



LOWER PLATTE SOUTH natural resources district

Know Your NRD: Wetlands Special Issue



PROTECTING OUR NATURAL RESOURCES FOR FUTURE GENERATIONS.

3125 Portia St, Lincoln, NE



402-476-2729

HOW ENGINEERED SOLUTIONS



Salt Creek Levee



Image of proposed DMR Basin



Streambank Erosion Project

Levees, channels, and dams help handle high water. They can protect homes, keep roads open, and help our community bounce back after big storms.

When heavy rains fall quickly, or when rivers rise fast, flooding can happen with little warning. We cannot control the weather, but we can decrease the damage by guiding where water goes. Engineered flood projects are built to hold, store, or move water in ways that lower the chance of damaging streets, buildings, and neighborhoods.

Natural solutions help, too: Wetlands, open space, and floodplains can soak up water like a sponge – slowing runoff, storing water temporarily, and filtering sediments before flows reach creeks and rivers. These natural areas are valuable across both rural and urban landscapes, but they cannot always provide enough protection on their own, particularly where homes, roads, and utilities are already in place. That is where engineered systems come in - to provide extra protection during the biggest storms.

Levees: A levee is a raised wall or earthen ridge built along a river. Its main job is to keep floodwaters from spreading into neighborhoods, businesses, and critical facilities. Levees can reduce flood impacts by slowing or redirecting rising water, giving people more time to prepare and respond to flood warnings.

Channels and better drainage: Flooding is not only caused by rivers; it can also happen when stormwater cannot drain fast enough. Improved channels, larger culverts, and storm sewers help carry water away. When designed

well, these systems lower water levels at flood-prone intersections and help prevent washouts and erosion. Because water flows downstream, these fixes can help both city neighborhoods and nearby rural areas.

Dams and reservoirs: Dams and reservoirs play an important role in flood reduction by temporarily storing runoff during heavy rains and releasing it gradually. This can lower the highest river levels downstream and reduce flooding.

Cost-share programs: NRD cost-share programs include buffer strips, terraces, basins, farm ponds, and cover crops. These best management practices are small compared to other flood mitigation solutions but can significantly reduce runoff.

A layered approach works best: No single project can remove flood risk completely, but multiple approaches working together can significantly lower it. Levees help keep rivers in place, drainage projects move stormwater, and reservoirs can cut down peak flows. Regular inspections and repairs matter, too, so the system is ready when high water comes.



ASSIST IN FLOOD MITIGATION

Local examples: Deadmans Run and the Salt Creek Levee

By Drew Bullett, LPSNRD Projects Coordinator

Deadmans Run Flood Reduction Project (DMRFRP): In northeast Lincoln, the Deadmans Run area can flood quickly after heavy rains. The Lower Platte South Natural Resources District (LPSNRD) and City of Lincoln are jointly working on the DMRFRP to lower flood risk along Deadmans Run (roughly from 48th Street downstream toward Cornhusker Highway). The project includes channel improvements and places to temporarily store stormwater upstream. The goal is to reduce peak flows and help remove the 100-year floodplain (an area that has about a 1% chance of flooding in any given year) from approximately 480 homes, businesses, and other buildings.

DMRFRP will focus on areas near North 33rd Street, North 48th Street, Leighton Avenue, and Huntington Avenue. The project is expected to cost around \$26 million using local funding mechanisms.

The DMRFRP is being constructed in two phases which includes detention basins, a wider DMR channel, and new wetlands. Phase 1 improvements will construct a detention basin on LPSNRD land near 56th Street beginning in the summer of 2026. Phase 2 improvements will occur in 2027 and 2028 and include construction of a detention basin on UNL East Campus land near 48th Street. In addition, the Deadmans Run channel will be widened from 48th Street to the railroad corridor and the 33rd Street culvert removed.

Project timeline (planned)

Phase 1: Detention basin (56th & Holdrege)

- *Fall 2025: Tree removal.*
- *Spring 2026: Bid process.*
- *Summer 2026: Detention basin construction.*

Phase 2: 48th Street to the Burlington Northern Sante Fe (BNSF) corridor

- *Fall 2026: Tree removal*
- *Detention basin construction.*
- *Construct wetland complex on UNL East Campus to help hold and slow stormwater.*
- *Update existing BNSF bridge to improve stormwater flow.*
- *Improvements to the DMR channel.*

Salt Creek Levee System: Along Salt Creek, a levee-and-channel system helps keep floodwater from spreading into nearby neighborhoods, businesses, and major roads. The Lower Platte South NRD helps manage and maintain this system. Management includes regular inspections and maintenance to address erosion issues or problems with drainage structures. This “behind-the-scenes” upkeep helps keep the levee reliable when high water arrives.

What this means for residents

- **Fewer flooded homes and basements:** Less water in the wrong places means less damage to property and fewer repairs.
- **Safer roads and access to services:** Keeping key routes open supports school, work, and access to hospitals, fire stations, and emergency response.
- **Cleaner, safer cleanup:** Less standing water helps reduce mold, debris, and polluted runoff after storms.
- **Lower community costs over time:** Preventing damage can reduce repeat repairs to streets, bridges, and public buildings.
- **Stronger neighborhoods:** Reduced flood risk supports stable property values and potential flood insurance savings for both residents and businesses.
- **Rural benefits, too:** Flood mitigation projects can also protect farmland and outbuildings, reduce streambank and ditch erosion, and help keep county roads passable after big rains.

CONTINUING THE WORK OF PROTECTING NATURAL RESOURCES

As we prepare our operating budget and move into a new fiscal year beginning July 1, we reflect on recent accomplishments while focusing on new and ongoing projects. In fiscal year 2026, the District saw the completion of the Piening Water Quality Basin near the Lancaster-Seward County line, finished a critical stream stabilization project on Salt Creek in Lincoln, began Phase 1 of the Deadmans Run (DMR) Flood Reduction Project, secured a Nebraska Environmental Trust (NET) grant for the Pecan Creek Wetlands Facility on UNL East Campus, secured land with the City of Lincoln for expansion of the Prairie Corridor on Haines Branch, launched an updated website, and hired a new Assistant General Manager.

A few projects planned for the next fiscal year include the MoPac Trail expansion east of Wabash and continued discussions on closing the trail gap; tree removal, final design, and the start of Phase 2 of the DMR Flood Reduction Project; completion of the Groundwater Management Plan and updates to the Groundwater Rules and Regulations; stream stabilization projects on Middle Creek and Beal Slough in Lincoln and on the Oak Creek Trail corridor near Valparaiso; rehabilitation of flood control structures, including the Janssen Road structure in Seward County and the Johnson Road structure in Otoe County; and continued maintenance of the District's many Wildlife Management Areas,

wetlands, and levees.

Public awareness and education continue to be a goal of the District along with the promotion of our many cost-share programs. Facility planning for our new office building to be located at 27th and Arbor Road also continues to progress forward. LPSNRD has undergone many changes, with more still to come, but our vision—"Protecting our natural resources for future generations"—and our mission—"Maintain a sustainable environment through the conservation of land, water, and wildlife"—remain unchanged.

-David Potter,
LPSNRD General Manager

Please contact our office, check our website (www.lpsnrd.org), follow us on Facebook and Instagram, or reach out to your LPSNRD staff and directors to get the latest on projects and programs.

WETLANDS: NATURE'S WATER FILTER

Wetlands are often described as nature's kidneys, and for good reason. As water moves across the land, wetlands slow it down, allowing sediment, nutrients, and other pollutants to settle out before the water continues downstream or soaks into the ground.

In the Lincoln area, runoff from rain and snowmelt can carry soil, fertilizer, bacteria, and other contaminants from yards, streets,

farm fields, and construction sites. When that water reaches a wetland, plants, soils, and microorganisms work together to improve water quality. Plant stems and roots trap sediment, while wetland soils support natural processes that can break down or transform excess nutrients, including nitrogen.

In some places, cleaner water may eventually recharge groundwater, depending on local soils, geology,

and water levels. The saline wetlands of the Salt Creek watershed offer a unique local example, where salty groundwater helps create rare conditions that support specialized plants, wildlife, and endangered species.

By slowing, storing, and filtering water, wetlands help protect water quality across Nebraska, making them an important part of the state's natural water system.

PROTECTING NEBRASKA'S WETLANDS FOR WILDLIFE AND COMMUNITIES

Nebraska's wetlands are very diverse, and although they cover only a small portion of Nebraska, their contribution to wildlife conservation and other benefits is immense. Wetlands provide important habitat for 50% of our birds and plants, 100% of our amphibians and fish, a third of our mammals and reptiles, and 70% of threatened or endangered species.

Less well known, but certainly as important, are the benefits that wetlands serve in improving water quality, recharging groundwater, sequestering carbon, protecting us from flood damage, and providing places to recreate.

At the time of statehood in 1867, Nebraska contained an estimated 2,910,000 acres of wetlands covering about 6% of the state.

Without the current knowledge about wetland benefits, many wetlands were viewed as unnecessary and filled or drained. In some places, wetland losses approached 90%, including the unique saline wetlands located in the Salt Creek watershed. This wetland loss not only impacted wildlife but also contributed to increased flood damage and declining water quality.

There are reasons to be hopeful, as landowners and other conservation partners throughout the state are collaborating to better conserve wetlands. There are many different programs available to help better restore and manage wetlands. One example is the Saline Wetlands Conservation Partnership, a collaboration among the Lower Platte South NRD, the City of

Lincoln, Nebraska Pheasants Forever, and the Nebraska Game and Parks Commission. Together, the partners have led efforts to conserve saline wetlands while expanding community access to the many benefits these unique ecosystems provide.

To learn more about wetlands, including saline and riverine wetlands, please visit www.NebraskaWetlands.com or scan the QR Code below.

- Ted LaGrange, Wetland Program Mgr., NGPC

Scan to
Learn More
About
LPSNRD Wetlands



JEREMY GEHLE JOINS LPSNRD AS ASSISTANT GENERAL MANAGER

As this special edition highlights the value of wetlands across Nebraska, LPSNRD is also welcoming a new leader whose career has been deeply connected to water. Jeremy Gehle, LPSNRD's new Assistant General Manager, brings 25 years of experience with the State of Nebraska, where his work focused on surface water administration, streamgaging, data collection, and the management of water rights.

For the past eight years, Jeremy served as manager of the Water Administration Division, overseeing a staff of more than 40 people across seven locations. The division focuses on maintaining accurate stream and canal information and administering water rights in accordance with state statutes. Before stepping into that role, Jeremy served as Data Collection Chief, where he led the survey crew and streamgaging efforts. He also headed the Lincoln Field Office for four years and spent more than a decade working as a hydrographer in the Lincoln Field Office.

Jeremy holds a bachelor's degree in Water Science from the University of Nebraska-Lincoln. His background in Nebraska's surface water systems offers a strong foundation for his new role with LPSNRD.

NATURE'S FLOOD CONTROL: HOW WETLANDS REDUCE FLOODING

- Will Inselman,
LPSNRD Resources Coordinator

After such a long dry spell in various parts of the state, flood mitigation may not be top of mind for many. But as we have seen, when the rain does arrive—and sometimes in abundance—how are we protected from devastating floods?

Imagine this scenario: Dark clouds gather overhead. A raindrop hits the ground, you look up, sensing that the weather is about to change. Soon, the rain intensifies into a downpour, soaking the landscape as water rushes along roadsides and creeks and rivers begin to rise.

A few miles upstream, a different scene plays out. The creek opens into a low, grassy bowl where cattails, sedges, and prairie cordgrass bend in the wind. The water doesn't sprint here—it eases. As the stormwater arrives, the wetland acts like a sponge

and speed bump: it absorbs water into its soils and plants, while forcing the rest to spread out and slow down. That slowing of water matters. When floodwater is allowed to fan across a wetland instead of being squeezed into a narrow channel, the force of the flow is reduced, softened by stems and roots, and broken into smaller, gentler currents. The result downstream is a lower “peak,” the high point of the flood that does the most damage. Instead of one sharp surge racing toward bridges, basements, and roads, wetlands help turn that surge into a longer, less intense wave.

That difference is what engineers call flood risk reduction, and it is why wetlands are often described as natural infrastructure. They provide storage without concrete walls or costly mechanical systems, holding water on the

landscape long enough for it to be released more gradually. Over time, that slower release can translate into significant savings. Floods are among the costliest natural disasters, and protecting wetlands and floodplains can prevent substantial damage by reducing the height and force of floodwaters before they reach homes, businesses, roads, and public utilities. Even a modest reduction in peak flow can mean fewer emergency calls, fewer road and bridge repairs, and fewer families facing costly cleanup. Long after the storm has passed and the creek begins to recede, the wetland continues its quite work—holding what it can, releasing the rest slowly over time, and demonstrating that one of the most effective forms of flood protection is a meadow that knows how to drink.

COST-SHARE CORNER *NRD programs to help with flooding*

Rain-Ready Landscapes Program

Cost-share to individual property owners or Homeowners Associations outside of Lincoln for projects that slow water flowing into storm drains, ditches, and streams, including rain gardens and bioswales.

Community Assistance Program

Cost-share to communities for projects that improve drainage, stabilize streambanks, reduce stormwater impacts, address flood mitigation needs, and support other local water management improvements.

Land Treatment Cost-Share Program

Financial assistance for landowners for buffer strips, cover crops, terraces, basins, and farm ponds that provide grade stabilization, reduce erosion, and help manage runoff across the surrounding landscape and downstream areas.

Stream Stabilization and Degradation Control

Cost-share to landowners for projects that address streambank erosion, channel degradation, and other stream stability concerns to help protect nearby land, waterways, infrastructure, and natural resources.

WILDLIFE IN WETLANDS: MORE THAN JUST WATER

- Tom Malmstrom, Saline Wetlands Conservation Partnership, and Will Inselman, LPSNRD Resources Coordinator

At first glance, a wetland can look quiet. Look closer, and it is alive with movement, sound, and color: frogs calling from the shallows, dragonflies skimming the surface, waterfowl and migrant shorebirds feeding on the shallow waters, and native plants thriving where water and soil meet. Wetlands are some of the busiest neighborhoods in nature, supporting birds, turtles, fish, native bees, threatened and endangered species, and a surprising variety of plant life in one compact space. The mix of water, sunlight, and nutrient-rich soil makes wetlands true hotspots for biodiversity, providing food, shelter, nesting cover, and resting places for wildlife all year long.

Around Lincoln, the saline wetlands are especially remarkable. These rare wetlands, found in the Salt Creek basin at sites such as the Lincoln Saline Wetlands Nature Center, Whitehead Saline Wetland, and Marsh Wren Saline Wetland, provide habitat for species specially adapted to salty soils and shallow wet conditions. They provide the only habitat in the world for the

endangered Salt Creek tiger beetle and also support the state-endangered saltwort plant. These restored wetland areas have helped bring back shorebirds, waterfowl, waders, and grassland birds that depend on a healthy patchwork of open water, mudflats, and native vegetation.

The cast changes throughout the seasons. In spring, migrating ducks, shorebirds, songbirds, and herons stop to feed and rest, while frogs call from the shallows and fresh green shoots of wetland vegetation emerge from the wet ground. Summer brings blooming wetland plants, busy pollinators, hunting dragonflies, and broods of young birds learning to forage. In the fall, wetlands become refueling stations for return migration, full of movement and sound. Even in winter, wetlands remain active, with tracks in wet soil or snow revealing deer, foxes, raccoons, and other visitors. More than just water, wetlands are living systems where countless species co-exist. In Lincoln, protecting wetlands means protecting a rare and irreplaceable ecosystem right in our own backyard.

Please welcome Brody Dickinson to LPSNRD. Brody joined the District on March 30, 2026, as a Land Management Maintenance Technician. He brings valuable experience from nearly a year as a seasonal employee.



A complete list of cost-share programs, descriptions, requirements, and applications can be found at: <https://www.lpsnrd.org/resource-browser> and search the term “cost-share”.

WETLANDS MYTH VS. FACT

Wetlands are often misunderstood. To some, they may look like low, soggy ground or places that are only useful when wildlife is present. In reality, wetlands are some of Nebraska's most valuable natural systems. They support wildlife, improve water quality, reduce flood risk, recharge groundwater, and provide outdoor recreation opportunities across the state. Here are a few common myths about wetlands and the facts behind them.

Myth: Wetlands are just standing water.

Fact: Wetlands are much more than water. They are living systems where water, soil, plants, and wildlife all interact. Nebraska wetlands include marshes, wet meadows, lake edges, river and stream edges, backwaters, oxbows, fens, forested floodplains, and seep areas. Some wetlands hold water for only a short time in the spring, while others remain wet most of the year.

Myth: Wetlands make flooding worse.

Fact: Healthy wetlands can help reduce flooding. During heavy rain, wetlands act like both a sponge and a speed bump. Their soils and plants absorb water, while the wetland itself gives stormwater room to spread out and slow down. That slowing helps reduce the flood peak, or the highest and often most damaging point of a flood.

Myth: Wetlands are wasted land.

Fact: Wetlands are working landscapes. They provide habitat, store floodwater, filter runoff, recharge groundwater, and support recreation, hunting, birding, photography, education, and conservation. A wetland may look quiet at first glance, but it can be full of movement and sound: frogs calling, dragonflies hunting, birds feeding, turtles basking, and native plants thriving where water and soil meet.

Myth: Wetlands only matter for ducks.

Fact: Ducks are only part of the story. Wetlands support shorebirds, wading birds, songbirds, fish, amphibians, reptiles, pollinators, mammals, and many rare species. Locally, Lincoln's saline wetlands are especially important because they support plants and animals adapted to salty soils and shallow wet areas. These rare wetlands are the only place in the world where the endangered Salt Creek tiger beetle survives, and they also support the state-endangered saltwort plant.

Myth: Wetlands take care of themselves.

Fact: Wetlands are resilient, but they still need protection and management. Many wetlands have been lost or altered by drainage, channelization, development, invasive species, and changes in streamflow. Restoration can make a difference. When wetlands are protected or restored, wildlife often responds quickly, bringing back shorebirds, waterfowl, wading birds, grassland birds, native plants, and the many small organisms that support the larger food web.

Myth: If a wetland dries up, it is no longer a wetland.

Fact: Many wetlands are naturally seasonal. Some Nebraska wetlands may only hold water for a few weeks or months, especially after snowmelt or spring rains. Others may remain wet most of the year. A dry period does not mean a wetland has lost its value. Seasonal wetlands can provide critical habitat during migration, support specialized plants, and help store water when wet conditions return.

The Bottom Line

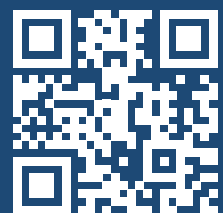
Wetlands are not wastelands. Whether they are holding back stormwater, providing a resting place for migrating birds, supporting rare species, or quietly filtering runoff before it reaches a creek, wetlands are working for us every day. Protecting them means protecting both Nebraska's natural heritage and the communities that depend on healthy land and water.

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3125 PORTIA ST, LINCOLN, NE 68521  (402) 476-2729



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