



For Further Information contact:
 Lower Platte River Corridor Alliance
 P.O. Box 83581
 3125 Portia Street
 Lincoln, NE 68501-3581
 Telephone: 402.476.2729
www.lowerplatte.org

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 CORRIDOR ALLIANCE
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 3125 Portia St
 PO Box 83581
 Lincoln, NE 68501-3581
 P: 402.476.2729
 F: 402.476.6454
www.lowerplatte.org



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PLATTE RIVER

Fall 2016

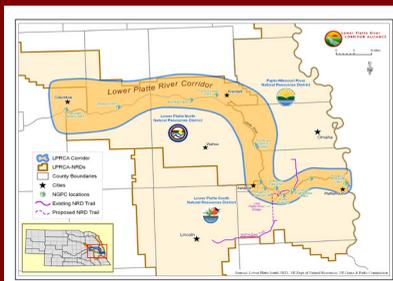
Update



Lower Platte River
CORRIDOR ALLIANCE

LEAD. ORGANIZE. INSPIRE. The voice of the Lower Platte.

Biannual Newsletter
of the Lower Platte
River Corridor Alliance



LPRCA MEMBERS

Lower Platte North NRD
Lower Platte South NRD
Papio-Missouri River NRD
NE Dept of Natural Resources
NE Dept of Environmental Quality
NE Health & Human Services
NE Game & Parks Commission
NE Military Dept
University of Nebraska - Lincoln
Conservation & Survey Division,
UNL School of Natural Resources
Water Center

Meghan Sittler,
Coordinator

3125 Portia, P.O. Box 83581
Lincoln, NE 68501-3581
(402) 476-2729
Fax (402) 476-6454
msittler@lpsnrd.org

Layout, Design, and Editing by:
Ann Wilton, LPRCA Intern



FROM THE COORDINATOR:

Another summer along the Lower Platte has come to an end. The native cottonwoods, oaks and hickory trees along the banks and bluffs of the lower Platte are showing their fall colors and harvest is underway. It is always a great time to start to look back on all the things that have gone on and been accomplished in the past year. That is an especially poignant thought for me as this is the final edition of the Platte River Update that I will have the opportunity to help bring to you. I have recently accepted a position with University of Nebraska Extension focused on domestic water and wastewater issues across the state. It is an exciting opportunity for me but one that comes with a good deal of reflection back on the tremendous work being done by the LPRCA, our partners and many others. I am very, very thankful that I had the opportunity to be a small part of those accomplishments and the opportunity to get to know so many people that call the Lower Platte home. I look forward to staying engaged with many of you and many issues within the region in my new role.

News Around the LPRCA

Watershed Days

By Krystal Herrmann and Alan Kolok, Nebraska Watershed Network, UNO



In the spring of 2016, the Nebraska Watershed Network (NWN) and the Lower Platte River Coordinator Alliance collaborated on a 10-week, water-quality monitoring project known as “Watershed Days”. The project was funded primarily by National Fish and Wildlife Foundation with cost share provided by both the University of Nebraska at Omaha and the LPRCA. Ten locations throughout the Omaha area were selected for weekly monitoring (Figure 1), with testing taking place every Wednesday during the early planting season beginning on April 22nd and ending on June 22nd.

Watershed Days was a project that featured Nebraska citizens volunteering as citizen scientists. Citizen scientists played a vital role in data collection as sites were located along the Platte, Elkhorn, and Missouri Rivers and additionally, the Papillion Creek running through the urban areas of Omaha and Bellevue. Volunteers were able to select the days and locations they wanted to monitor, and participants typically selected areas close to where they lived or worked—making the project more personal to the volunteers.

Weeks before the project, the NWN hosted demonstrative workshops to educate and train citizen scientists so they could successfully contribute to the Watershed Days project. When the project went live, volunteers did two things. First they conducted a rapid assessment test for the herbicide atrazine. This test discriminated between the presence or absence of atrazine at the US EPA drinking water standard of 3 parts per billion. The second test was for coliforms and the citizen scientists collected water then dropped the water off at UNO to be tested by the NWN staff.

In total, 60 volunteers from the surrounding area contributed to the effort which included three universities, two public schools, two community groups and various private citizens. Middle school and high school students from Louisville monitored the Platte River just north of Louisville, while 30 Omaha Northwest High School students tested the Papillion Creek running through Stinson Park in Aksarben Village. Additionally, servicemen and women from Offutt Air Force Base conducted tests at various Missouri River and Papillion Creek locations—often working in teams. Even a corporate environmental stewardship group, the Wells Fargo Green Team, volunteered to monitor its own site on Papillion Creek near 90th and

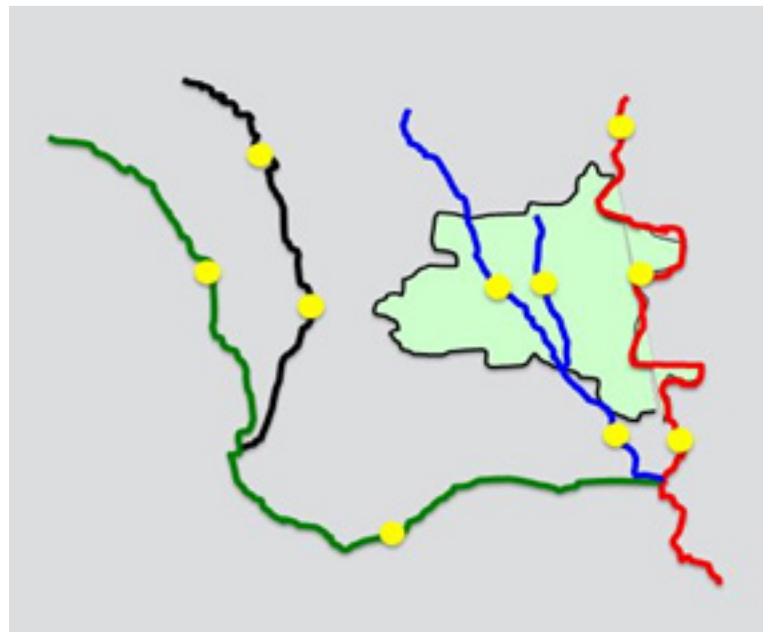


FIGURE 1. THE 10 SAMPLING LOCATIONS FOUND ON THE MISSOURI, PLATTE AND ELKHORN RIVERS, AND ON PAPIILLION CREEK.

News Around the LPRCA

Nebraska's Outdoor Venture Parks: Parks for the Next Generation

By Lindsay Rogers, Nebraska Game & Parks Commission

Nebraska's first state park – Chadron State Park – was established in 1921. Since then, our state parks system has grown to eight state parks, nine state historical parks and 60 state recreation areas. And, since that time our park visitors have changed, too. No longer are state park visitors just looking for a place for a Sunday drive or a spot to have a family reunion. Today, visitors are looking for a wider range of activities, including mountain biking, water parks, glamping and quality environmental education in addition to picnicking, hiking and camping. This is where the Venture Park concept comes into play.

The Outdoor Venture Parks initiative is focused on four park areas along the lower Platte River corridor – Eugene T. Mahoney and Platte River state parks and Schramm Park and Louisville state recreation areas. More than one million residents live within 60 miles of this Platte River Valley area. Additionally, with a four-park complex, the area will be a destination for regional visitors from across the state and neighboring states.

The purpose of creating an Outdoor Venture Parks complex is to meet and anticipate park visitors' expectations and provide them with positive, exciting and relaxing opportunities. Most importantly, the Outdoor Venture Parks will provide visitors the opportunity to make lifelong memories and develop a strong conservation ethic.

It is important that the Outdoor Venture Parks complex provides multiple types of activities to meet the different needs of visitors. Some activities will focus on excitement and active play. Examples of these include the aerial ropes and zip lines at Mahoney State Park or the development of new mountain bike trails at Platte River. Other activities will focus more on encouraging visitors to relax and find comfort in nature. A new lazy river at Mahoney's existing Family Aquatic Center or a new glamping campground at Platte River will easily provide rest and relaxation for visitors. Still other activities will focus on discovering and learning about nature and natural resources. A new tree house learning center and interactive exploration center at Schramm as well as naturalist programs at all four areas will highlight new educational opportunities.

The total cost for the Outdoor Venture Parks complex – including more than 50 new amenities and activities in addition to many infrastructure improvements – is \$35 million. Eighty percent of this will come from the Nebraska Game and Parks Foundation, private donations and grants.

In all, the new complex will meet the needs of all park visitors – those seeking a place for a family reunion, a place to learn and a place for an adventure.

TO LEARN MORE ABOUT THE NEBRASKA GAME AND PARKS COMMISSION AND THEIR VENTURE PARKS PROGRAM, VISIT OUTDOORNEBRASKA.GOV

News Around the LPRCA

Keep Cass County Beautiful

By Linda Behrns, Keep Cass County Beautiful

Keep Cass County Beautiful (KCCB) is a non-profit 501 (c) (3) organization whose mission is to educate, enable and encourage all Cass County residents to take greater responsibility for enhancing their community environment. We help build vibrant communities that create clean, beautiful public places; reduce litter and manage solid waste; generate positive impact on the local economy; and inspire generations of environmental stewards. The organization is one of 21 Nebraska – Keep America Beautiful (KAB) affiliates and supports many of the KAB programs.

Funding for the organization comes from the Nebraska Department of Environmental Quality Litter and Recycling Education Grants, Cass County, memberships from local businesses and individuals, plus an annual fundraising plant sale event. KCCB offers free environmental educational programs to all local schools in Cass County and to other youth and civic organizations. KCCB will be hosting a fall environmental fair for all Cass County fifth grade students at the Cass County Fairgrounds this week. Through the Great American Cleanup program, KCCB provides supplies and materials to organizations who wish to have litter cleanups in Cass County. The organization loans recycling bins and cigarette receptacles to communities for litter free events across the county.

KCCB helps staff and support household hazardous waste collections and recycling events in the county. Our ultimate goal is to provide education that will encourage our citizens to reduce littering and reduce the amount of trash that they generate by making wise decisions about purchases that result in the opportunity to reuse, repurpose, and buy recycled. The organization works with communities and local groups to align policies and to build infrastructure to enable pro-environmental behaviors.

Many KCCB projects are supported by a partnership with other local organizations such as the Lower Platte River Corridor Alliance (LPRCA). Local volunteers recently spent an afternoon collecting litter from the Platte River during the Ocean Conservancy's International Coastal Cleanup, the world's largest volunteer effort on behalf of ocean and waterway health. The cleanup was scheduled by coordination and material support from the LPRCA, KCCB and Platte River Rentals.



Other volunteers helping with the river cleanup were represented from the following organizations: the Nature Conservancy, the Nebraska Watershed Network and the Nebraska Airboat Association. The group collected about 485 pounds of trash, 2 tires and part of a baby crib. The data will be reported, analyzed and published on the Ocean Conservancy website.

KCCB is providing cleanup supplies to the Beaver Lake Fishing Club who will also soon be hosting an International Coastal Cleanup of Beaver Lake.

Plans are being made to make this a yearly event, so contact us if you'd like to be a part of this venture next year.



Center. Without the collaborative effort of citizen scientists, the Watershed Days project would not have been possible.

Results from the overall project were analyzed according to region, and as a consequence the two regions on the Platte River, as well as the two regions on the Elkhorn River were analyzed together (Figure 2). Data collected from the four sites from April to July reveal a fairly low level of atrazine (40% of all samples collected) in the Platte River in the Two Rivers area. In contrast, the other three areas, the Platte River at Louisville and the Elkhorn River at 245th and Q Street, and at Waterloo had detection rates for atrazine 80-90% of the time (Figure 3). It appears as though water from the Elkhorn River contributes significant amounts of atrazine to the lower Platte River.

The Nebraska Watershed Network believes that an engaged citizenry is a solid stalwart for environmental stewardship and conservation. The results from Spring 2016 exemplify the type of data that citizen scientists can accurately and reliably collect.



FIGURE 2 (ABOVE). THE 4 SAMPLING LOCATIONS FOUND ON THE PLATTE AND ELKHORN RIVERS.

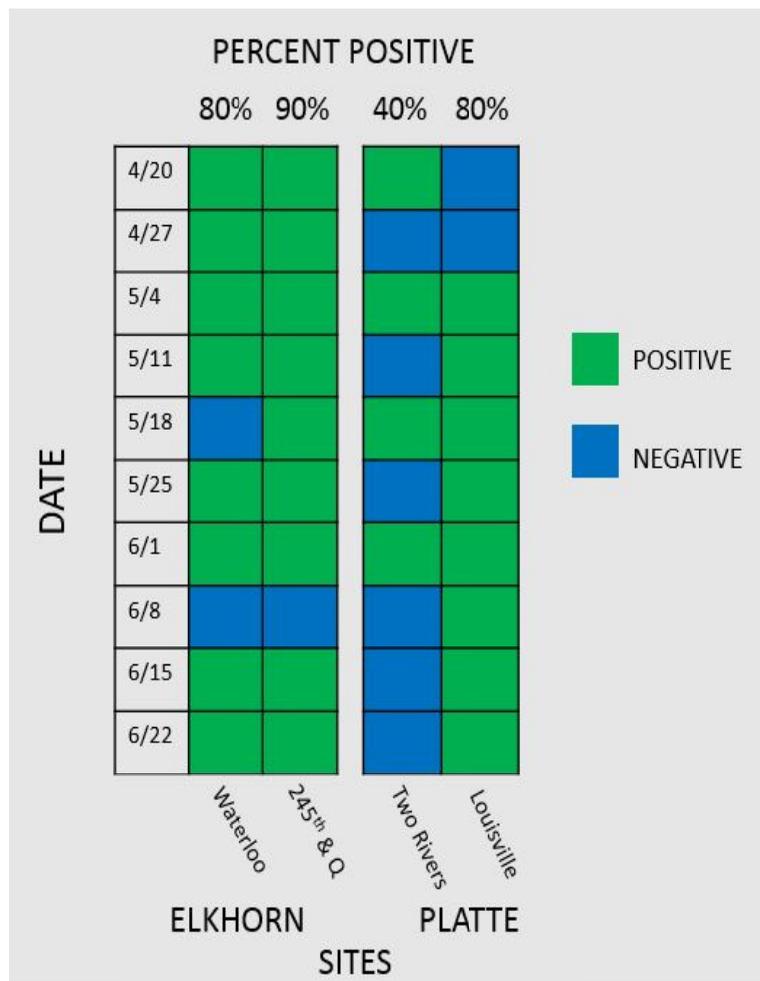


FIGURE 3 (RIGHT). ATRAZINE MEASUREMENTS ON THE PLATTE AND ELKHORN RIVERS.

THE NEBRASKA WATERSHED NETWORK IS A STUDENT-DRIVEN ORGANIZATION BASED IN THE UNIVERSITY OF NEBRASKA - OMAHA THAT STRIVES TO PROMOTE WATER QUALITY AWARENESS THROUGH OUTREACH, EDUCATION, AND RESEARCH.

Communities of the Platte

Encounter on the Lower Platte, 1813

By Harlan Seyfer, Historian, Plattsmouth National Historic District Resources

In December 1810, Robert Stuart sailed out of New York with several men aboard the ship *Tonquin*, owned by John Jacob Astor's Pacific Fur Company (Stuart was a shareholder). Their destination was the Pacific Northwest, where they constructed Fort Astoria at present-day Astoria, Oregon. After dropping Stuart and his people off, the *Tonquin* sailed up the coast to trade. In an altercation with Indians, the entire crew was killed and the ship burned.

In June 1812, with no other way of communicating with the outside world, Stuart with six other men left the fort for St. Louis. Unlike Lewis and Clark in 1806, Stuart planned to make the journey entirely over land. Later the route he and his men took would become the Oregon Trail. Theirs was one of the great adventures in American history. However

we are only concerned with their arrival and departure on the lower Platte.

In 1855 Washington Irving published *Astoria* in which he described the Stuart adventure. After striking the North Platte River near its confluence with the Sweetwater in Wyoming, Stuart and company proceeded downstream along its north bank and that of the Platte. By April 1813, as Irving wrote:

The first landmark by which the travelers were enabled to conjecture their position with any degree of confidence, was an island about seventy miles in length, which they presumed to be Grand Isle. If so, they were within one hundred and forty miles of the Missouri. They kept on, therefore, with renewed spirit, and at the end of three days met with an Otto Indian [who] conducted the travelers to his village.

Stuart kept a journal (which surprisingly was not published until 1935), in which he noted:

Tuesday 13th [April 1813] 4 miles nearly south brought us [with the Otoe Indian] to the trace which passed in the vicinity of a branch [Sand Creek] of the Saline River [Salt Creek] over a high plain 18 miles; then ascending a ridge of considerable elevation. We in 6 more [miles] reached the Otto Village standing on a Hill about four hundred paces from the right bank of the Platte.

This village was about one and half miles southeast of today's Yutan. Continuing, Stuart wrote that the Platte River in the neighborhood of the village was "three quarters of a mile wide with some Islands which as well as the opposite shore are thickly covered with Cottonwood and a few other kinds of wood."



ROBERT STUART SLIGHTLY BEFORE HIS DEATH IN 1848.

CONTINUED ON NEXT PAGE →

News Around the LPRCA

NRDs Complete Finishing Touches on Joint Project: Western Sarpy/Clear Creek Levee

By John Miyoshi, General Manager of the Lower Platte North NRD

A collaborative project that brought together several entities to address flooding issues is nearing completion after more than a decade of development.

In 1993, flooding due to ice jams in the Lower Platte River caused millions of dollars of damages and hardships to many Nebraskans. This flooding closed Interstate 80 for over two days and Highway 6 for over six months. Lincoln Water System was in peril as there was only one water main connecting the well fields to the treatment plant in service, and this line was exposed to flowing floodwater. Governor Ben Nelson pushed for a solution to ensure this catastrophe would not repeat in future years.

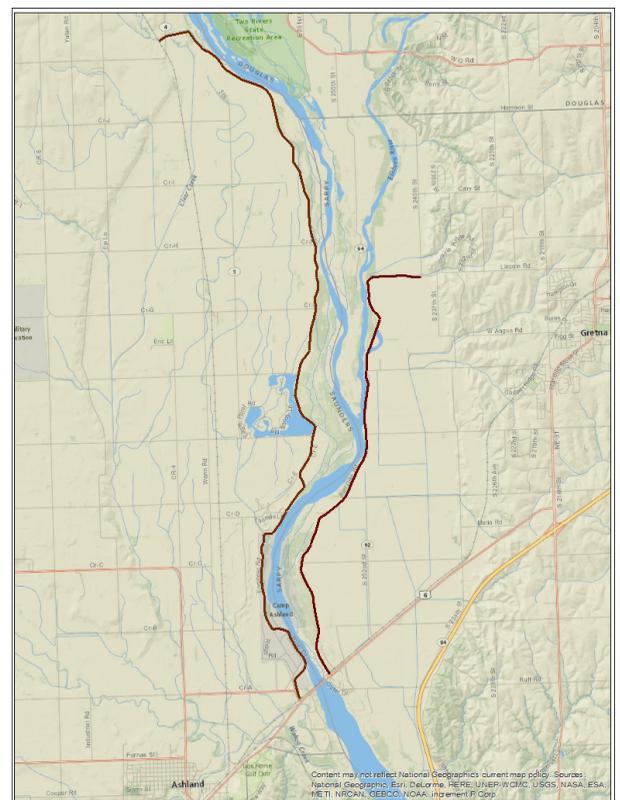
In typical Nebraska fashion, a partnership was formed including the U.S. Army Corps of Engineers, the Lower Platte North, Lower Platte South, and Papio-Missouri River NRDs. The Corps's feasibility study identified the problem as weak sand levees located on both sides of the Platte River that would fail during ice jam events. Failure of the levee on either side of the river would allow water to escape the system and leave no opportunity to float the ice downstream to elevate the ice jam.

Federal authorization for the project was secured in 2000 and the list of partners expanded to include the Nebraska Army National Guard, Nebraska Department of Natural Resources, and the Clear Creek Dike and Drainage District. The planned project would rebuild the six mile Western Sarpy Levee located in Sarpy County and nine and one-half miles of Clear Creek Levee located in Saunders County.

The project was completed in 2016 at a total cost of over \$42 million. Close to one-half of the cost was funded by federal sources, with the non-federal funding being split between the State and the three NRDs.

According to John Miyoshi, General Manager of the Lower Platte North NRD, the toughest portion of the project was to secure the necessary federal funding that came in small increments over a 15 year time line. Key to receiving these funds were; Senator Ben Nelson, Senator Mike Johanns (Mayor of Lincoln in 1993) and Nebraska Congressmen; Doug Bereuter, Lee Terry and Jeff Fortenberry.

After years of planning, designing, and development, the Western Sarpy/Clear Creek Levee Project is at the final stages. With construction officially complete, an Operations & Maintenance Manual is in the process of being finalized. The hard work and collaboration of those involved with this project is an example of true commitment to protecting lives, protecting property, and protecting the future.



News Around the LPRCA

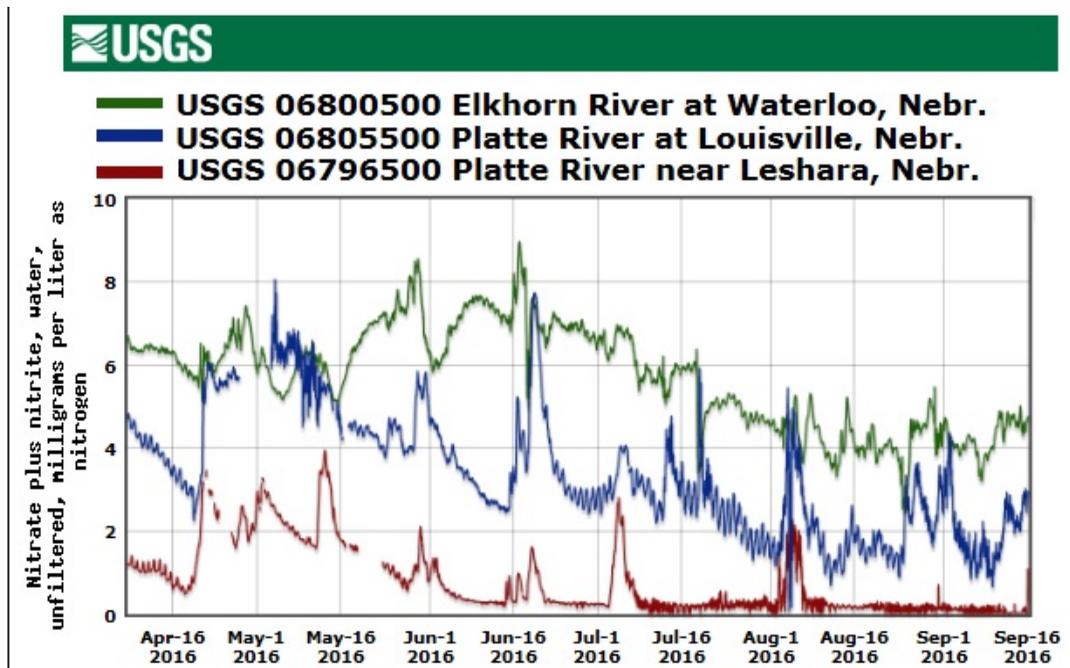
Real Time Nitrate in the Lower Platte River Corridor

By Matt Moser, United States Geologic Survey

More than 50 percent of the State of Nebraska relies on the Lower Platte River for their drinking water needs. With such high demand, it is important to monitor the surrounding water quality. Nitrates in stream water could pose a threat to the long term quality of the drinking water. Continuous monitoring of nitrates has been occurring at three sites in the Lower Platte River Corridor. There are three nitrate monitors deployed as a result of a collaborative effort between the U.S. Geological Survey (USGS) Nebraska Water Science Center and several member agencies of the Lower Platte River Corridor Alliance (Papia Missouri River NRD, Lower Platte South NRD, Lower Platte North NRD, M.U.D., and the City of Lincoln). During the 2016 field season, the three sites being monitored are the Platte River at Louisville, the Platte River at Leshara, and the Elkhorn River at Waterloo. The Louisville location has been in place and monitoring data seasonally (March through October) since 2012, while the Leshara and Waterloo sites are new this year.

Continuous monitoring allows observations of nitrate concentrations in the river during several different river conditions. It allows for observation of both daily and seasonal trends. Nitrate loads in the river can also be computed. The meters are deployed in the river and log data every fifteen minutes. Collected data show up in near real time on the USGS's website. Nitrates in Nebraska's stream could come from several potential sources. The drinking water standard for nitrate is 10 mg/L. None of the monitored rivers during the 2016 field season surpassed this threshold.

This season, the highest observed concentration of nitrate was seen at the Elkhorn River on June 16th during a runoff event. That concentration was 8.98 mg/L of nitrate as nitrogen. The 2016 concentrations at all three sites are shown below. At all three sites, the higher concentrations of nitrate coincided with the presence of runoff and resulted in large loads of nitrate occurring in the streams. The highest observed load in 2016 occurred on June 19th at the Platte River at Louisville when the river's load for that day was 877.5 tons of nitrate. The Elkhorn River had higher concentrations of nitrate at all times than the nearby Platte River at Leshara site.



For more information, or to view the data in real time, please visit:
<http://waterwatch.usgs.gov/wqwatch/map?state=ne&pcode=00630>

At the village Stuart encountered the first white men since leaving Fort Astoria, "We found here Mr. Dorouin and Mr. Baptiste Roi who after a voyage of six weeks from Saint Louis, reached this place three days ago."

This Dorouin is neither the senior nor junior Pierre Dorion encountered by Lewis and Clark, but one François Derouen. Derouen was illiterate and suffered for the usual problem that state bestows: he was not able to correct anyone who misspelled his name – if he had cared to (Washington Irving called him "Dornin"). Francisco Derouin left St. Louis during the summer of 1776 to trade with the Otoe Indians for the Spanish Missouri Company. Louisiana was a Spanish territory at the time; hence, Derouen's name as it was rendered in Spanish. He returned to St. Louis in the spring of 1797, having spent the winter on the Platte with the Otoe. In 1807 he was granted a license to trade with the Otoe and Pawnee Indians. Since by then Louisiana was American territory, the name on his license was anglicized to Francis Dorion.

Roi (also spelled Roy), whose full name was Jean Baptiste Antoine Roi, was born in St. Louis in 1794. He was a partner of Joseph Robidoux (the Third) in 1827 and 1828. On their trading license the partners listed their operations as at Bellevue and the mouth of Papillion Creek, trading with the Pawnee and Omaha. Derouen was 40 years old and Roi, 19 when the Stuart party encountered them in 1813. No surprise, Stuart and his men were overjoyed to encounter their fellow St. Louis citizens. Washington Irving explains what happened:

A bargain was made with Mr. Dornin, who engaged to furnish them with a canoe and provisions for the voyage, in exchange for their venerable and well-tried fellow traveler, the old Snake horse [purchased from Shoshone (Snake) Indians, six months earlier].

Accordingly, in a couple of days, the Indians employed by that gentleman constructed for them a canoe twenty feet long, four feet wide, and eighteen inches deep. The frame was of poles and willow twigs, on which were stretched five elk and buffalo hides, sewed together with sinews, and the seams payed with unctuous mud. In this they embarked at an early hour on the 16th of April.

The Otoe Indians completed construction of the canoe in about two days. Stuart noted in his journal, "Friday 16th [April 1813] Our canoe was finished last evening ... making a vessel somewhat shaped like a boat, very steady and ... remarkably tight." That canoe served Stuart and company very well, taking them in relative comfort to the completion of their journey.

Irving wrote of their arrival in St. Louis:

On the 30th of April they arrived in perfect health and fine spirits at St. Louis, having been ten months in performing this perilous expedition from Astoria. Their return caused quite a sensation at the place, bringing the first intelligence ... of the new establishment on the shores of the Pacific.

Stuart concludes in his journal, "This day a little before sunset we reached the town of Saint Louis all in the most perfect health after a voyage of ten months from Astoria." They had travelled, according to Stuart's calculation, 3,768 miles.

Stuart died in 1848, but not before a daguerreotype of him was taken. 1813 is the last we hear of Dorouen, while Roi appears to have still been active in 1854, as an interpreter for the Iowa Indians.

Recreation Master Plan

Early Spring saw the completion of the Recreation Master Plan. The Lower Platte River Corridor Alliance, in partnership with the Nebraska Game and Parks Commission and National Park Service hosted a series of public meetings to discuss opportunities for the expansion of recreational opportunities and the development of a Platte River Water Trail. Each meeting included a diverse group of landowners and stakeholders that were given the opportunity to express what they saw as opportunities and constraints for the future.



Lower Platte River Kayak Tour

The 2016 Lower Platte River Kayak Tour was originally scheduled for June 7th. Due to weather and high water conditions, the Tour was rescheduled to July 19th. The river didn't cooperate in July either and the Tour was cancelled for the year. However, the LPRCA provided an opportunity for the public to get out on the water by partnering with Keep Cass County Beautiful and Platte River Rentals to do a river cleanup. We plan to continue both the Kayak Tour and the river cleanup next summer.

Year in Review



Water Quality Open

The 2016 Water Quality Open was held on August 25th at Quarry Oaks Golf Course. This year's keynote speaker was Elizabeth VanWormer, Assistant Professor of Practice and One Health Coordinator, School of Veterinary Science and Biomedical Sciences, School of Natural Resources, University of Nebraska-Lincoln. Course presenters included Allison Zach from the Nebraska Invasive Species Program, Krystal Herrmann from the Nebraska Watershed Network, Jacob Alishouse from the Nebraska Land Trust, Nathan Schaepe from USGS, and Lauren Dinan from the Nebraska Game and Parks Commission's Tern and Plover Partnership. We had a successful event and look forward to seeing you all there next year!

