



## LPRCA Coffee Shop Meetings

The LPRCA has had a tradition of holding Coffee Shop Meetings in cities and towns throughout the Corridor. We have visited Gretna most recently and plan to hold more meetings throughout winter and spring this year. The meetings provide an opportunity to bring information about the LPRCA and our partners to locations along the lower Platte. But perhaps most importantly, they are an opportunity to hear directly from residents of the corridor about concerns, local issues and programs, and discover ways to assist one another. Please check our website for more information on upcoming meetings and please **let Meghan know if you are interested in helping host a meeting in your town!**



View of hiking trail at Pahaku, Fall 2012



A nice place to enjoy your coffee!  
Pahaku, Fall 2012

## Upcoming LPRCA Events in 2013

**January 17<sup>th</sup>:** LPRCA Quarterly Meeting at Lower Platte South NRD,  
Lincoln, NE

**Summer 2013:** LPRCA Kayak Tours & Water Quality Open

Check [www.lowerplatte.org](http://www.lowerplatte.org) for updates about upcoming events and meetings

### For further information, contact:

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# PLATTE RIVER

Summer/Fall 2012



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

# Update



The Platte River near Silver Creek, July 2012

## From the Coordinator

The Summer of 2012 marked my fourth summer as coordinator of the Lower Platte River Corridor Alliance. Those four summers have been marked by extremes--both record high and record low flows on the lower Platte River. Extremes are not new to the lower Platte, Nebraska, and the Great Plains, but that does not make them easier for individuals, resource managers, and producers to cope with while they are occurring. However they do continue to show the need and benefits of both understanding those challenges and planning for their eventual return. This issue of the Platte River Update highlights the on-going work of the LPRCA and its partners to understand how changing climatic conditions impact the river and the region. The importance in managing and planning for risk is also highlighted for both extremes of droughts and floods.

I hope you will find the information is the second issue of the Platte River Update useful. Please feel free to contact me with questions about the content, with ideas for next issues, or to simply find out more about the LPRCA.

Biannual Newsletter  
of the Lower Platte  
River Corridor Alliance



### LPRCA MEMBERS

Lower Platte North NRD  
Lower Platte South NRD  
Pappio-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 -  
Conservation &  
Survey Division,  
UNL School of Natural Resources  
Water Center

**Meghan Sittler,**  
Coordinator

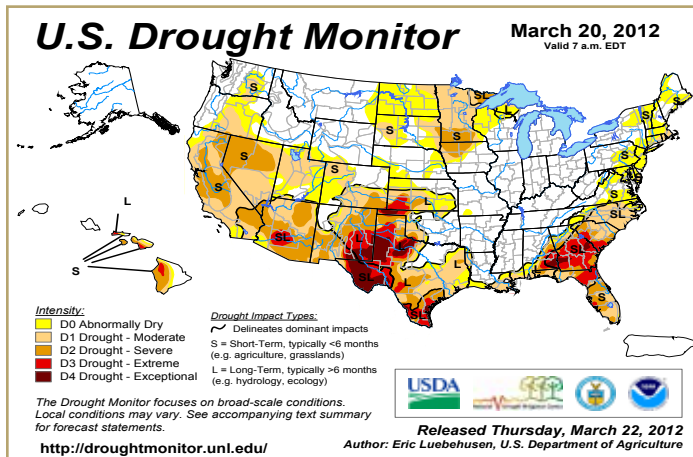
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# News Around the LPRCA

## Resources for Drought Mitigation

Kelly Smith, The National Drought Mitigation Center



Drought monitor map released on March 20<sup>th</sup>, 2012

During the Drought of 2012, the National Drought Mitigation Center at the University of Nebraska-Lincoln became “Drought Central,” hosting elected officials and answering a steady stream of questions from media about how bad the drought is, and how it compared with droughts in the 1950s and 1930s. So far, this year’s drought is most comparable to the Drought of 1988, the last major drought to hit the U.S. Corn Belt.

The NDMC was established in 1995 to reduce societal vulnerability to drought. Droughts are inevitable, but people may be able to escape some of the worst consequences by planning ahead.

One of the first steps is figuring out how you’ll recognize a drought, because it creeps up slowly, one nice day at a time. In 1999, the NDMC and federal partners (the National Oceanic and Atmospheric Administration and the U.S. Department of Agriculture) launched

the U.S. Drought Monitor, a weekly map characterizing drought in the U.S. and Puerto Rico. Each week, U.S. Drought Monitor authors work with a network of local observers across the country to synthesize many drought indicators such as precipitation, temperature, hydrologic conditions and observed impacts into a single map characterizing drought. In addition to providing a focal point for national discussion on drought for media and policymakers, the U.S. Drought Monitor is now one of the main triggers for distributing drought relief funds to agricultural producers.

<http://droughtmonitor.unl.edu>

A good way to know what to plan for in drought is to see how it has affected you



Platte River at Columbus, NE. July, 2012

in the past. In 2005, the NDMC launched the Drought Impact Reporter, a comprehensive archive of drought impacts, accessible via an online map. In 2011, the NDMC rolled out an updated version of the tool. Impacts come from user reports, and from media and various agency reports entered by NDMC staff.

<http://droughtreporter.unl.edu>

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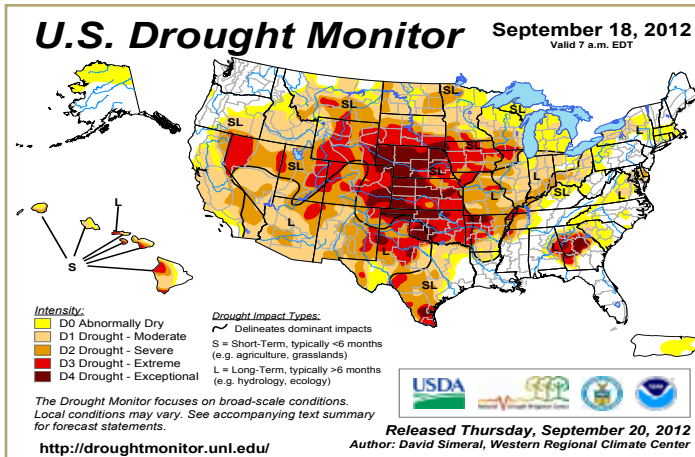




# News Around the LPRCA

## 'Drought'

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Drought monitor map released on September 18<sup>th</sup>, 2012

City dwellers are usually insulated from the worst effects of drought because their water supplies are professionally managed. But farmers, ranchers, people with private wells, and habitat managers are all painfully aware of what happens when it doesn't rain. To help ease the pain, the NDMC emphasizes that people can and should plan ahead for drought. Planning ideally includes both short-term measures to take during the next drought and long-term measures to reduce vulnerability. Long-term measures to reduce drought include agricultural and land use practices that maintain the organic and water-holding capacities of soils, and smart growth, which reduces the paved area and allows more water to soak into the ground. The NDMC has produced a variety of drought planning guides, such as:

- **Managing Drought Risk on the Ranch**  
<http://drought.unl.edu/ranchplan/Overview.aspx>
- **Drought-Ready Communities**  
<http://www.drought.unl.edu/Planning/PlanningProcesses/DroughtReadyCommunities.aspx>

The NDMC works closely with NOAA on the National Integrated Drought Information System (NIDIS). <http://drought.gov>

For more information, please visit:  
<http://drought.unl.edu>

## Drought as Viewed from the Lower Platte River

Meghan Sittler, LPRCA

The Summer of 2012 saw record low river levels for much of the lower Platte River throughout much of the summer. Portions of the Platte were almost completely dry near Columbus and further up-river. USGS stream gages at Louisville and North Bend captured stream flows consistently between 250-500 cfs for much of the latter part of July and through much of August. To put that in perspective, "normal" stream flow measurements for those gages range between 5000 and 8000 cfs.

The low river flows coupled with extreme temperatures also saw record high water temperatures. Temperatures recorded by the USGS' Water Quality Monitoring Network gage at Louisville reached a height of 97 degrees in August which is unpleasant if you are swimming in the river but even more unpleasant if you are a fish swimming in the Platte! In all seriousness though, high water temperatures combined with low river flows exacerbate water quality concerns and present considerable issues to people, fish and wildlife utilizing the river.

The drought of 2012 has also obviously had plenty of negative impacts on-land and throughout the corridor. The City of Lincoln implemented mandatory water restrictions in early August as extremely low flows impacted their well fields near Ashland. Those restrictions were lifted in mid-September but voluntary restrictions are still in effect. Significant impacts were realized on smaller water systems and individual wells.

Obvious impacts could also be seen on crops, pastures and trees



Platte River at Columbus, NE. July, 2012

throughout the Corridor. It may be next year before the true impact of this drought is realized but hopefully some much needed moisture will arrive this winter.

# LPRCA Project Updates

## USGS Sandbar Monitoring Study

Jason Alexander, USGS



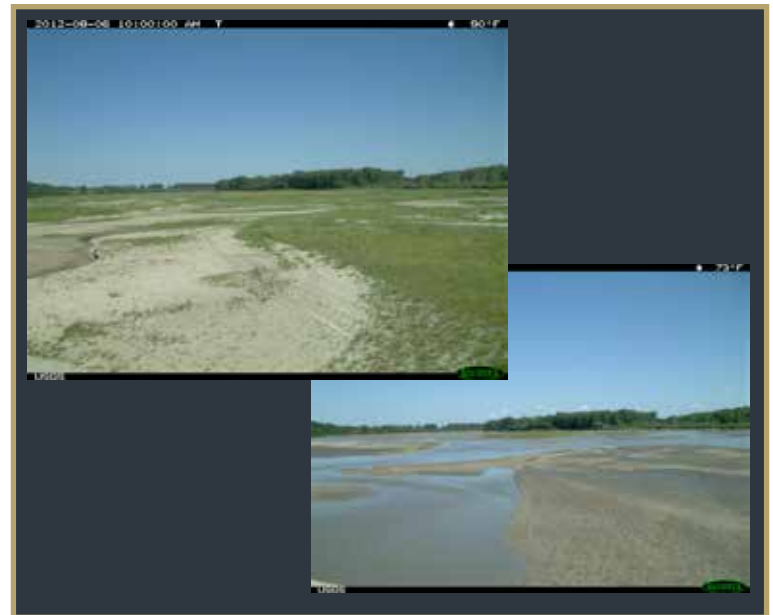
Platte River at NE-Hwy 64 on June 2, 2012 (bottom) and August 6, 2012 (top).

The U.S. Geological Survey completed the first year of the lower Platte River Sandbar Dynamics Pilot Study. The study measured the geometry and locations of all sandbars along the 22-mile reach of the Platte River downstream from the Salt Creek Confluence near Ashland, at three different intervals: spring, late summer, and late fall. This information, in combination with a hydraulic model, could be used to create a map of the lower Platte River showing how sensitive various locations of the river are to the formation of emergent sandbar habitat. The report summarizing the findings of the U.S. Geological Survey is currently in the process of internal peer-review, and is expected to be released to the public by the end of the calendar year.

With funding from Lower Platte South NRD, the U.S. Geological Survey expanded the Pilot Study upstream to cover the 55-mile reach downstream from Fremont. Two additional surveys along the 55-mile reach have been completed as of the beginning of October. Information from the study will be used to help better assess the potential for impacts from various infrastructure and development activities on sandbar habitats important to state and federally-protected bird species.



Platte River at Platter River SRA on April 27, 2011 (bottom) and August 6, 2012 (top).



Platte River at Two Rivers SRA on June 2, 2012 (bottom) and August 6, 2012 (top).

Photos depicting the transformation of the Platte River into a vegetated alluvial plane courtesy of USGS. Time-lapse photography is used as a tool to validate or reject predictions of emergent sandbar inundation, as well as to capture anecdotal observations of emergent sandbar erosional and depositional dynamics. To learn more, visit

<http://ne.water.usgs.gov/projects/time-lapse/>

# News Around the LPRCA

## 2012 LPRCA Events

Meghan Sittler, LPRCA

### LPRCA Kayak Tour

The LPRCA Kayak Tours were originally scheduled in July but given the low flows the tours were rescheduled for September in the hopes that the river level would come up some. Unfortunately we saw persistently low flows and we had to cancel the tours for 2012. We are hopeful the flows in the Platte will return next year so we can resume this great event! Please check the LPRCA website for details and updates: [www.lowerplatte.org](http://www.lowerplatte.org)



Pit stop along a previous kayak tour

### LPRCA Water Quality Open

The LPRCA Water Quality Open was held on Thursday, August 29<sup>th</sup> at Quarry Oaks Golf Course near South Bend. Thirty-six foursomes participated in the event which was held on a typical 2012 summer day with very warm temperatures and gusty winds. The 144 golfers heard a presentation by Mike Archer, Nebraska Department of Environmental Quality, on sturgeon research during the floods of 2011.



View from the Quarry Oaks course, 2012

Following Mike's presentation and the beginning of the tournament, golfers had the opportunity to interact with on-course presenters from the Nebraska Land Trust, Nebraska Department of Natural Resources, the Groundwater Foundation, City of Lincoln Watershed Management Division, and the United States Geologic Survey.

### Lower Platte River Summit

The Historic Fremont Opera House in downtown Fremont was the site of the 2012 Lower Platte River Corridor Alliance's Lower Platte River Summit. The Summit is held biennially at different locations throughout the Corridor. It serves as an opportunity to hear from scientists, resource managers, policy makers, residents and others about important issues, opportunities and efforts.



Keynote address by Michael Forsberg

This year's Summit began with a keynote presentation by renowned photographer Michael Forsberg. His presentation focused on his on-going project--the Platte Basin Time-

lapse Project ([www.plattebasintimelapse.com](http://www.plattebasintimelapse.com))-as well as his upcoming documentary "Great Plains".

Two presentations followed Forsberg. Those presentations by Chad Smith, Headwaters Corporation, and Mark Pegg, University of Nebraska School of Natural Resources provided information about the Platte River Recovery Program adaptive management efforts and sturgeon research in the lower Platte River, respectively.

A tour of a portion of the Corridor followed the morning presentations. Stops on the tour included the Pawnee Sacred site, Pahaku, which is a property protected by the Nebraska Land Trust.



Tour stop at Pahaku

The second stop on the tour was at the Colfax Movie Theater, followed by a stop at the Fremont State Lakes. During the tour presentations were provided by the Nebraska Land Trust, the Loup Public Power District, the Nebraska Department of Environmental Quality, Lower Platte North NRD, and USGS.

**Keep an eye out for more information about upcoming LPRCA events!**



# News Around the LPRCA

## Pathways to Flood Mitigation - Managing Flood Risk

John Callen, Nebraska Department of Natural Resources

Many communities in Nebraska are still working to recover from major flooding that occurred in 2011, and despite the current drought conditions, major flooding is likely to occur in floodprone areas again in the future,



2011 flood damage

including the lower Platte River corridor. While regulatory oversight for new construction and development in flood hazard areas is in place

for communities that participate in the National Flood Insurance Program (NFIP), it is also important to mitigate flood risk for existing structures and several programs have been established for this purpose. The following is a listing of some of the mitigation opportunities and resources available in Nebraska, the type of assistance they may potentially provide, and the typical minimum eligibility requirements.

- **Hazard Mitigation Grant Program (HMGP)** – this is a federal grant program that is administered by the Nebraska Emergency Management Agency (NEMA) and can provide up to 75% of the cost of a mitigation project. Funding for this grant program is based on the damages from federally declared disasters and therefore varies from year to year. This program can potentially assist with acquisition and demolition or relocation of floodprone structures, elevation of floodprone structures, or smaller scale flood protection projects (but not dams or levees) if they reduce flood risk to specific structures. Basic eligibility requirements may include the community must have a hazard mitigation plan, the community must participate in the NFIP (if the structure is in a FEMA identified flood hazard area), and a project benefit/cost ratio greater than one. For acquisition projects, the subject property will be deed restricted as open space after mitigation.

- **Flood Mitigation Assistance grant (FMA)** – this is a federal grant program specifically aimed at mitigating structures at risk of flooding, and is administered by the Nebraska Department of Natural Resources (NDNR). FMA also places special focus on repetitive loss and severe repetitive loss properties (properties flooded multiple times). Funding for the FMA program occurs on an annual basis and the federal cost share for a project varies depending on whether the structure falls under a standard flood risk, repetitive loss, or severe repetitive loss category but is typically a minimum of 75%. Potential projects and eligibility requirements are similar to the HMGP program, with the additional requirement that the subject property carries flood insurance.



2011 flood damage

- **Increased Cost of Compliance coverage (ICC)** – this is a component of every standard flood insurance policy that may assist with the cost of mitigation for non-compliant structures substantially damaged by flooding. For flood insurance policy holders seeking mitigation alternatives after substantial damage due to flooding, ICC can provide up to \$30,000 in cost share for the effort to comply with local floodplain management requirements. This may include the cost of elevating a structure, cost of relocation, or demolition cost. ICC



# News Around the LPRCA

## 'Flood'

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coverage and applicability is handled on an individual flood insurance policy holder case by case basis and eligibility may vary depending on individual circumstances.



2011 flood damage

- **Natural Resources Districts (NRDs)** – the NRDs generally support floodplain management efforts and can often assist with mitigation projects in some way. This may be through an NRD's programs specifically designed to help with mitigation of floodprone structures or by assisting with meeting local cost share requirements of federal grants. Eligibility varies depending on the nature of the project and availability of funds.

Each of these programs, either by themselves or in combination with other programs, can provide significant mitigation opportunities and tools to communities with floodprone areas within the State. Over time, mitigation of floodprone structures within the Lower Platte River corridor will support benefits related to both reduction of flood risk for properties and a potential increase of open space. These programs also all have unique eligibility and participation requirements. If you have further questions about any of these programs or would like assistance determining which program may be applicable to a potential project, **contact John Callen with the Nebraska Department of Natural Resources at (402) 471-3957 or [john.callen@nebraska.gov](mailto:john.callen@nebraska.gov).**

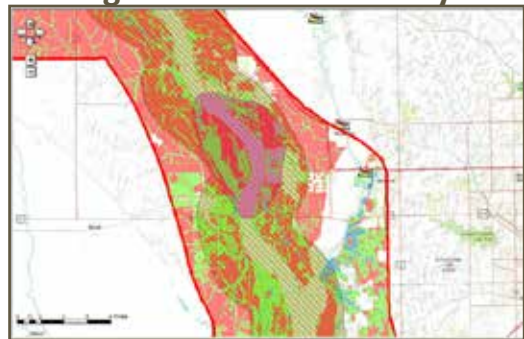
## Environmental Suitability Assessment & Land Suitability Analysis

Meghan Sittler, LPRCA

The Lower Platte River Corridor Environmental Suitability Assessment (ESA) is a multi-phase effort that has developed a planning framework for responsible, consistent, and sustainable development within the Lower Platte River Corridor. This effort involves assembling environmental and natural resource related information and using it to develop tools to assist stakeholders with land use decision making.

Part of the Environmental Suitability Assessment is the Land Suitability Analysis (LSA) model that provides a way to identify, classify and prioritize land in order to promote sustainable land use plans and decisions for the lower Platte River. An example of the model output is below:

### Biologically Unique Landscapes & Agricultural LSA Overlay



In 2012, the LPRCA & HDR Inc completed "Phase 2" of the LSA a predictive of "what if" component of the LSA model to identify the impact of future land use changes throughout the corridor.

All of the GIS data for the Environmental Suitability Assessment and the Land Suitability Analysis Phase 1 can currently be found on-line at [www.mapmaker.org/lpresa](http://www.mapmaker.org/lpresa). Additionally, the report and further information on conservation practices and resources can also be found there. Data from Phase 2 will be available on-line in early 2013.

Please take some time to explore the ESA as it is our goal to provide timely and consistent planning information to all Corridor stakeholders.