermit Brashear wrote. As attorney for the trust, Brashear wrote that the "enormous size and troubling environmental concerns ... are wholly inconsistent with the character and aesthetics" of any proposed development.

Gardner urged the committee to vote against it.

"When you live in the city, you have few places to get away from urban life and see natural beauty," she said.

Troutman showed the board pictures of what the lines would look like. The poles stand about 120 feet to 150 feet tall and are about 3 to 4 feet wide at the base.

After seeing the pictures, board member Jim Thompson said he would vote no.

"It looks like a big fence," he said. "It's uglier than I thought."

Those voting to recommend use of the trail were John Conley, Rich Tesar, Rich Jansen and Tim Fowler. Joe Neary abstained, saying he wanted to see more complete cost estimates.

Fowler said he thinks the trail is a better location because it would be less disruptive and safer. To the extent that an electromagnetic field generated by the line could pose health problems, he said, fewer people would be affected along the trail.

Conley said he was particularly concerned about the line's impact on the Westgate neighborhood if it were to be built on 72nd Street.

"All of the factors involved convince me that the trail is the best route for the power lines," he said. "But I don't want to see this become the standard for OPPD — that they come to us every time they want to run a power line."

Use of the trail could spell a defeat for a major community improvement effort before it gets off the ground. Community groups have pitched in $800,000 to support the Omaha By Design task force, which is studying green space, streets and neighborhoods. The group has asked the NRD to delay its decision.

The College of St. Mary also has written to oppose it.

If the NRD approves use of the trail, OPPD will take the issue to the Douglas County Board for its approval. The OPPD board will not have to vote on the trail route.

OPPD hopes to have the line in place by 2005.