CITY OF LINCOLN
NEBRASKA

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"Making Lincoln a Better Place to Live"

MAYOR CHRIS BEUTLER

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LINCOLN
The Community of Opportunity

MEMORANDUM

DATE: March 15, 2010

TO: Lancaster County Board of Commissioners, Lincoln City Council, Lower Platte South Natural Resources District Board of Directors, The Nebraska Game and Parks Commission, and The Nature Conservancy

FROM: Tom Malmstrom
Natural Resources Coordinator
Parks and Recreation Department
Saline Wetlands Conservation Partnership

RE: Saline Wetlands Conservation Partnership – 2009 Progress Report

On behalf of the Saline Wetlands Conservation Partnership (SWCP) I want to make you aware of the activities, which occurred in 2009. The SWCP was initiated in 2003 and continues to progress. The City of Lincoln has been awarded three Nebraska Environmental Trust (NET) grants for the eastern saline wetlands. The grants were received in 2002, 2005, and 2008. The 2005 grant was completed this year. The City of Lincoln received a $1,200,000 grant over a three year period in 2008; $800,000 awarded in 2008 and $400,000 awarded in 2009. These grants have been used for land acquisition and restoration purposes and provide matching funds for other grant opportunities.

I have attached an article from the April 2009, NEBRASKAland magazine. The article is titled "Shoemaker Marsh" and discusses the history of the marsh and more recent activities undertaken by the City of Lincoln and the SWCP describing the commitment and efforts to conserve the saline wetlands. Also included is a "rack card," which was developed by the SWCP and placed at two Interstate 80 Visitor Centers; York Eastbound and Melia Hill Westbound. The cards summarize the history of the saline wetlands and provide directions for travelers to specific saline wetland areas.

The Partnership continues to utilize the "Implementation Plan for the Conservation of Nebraska's Eastern Saline Wetlands (2003)," for guidance in efforts to conserve the saline wetlands. Since its inception the partnership has purchased nearly 1,015 acres of saline wetlands and other associated upland habitat, initiated educational activities, participated in saline wetland restoration projects, and provided for operation and maintenance of these areas. Illustration 1 identifies many of these properties.

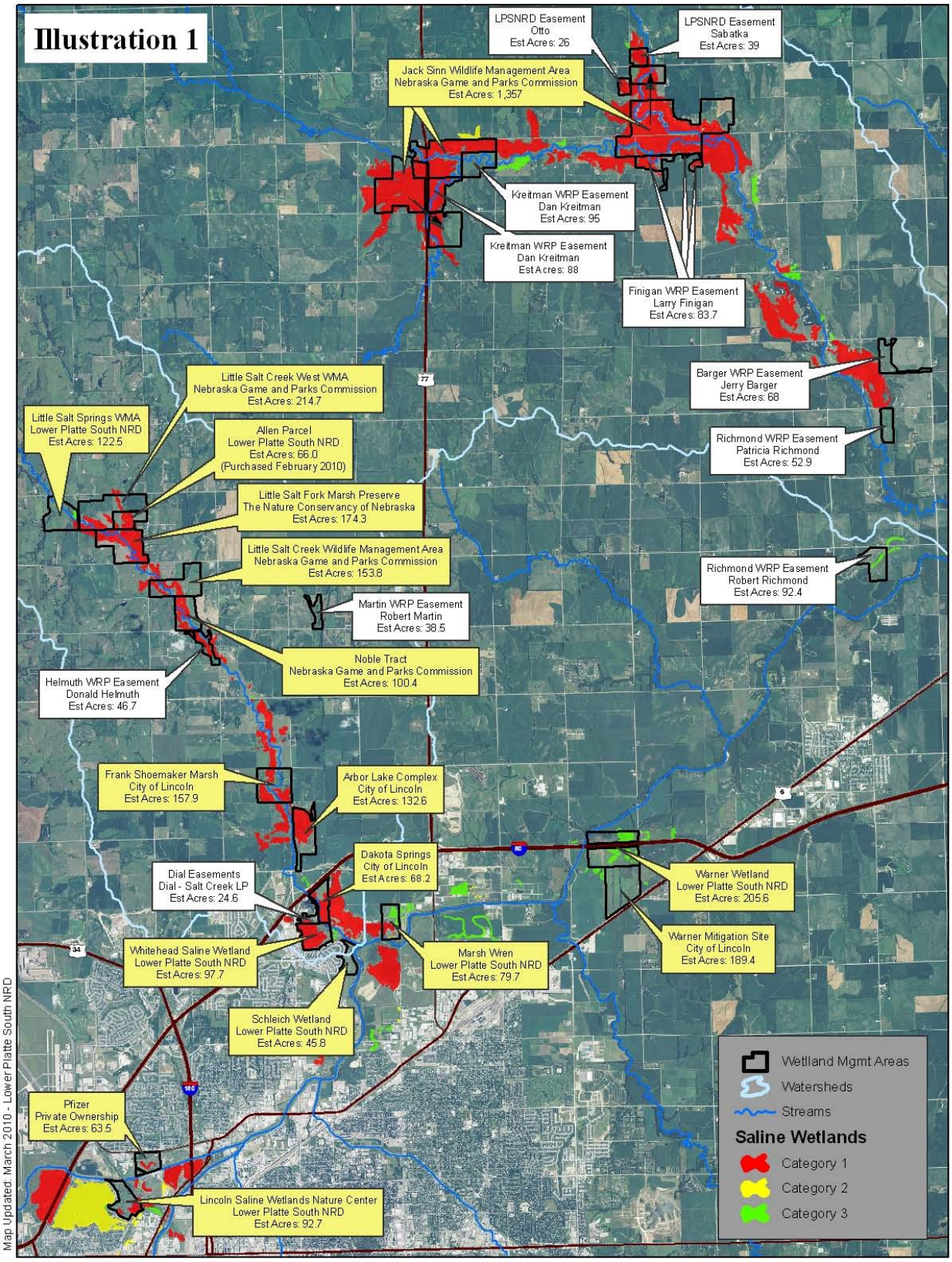


Illustration 1
LPSNRD Easement
Otto
Est Acres: 26
LPSNRD Easement
Sabatka
Est Acres: 39
Jack Sinn Wildlife Management Area
Nebraska Game and Parks Commission
Est Acres: 1,357
Kreitman WRP Easement
Dan Kreitman
Est Acres: 95
Kreitman WRP Easement
Dan Kreitman
Est Acres: 88
Finigan WRP Easement
Larry Finigan
Est Acres: 83.7
Barger WRP Easement
Jerry Barger
Est Acres: 68
Richmond WRP Easement
Patricia Richmond
Est Acres: 52.9
Richmond WRP Easement
Robert Richmond
Est Acres: 92.4
Little Salt Creek West WMA
Nebraska Game and Parks Commission
Est Acres: 214.7
Little Salt Springs WMA
Lower Platte South NRD
Est Acres: 122.5
Allen Parcel
Lower Platte South NRD
Est Acres: 66.0
(Purchased February 2010)
Little Salt Fork Marsh Preserve
The Nature Conservancy of Nebraska
Est Acres: 174.3
Little Salt Creek Wildlife Management Area
Nebraska Game and Parks Commission
Est Acres: 153.8
Martin WRP Easement
Robert Martin
Est Acres: 38.5
Noble Tract
Nebraska Game and Parks Commission
Est Acres: 100.4
Helmuth WRP Easement
Donald Helmuth
Est Acres: 46.7
Frank Shoemaker Marsh
City of Lincoln
Est Acres: 157.9
Arbor Lake Complex
City of Lincoln
Est Acres: 132.6
Dakota Springs
City of Lincoln
Est Acres: 68.2
Dial Easements
Dial - Salt Creek LP
Est Acres: 24.6
Warner Wetland
Lower Platte South NRD
Est Acres: 205.6
Warner Mitigation Site
City of Lincoln
Est Acres: 189.4
Whitehead Saline Wetland
Lower Platte South NRD
Est Acres: 97.7
Marsh Wren
Lower Platte South NRD
Est Acres: 79.7
Schleich Wetland
Lower Platte South NRD
Est Acres: 45.8
Pfizer
Private Ownership
Est Acres: 63.5
Lincoln Saline Wetlands Nature Center
Lower Platte South NRD
Est Acres: 92.7
Wetland Mgmt Areas
Watersheds
Streams
Saline Wetlands
Category 1
Category 2
Category 3
Map Updated: March 2010 - Lower Platte South NRD

SUMMARY OF 2009 ACTIVITIES

LAND ACQUISITIONS

- **Marsh Wren –** Between 40th and 56th Streets and north of Salt Creek

Size:	80.0 acres
Purchase price and date:	$320,000 on May 27, 2009
Funding sources:	Lower Platte South NRD ($25,000) SWCP ($25,000) City of Lincoln floodplain acquisition funds ($178,000 ($89,250 each from the City of Lincoln and the Lower Platte South NRD)) 2005 NET Grant ($91,500)
Owner:	Lower Platte South Natural Resources District

Notes – The property contains Category 1, Category 2, and Category 3 saline wetlands and is proposed as critical habitat for the endangered Salt Creek tiger beetle. Floodplain encompasses nearly 85 percent (67.5 acres) of the property.

- **Little Salt Creek West WMA –** South of Branched Oak Road between NW 12th and 1st Streets

Size:	220.0 acres
Purchase price and date:	$979,000 on October 9, 2009
Funding sources:	Federal Section 6 ($560,000) 2005 NET Grant ($42,838.58) 2008 NET Grant ($366,250.42) Ducks Unlimited ($10,000)
Owner:	Nebraska Game and Parks Commission

Notes – The property contains Category 1 saline wetlands and is proposed as critical habitat for the endangered Salt Creek tiger beetle. It is located between Little Salt Springs owned by the Lower Platte South Natural Resources District (LPSNRD) and Little Salt Fork Marsh Preserve owned by The Nature Conservancy.

WETLAND RESTORATION

- Arbor Lake Complex - A wetland restoration conceptual design was completed in August 2009. In 2010, the City of Lincoln will hire a firm to complete the final design for the wetland restoration. A core and technical/planning team consisting of several agency representatives will work with the consultants on the final design. The final design will be completed in 2010 and it is anticipated restoration work will begin in the fall/winter 2010. This project is being funded with Federal Section 319 funds and the 2008 NET Grant, all received by the City of Lincoln.

- Jack Sinn WMA - This 2009 project installed a water-control structure in a low-level berm on Nebraska Department of Roads property to allow the water to bypass the outlet and continue to flow east onto the Jack Sinn WMA. A shallow swale was excavated to provide a route for the water to flow eastward. The swale is designed to be a wetland. Several areas on the WMA, where sediment has accumulated and reed canary grass has become dominant were excavated at a level that hopefully will be desirable to saline vegetation.

  A low level berm was constructed on the south side of Ashland Road and on the west side of 98th Street. This berm allows for some ponding of water by keeping it out of the road drainage ditch. A water control structure was placed under 98th Street to allow water to continue to flow through a constructed swale east into the WMA. The water flow will end in a wetland that was restored during an earlier project. A control structure in this wetland will allow water to be outlet into Rock Creek as needed. In addition, an existing head cut along Rock Creek was plugged to allow for some additional water to be ponded on the floodplain.

  An additional benefit of the project is Saunders County used some of the excavated material and to build up the grade of the graveled portion of Ashland Road to the point where it meets a driveway to a private residence. During times of high water, this portion of Ashland Road would flood and prevent access to the private residence. Funding for the project was provided through the Nebraska Department of Roads and Federal Section 319 funds received by the Nebraska Game and Parks Commission (NGPC). Funds from the 319 grant were not used for the road work.

WETLAND MANAGEMENT

- Two seasonal employees were hired by the City of Lincoln in 2009 to perform management on the saline wetland areas. Members of the Partnership established management activities to be addressed within the eastern saline wetlands complex. These employees primarily worked on noxious weed and woody vegetation removal, and access and structure maintenance. Funding for these positions is provided with 2001 State Wildlife Grant funds the NGPC received from the U.S. Fish and Wildlife Service (USFWS). The Coordinator provided supervision of the employees.

SALINE WETLAND RESEARCH

In 2007, the NGPC received funding from the U.S. Fish and Wildlife Service to collect biological and hydrological data. A summary of the Salt Creek tiger beetle and Hydrologic research conducted in 2009 is on the following two pages. This information will be used for the development of a Habitat Conservation Plan for the Salt Creek tiger beetle and the Eastern Saline Wetlands of Nebraska.

Salt Creek Tiger Beetle Research (SCTB)

Research information supplied by:
Steve Spomer, Sheri Svehla, and Tierney Brosius
Department of Entomology
University of Nebraska-Lincoln

Life History

- The remaining plastic monitoring tubes (placed in the banks of Little Salt Creek in Sept. 2007 and May 2008) were removed in late summer 2009 and examined for tiger beetle larvae. No larvae were found. It was concluded that the tube method for transplanting or relocating larvae was inappropriate.

- Soil slope preference study - Using optimum salt concentrations previously determined, a study was conducted to determine the egg-laying preference by female Salt Creek tiger beetles as to whether they preferred sloped (simulating the banks of Little Salt Creek) or flat (simulating original habitat 100+ years ago) soil. The results to date are inconclusive.

- Rearing - SCTB larvae are in culture from adults originally collected in 2007.

- Prey base experiment- Washers, 1 ½" in diameter (to simulate a mature tiger beetle larva's strike distance) were covered in sticky trap and placed at 1 meter intervals from the water's edge to near the top of the bank along Little Salt Creek and left for 24 hours. Washers were collected and insects identified to the family level. The experiment ran at two week intervals from April through September, except during the time when adult SCTB were active (to avoid injury to SCTB). Analyses have not been done, but concentrations of insects tended to be much higher near the water. This experiment may be repeated in 2010.

Insecticide Poisoning

Using another salt flat endemic tiger beetle (*C. circumpicta*), larvae were exposed to technical grade bifenthrin (Talstar®), imidacloprid (Gaucho®), and glyphosate (Roundup®) in various concentrations. These chemicals are frequently used in both agricultural and urban settings and SCTB adults and/or larvae may be potentially exposed to these chemicals in nature. We found no negative impact at concentrations which tiger beetles would be exposed to.

Light Pollution

No experiment could be conducted because of low SCTB numbers.

Salt Marsh Insect Inventory

Salt marsh localities (mainly Arbor Lake WMA but also other sites) continued to be inventoried for insects from April through September, using nets, pitfall traps, and mercury vapor lights. Many species were collected which had not previously been found. These were identified to genus level if possible and added to the database. The database now has a total of 2,855 specimens, comprising 13 orders, 173 families, at least 529 genera, and at least 672 species (of which 457 were keyed to a known species). Of these, the family Carabidae (ground beetles) was the most diverse, with 66 species identified.

Pitfall Trap

Netting Trap

Public Outreach

- An art exhibit at the Haydon Art Gallery, focusing on SCTB and the eastern saline wetlands was shown in July. The exhibit included original paintings, drawings, and other art from national and international artists. A survey of viewer attitudes towards endangered species was also conducted during the exhibit, and a full-color catalog was published.

- The SCTB website was updated and improvements were made. The website address is: http://drshigley.com/lgh/sctb/

- A videography of SCTB was started and will be completed in 2010

Hydrological Research

The following research information provided by:

F. Edwin Harvey, PhD, PG
Associate Director, School of Natural Resources
Director, Justin Smith Morrill Scholars Program
Professor of Hydrologic Sciences
School of Natural Resources
University of Nebraska-Lincoln

Groundwater:

- Sampled three shallow wells installed at the Arbor Lake-Anderson site on March 19th and 20th. Groundwater samples analyzed for major ions.
- The three shallow Arbor Lake-Anderson wells were instrumented with logging pressure transducers in January.
- Two intermediate-depth wells were drilled (40-120 feet) and installed during the summer at the Arbor Lake-Anderson site. In one well, the piezometer was screened over the depth interval of 103 to 108 feet on July 1st. In another well the piezometer was screened over the depth interval of 110 to 115 feet on August 5th. These wells have not been sampled yet.
- The logging pressure transducers that have been deployed in other saline wetland piezometers were temporarily removed for cleaning, data download, and repair (where necessary) over a several-day period in May and September. All pressure transducers were then returned to their host piezometers.

Surface Water:

- Archived water samples from Little Salt Creek (from May 2007 to April 2008) were analyzed for major ions.
- Continual weekly measurements of electrical conductivity of stream waters along Little Salt Creek. Resumed regular sampling of stream water at three points along Little Salt Creek. Water samples were collected for analysis of major ions and stable isotopes (oxygen-18 and deuterium). In addition to electrical conductivity, pH, dissolved oxygen, and alkalinity were measured at each sampling point.

- A select subset of 2009 stream samples was analyzed for major ions and isotopes.

- From late-April through mid-July two logging multi-sensors were installed, for trial purposes, in stilling wells in the bed of Little Salt Creek. Both sensors measured water level (via pressure measurement), water temperature, and electrical conductivity. One type of sensor was found to be less cumbersome to install and download from while providing essentially the same volume and quality of data (also at considerably less cost). The performance of both sensors suffered at times from significant biological fouling and sediment build-up in the stilling wells.

Soils and Surface Salinity:

- In early August, a survey of surface soil (top 3 inches) salinity and associated vegetation types was completed for the Whitehead wetland and portions of the Arbor Lake-Anderson site. Preliminary maps and analysis have been completed.

- Custom soil calibrations were developed to improve the accuracy of the results from the Hydra-Probe soil sensor installations. A preliminary report on the soil temperature and salinity data obtained from the sensor installations was compiled in July and submitted to the NGPC

Plant Community Inventory of Saline Wetlands

An inventory of saline wetland plant communities on SWCP properties was initiated in 2009. The inventory will provide baseline data on the extent and condition of existing saline wetlands from which future changes in saline wetland areas and their condition can be monitored. This ground-based plant community inventory will also provide valuable data for further analysis of saline wetlands, including saline species population studies and threat assessments.

The study is being conducted with funding provided through an agreement between The Nature Conservancy and the Lower Platte South NRD. Plant assemblage began on Arbor Lake, Frank Shoemaker Marsh, Little Salt Creek WMA, and Little Salt Fork Marsh Preserve. Tyler Janke, a wetland restoration specialist with The Nature Conservancy is conducting the study.

Soil Investigation

The Natural Resources and Conservation Service initiated field investigations at the Arbor Lake Complex using an Electro-Magnetic (EM-38) sampling device. The device is useful for mapping variations in soil salinity and moisture content. Further EM-38 data collections may be conducted at other saline wetland sites in the future. Sampling pits were also dug at two saline wetland areas in the summer of 2009. The sample analysis is being conducted by the National Soil Survey Laboratory (through NRCS) and should be available in 2010.

ENDANGERED SPECIES

The Salt Creek tiger beetle (*Cicindela nevadica lincolniana* Casey) was listed on the Federal endangered species list in October 2005. It is endemic to the eastern saline wetlands in Lancaster and southern Saunders counties. Saltwort (*Salicornia rubra*) is a state listed endangered species. In Nebraska, the eastern saline wetlands are the only location the Saltwort is found.

In 2007, the U.S. Fish and Wildlife Service listed the Proposed Rule in the Federal Register regarding the Designation of Critical Habitat for the Salt Creek tiger beetle (SCTB). In April 2009, the USFWS reopened Critical Habitat Designation to add a total of 138 acres to three of the four previously proposed units. As a result, the proposed revised critical habitat designation for the species now includes four critical habitat units totaling approximately 1,933 acres. The rule has yet to be made final. The action plan for the SCTB was completed in October 2009.

- Habitat Conservation Planning was initiated in 2006 in response to the Salt Creek tiger beetle's Federal endangered species listing. To date there has been limited activity. The targeted completion date for the plan is 2012.

- When requested, the coordinator and partnership representatives provide information to the U.S. Fish and Wildlife Service on activities related to the endangered species act.

- Efforts of the SWCP are to protect, restore, and manage the rare and unique saline wetland habitat and not just endangered species.

EDUCATION

- North Star High School – Coordinator established annual program with the Environmental Studies class on saline wetlands in 2005. The coordinator in cooperation with the environmental studies instructor at North Star sponsors field trips for a selected group of students to the saline wetlands. The field trips include presentations to the students by personnel of the LPSNRD, UNL, NGPC, and the NRCS. Topics covered regarding the saline wetlands included vegetation, hydrology, entomology, restoration and mitigation, management, soils, well monitoring and sampling, wildlife, and the relationship of urbanized development with natural areas. In the fall of 2009, a total of seven (7) field trips and three (3) class presentations were held.

- Coordinator educational presentations - The Coordinator continues to present "saline wetland jeopardy" to fifth grade students attending the Earth Wellness Festival. Other presentations were given to local groups and conservation agencies.

- Coordinator participates in Elementary School Nature Nights and field trips to saline wetlands sponsored by the LPSNRD

- Updated the saline wetlands information on the City web site.

FUNDING RESOURCES

- 2005 Nebraska Environmental Trust Grant – The grant amount was $800,000 over a three year period. A total of $438,432.77 was utilized for wetland restoration at Frank Shoemaker Marsh and $361,567.23 was used for land acquisition. The grant terminates on June 30, 2010 and a final report will be written.

- Federal Section 319 Grant (2007 and 2009) – The coordinator on behalf of the City of Lincoln submitted a grant in 2005 for Federal Section 319 funds in the amount of $500,000 for the eastern saline wetland complex. In November of 2007, the City was awarded $250,000. A total of $52,500 was expended for restoration services related to the Arbor Lake Wetland Restoration Project. The remaining $250,000 was awarded in 2009. The total amount available for restoration services is $447,500. The intention of the grant is for the Arbor Lake Wetland Restoration Project.

- 2008 Nebraska Environmental Trust Grant – The grant amount is $1,200,000 over a three year period. A total of $366,250.42 was expended in 2009 for land acquisition. These funds are for the acquisition and restoration of saline wetlands.

- Federal Section 6 – In 2009, the NGPC through the U.S. Fish and Wildlife Service expended $559,911 for the acquisition of property containing saline wetlands. An additional grant was submitted in the amount of $325,000 in 2009.

SUMMARY OF OTHER COORDINATOR ACTIVITIES

- Completed inter-local cooperative agreements for saline wetlands between the City of Lincoln, Lower Platte South NRD, Nebraska Game and Parks Commission, and The Nature Conservancy for the time period of 2009-2012

- Technical Committee member of the Little Salt Creek Watershed Master Plan study

- Attend and participate in Nebraska inter-agency wetland meetings sponsored by the U.S. Corps of Engineers

- Attended meetings regarding City and County projects regarding construction activities scheduled near or on saline wetland areas

- Presented information regarding the saline wetlands to UNL Lifelong Learning Institute class, Lancaster County Ecological Advisory Committee, UNL Landscape Ecology class, and Nebraska groundwater and surface water monitoring councils

- Presented information regarding the saline wetlands and provided tours at Frank Shoemaker Marsh to Capitol City Kiwanis, UNL Bio-engineering class, and Western States Water Council

- Worked with UNL Landscape Ecology on studio project and presentation to the Partnership regarding public access, trail system, and education ideas for the saline wetlands along the Little Salt Creek watershed from the City of Lincoln to near Raymond, Nebraska

- Youth education – presented and participated in elementary school Nature Nights sponsored by the Lower Platte South NRD, the Earth Wellness Festival, and Wilderness Park Nature Camp

- Worked with Eagle Scout candidate and Boy Scout Troop with the placement of bluebird houses at Frank Shoemaker Marsh

- Participate with Natural Resources and Conservation Service (NRCS) B Team regarding the scoring and design of Wetland Reserve Program applications in Lancaster County

- Assist and observe NRCS soil scientist regarding saline soil research

- Land management – Supervision of seasonal employees, annual saline wetland area task discussions with land managers from other agencies, noxious weed and woody vegetation control at publicly owned saline wetland sites, participation in three 2009 prescribed burns, and Phragmites location identification with established GPS coordinates

- Project Manager for the Arbor Lake Complex wetland restoration project.

- Member and participant of the Educational Workgroup of the Nebraska Partnership for All-Bird Conservation.

- Participant of the Habitat Conservation Plan committee sponsored by the U.S. Fish and Wildlife Service and miscellaneous activities related to endangered species

- Miscellaneous grant administration, participation in grant applications through conservation agencies regarding wetland projects, and attended NET grantee seminar and roundtable discussion

SALINE WETLAND PROPERTIES

- **Frank Shoemaker Marsh** – 27th Street and Bluff Road

  Size: 160 acres
  Purchase price and date: $472,000 on June 12, 2003
  Funding sources: 2001 State Wildlife Grant through the USFWS ($222,000)
  2002 NET grant ($250,000)
  Owner: City of Lincoln

  Activity summary –Noxious weed removal continued and included the documentation of several new small plots of Phragmites. Post-restoration monitoring includes observations of wetland vegetation and management of the hydrology through the five water control structures in place. Several monitoring wells were installed by UNL and are continually monitored. The total number of wells includes three shallow wells (15-30 feet), three intermediate wells (60-90 feet), and one deep well (~180 feet). Several Blue Bird boxes were located on the property.

- **Dakota Springs (Formerly King)** – South of Arbor Road and East of 27th Street

  Size: 68.7 acres
  Purchase price and date: $204,700 in January 2004
  Funding sources: Federal Section 6 ($153,525)
  2002 NET grant ($51,175)
  Owner: City of Lincoln

  Dakota Springs Extension Purchase (Dial Realty, 7.45 acres)
  Purchase price and date: $48,500 on December 31, 2008
  Funding source: Federal Section 6

  Activity summary – Noxious weed removal continued. Monitoring wells were installed by UNL and are continually monitored. The total number of wells in place includes two shallow wells (15-30 feet) and two intermediate wells (60-90 feet). Interstate 80 construction adjacent the property was completed in 2009 and field access was restored to the east off of Arbor Road.

- **Warner Saline Wetlands -** 98th Street and Interstate 80

  Size: 140 acres
  Purchase price and date: $298,580 on December 7, 2004
  Funding sources: Federal Section 319 ($179,148)
  LPSNRD ($43,043.20)
  SWCP ($76,388.80)
  Owner: LPSNRD

  Activity summary – Woody vegetation removal continues with Honey locust and cedars. A prescribed burn was conducted in the spring of 2009 on approximately 35 acres south of Interstate 80 and west of 98th Street.

- **Little Salt Creek Wildlife Management Area** – 1st Street and Raymond Road
  Total Size: 256.5 acres
  Purchase price and date: $476,000 in June 2004 (original 156 acres)
  Funding sources: Federal Section 6 ($276,000)
  2004 NET grant through NGPC ($200,000)
  Owner: NGPC

  Noble Tract Extension - Along Little Salt Creek, between Mill Road and the southern boundary of the original Little Salt Creek Wildlife Management Area. (100.5 acres)

  Activity summary – Prescribed grazing was conducted. Cedar removal and noxious weed control continues. A prescribed burn was conducted in the spring of 2009 on the noble tract extension east of Little Salt Creek. Monitoring wells were installed by UNL and are continually monitored. The total number of wells includes three shallow wells (15-30 feet) and three intermediate wells (60-90 feet).

- **Arbor Lake Complex** – North of Arbor Road and east of 27th Street.
  Total Size: 132.5 acres
  Owner: City of Lincoln

  Arbor Lake Extension Purchase (Anderson Property, 69.2 acres)
  Purchase price and date: $361,710.67 on September 1, 2004
  Funding source: 2002 NET grant through City of Lincoln

  Activity summary – Continued efforts to control noxious weeds and woody vegetation. UNL conducted insect inventories throughout the summer along the salt flat areas and NRCS conducted soil research throughout the area. Approximately 12 acres were cropped by an adjacent landowner; this includes areas under the transmission line, which were disturbed during construction in 2007. Monitoring wells were installed by UNL and are continually monitored. The total number of wells includes three shallow wells (15-40 feet) and two intermediate wells (60-90 feet).The Arbor Lake Wetland Restoration concept design was completed. It is anticipated construction will commence in the fall/winter of 2010.

- **Little Salt Springs (Formerly Schell) –** NW 12th Street and Branched Oak Road
  Size: 123 acres
  Purchase price and date: $472,188 on July 31, 2007
  Funding sources: Lower Platte South NRD ($187,960.35)
  2005 NET grant ($227,227.95)
  Partnership Funds ($57,000)
  Owner: Lower Platte South NRD

  Activity summary – Continued efforts to control noxious weeds and woody vegetation. Signage was placed at the property to adhere to state hunting laws. A fence was constructed in the northeast portion of the property to delineate the boundary from an adjacent acreage development. The second year growth of the high diversity native seeded on the formerly cropped areas (60 acres) is progressing well.

- **Seacrest Range** (43 acres) – Located west of Folsom Street along both the north and south sides of Rosa Parks Way. The area is owned by the City of Lincoln. Efforts continued to remove cedar trees and Honey locust and to control noxious weeds on the site. Significant efforts were undertaken in 2009 to control Phragmites along the Haines Branch on the north side. The construction of the relief sewer along the south boundary began in 2009 and should be completed in 2010.

- **Lincoln Saline Wetlands Nature Center** (92.7 acres) – It is located near Capitol Beach in Lincoln. The area is owned by the LPSNRD. Management activities in 2009 were noxious weed control and removal of Russian olive, Honey locust, and cedar trees.

- **Schleich Wetlands** (50.2 acres) – It is located southwest of Little Salt Creek near where it empties into Salt Creek and east of the Northbridge subdivision in Lincoln. The area is owned by the LPSNRD. Management activities in 2009 were noxious weed and woody vegetation control. Salt cedars were removed along the banks of Little Salt Creek.

- **Whitehead Wetlands** (98.8 acres) – It is located east of 27th street and a short distance south of Interstate 80. The area is owned by the LPSNRD. Management activities in 2009 were noxious weed and phragmites control. Vegetative management of Tall wheatgrass was initiated. Monitoring wells were installed by UNL and are continually monitored. The total number of wells includes five shallow wells (15-30 feet), four intermediate wells (60-90 feet), and one deep well (~180 feet).

- **Little Salt Fork Marsh Preserve** (174.2 acres) – It is located northwest of 1st and Raymond Road and owned by The Nature Conservancy. Management activities in 2009 included a prescribed grazing rotation throughout the property for the majority of the growing season. Discussions have taken place regarding embankment repairs.

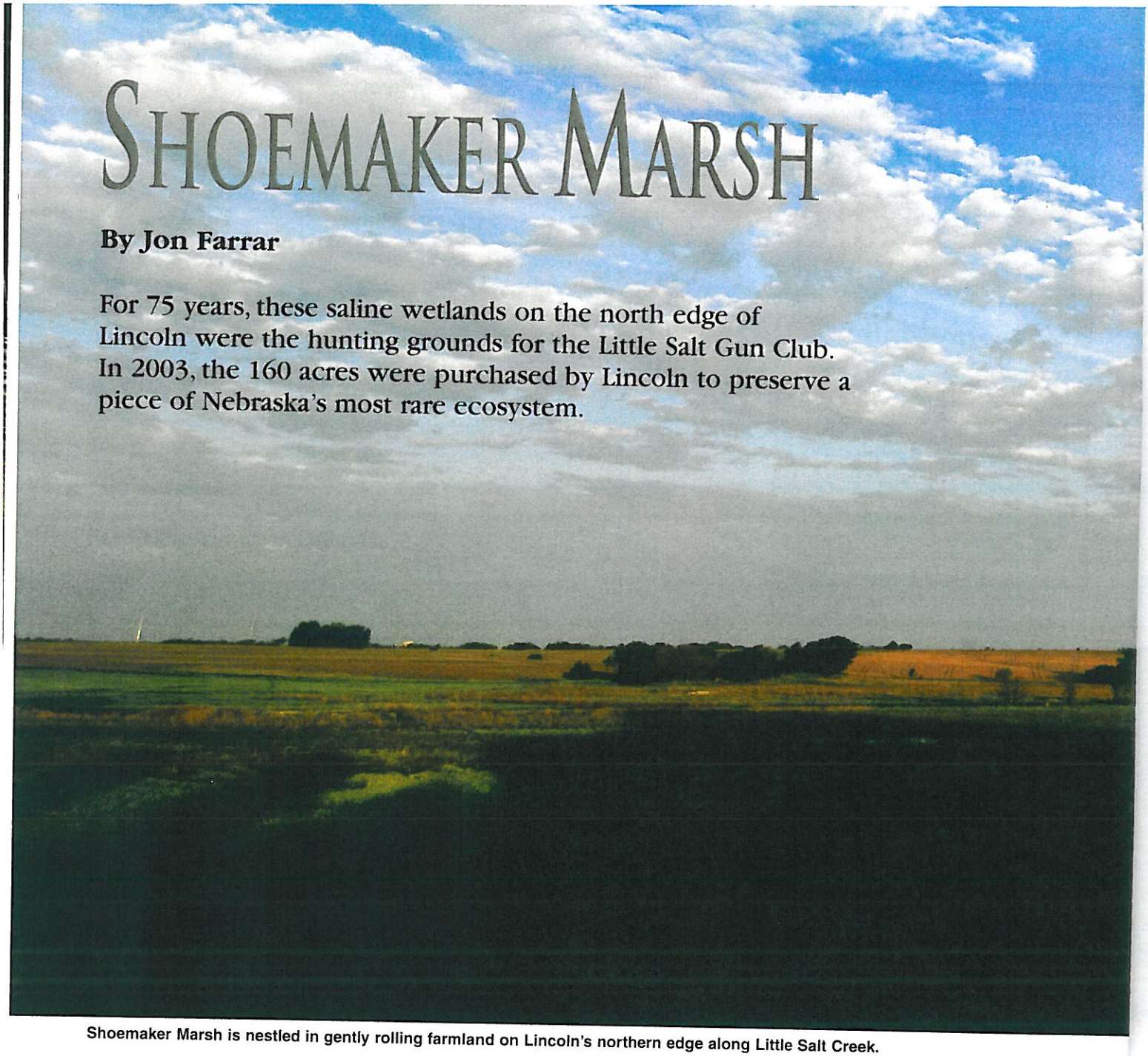
- **Jack Sinn Wildlife Management Area** (1,352.3 acres) – Located south of Ceresco in Saunders and Lancaster counties. This area is owned by the NGPC. Perimeter fencing construction continues. Management activities in 2009 were noxious weed control, woody vegetation removal, and prescribed grazing. A wetland restoration project in cooperation with the Nebraska Department of Roads was completed in 2009.

This program has been very successful and continues to accomplish many of the goals of the Implementation Plan for the Conservation of the Eastern Saline Wetlands. We hope you would agree. Your continued support for the conservation of these natural areas is appreciated. If you have any questions, please contact me at 476-2729 or tmalmstrom@lpsnrd.org. You can visit the saline wetland website at http://lincoln.ne.gov/city/parks/ParksFacilities/wetlands/index.htm

SHOEMAKER MARSH

By Jon Farrar

For 75 years, these saline wetlands on the north edge of Lincoln were the hunting grounds for the Little Salt Gun Club. In 2003, the 160 acres were purchased by Lincoln to preserve a piece of Nebraska's most rare ecosystem.



Shoemaker Marsh is nestled in gently rolling farmland on Lincoln's northern edge along Little Salt Creek.

"I had awakened at 5 a.m. and put on my dad's old hunting coat and drove the long miles in the darkness to reach the location on North 27th Street that people now know as Shoemaker's Marsh," Charles "Fritz" Craft wrote in the "Local View" column of the January 29, 2005 edition of the *Lincoln Journal Star*. "But to me and a few men in the Lincoln area, it will always be known as Little Salt Duck Club."

That morning Craft, who was briefly home from Cambodia, where he was the chief dental officer for the U.S. Embassy, spread his father's ashes on the wetlands they both loved. Charles "Fred" Craft, Fritz's father, had been a member of the Little Salt Gun Club for nearly five decades and the principal caretaker of the club's dikes, pumps and blinds.

In the first half of the 20th century, duck hunting clubs could be found on most of the shallow, saline wetlands on Lincoln's western and northern edges. When rains were timely those wetlands attracted waterbirds, and the ducks among them attracted hunters from the city's earliest days.

The location for the city of Lincoln was selected because of those basins and the promise of a rich commerce evaporating salts from their saline waters. That hope was dashed by the discovery of easily mined salt deposits in Kansas. From that time until recently, the salt marshes were viewed as mosquito-breeding swamps to be filled with rubbish so something useful could be built on the sites. From the 1930s until the mid-1950s, low ground and wetlands near Oak Lake on Lincoln's western edge were used as the city dump. Into the 1980s, other wetlands west of Lincoln were filled with construction rubble. Wetlands on Lincoln's northern edge were used as the city landfill from the mid-1950s until 1988. Saline wetlands that survived were farther from the city,

mostly along Little Salt Creek to the north and Rock Creek south of Ceresco. Wetlands near Lincoln survived for as long as they did because until recently the city had not spread to them, they could only be farmed when dry (and even then produced poor crops) and they were owned or leased by waterfowl hunters. And that is the story of Shoemaker Marsh on Lincoln's northern edge.

Little Salt Gun Club

Dana F. Cole – certified public accountant, charter member, and secretary-treasurer for most of the Little Salt Gun Club's history – recalled the club's founding in a 1977 talk to Lincoln sportsmen. In 1927, an acquaintance asked Cole for a loan so he could lease "a place out north of town where commercial hunters used to hunt. It was a great hunting spot."

PHOTOS BY JON FARRAR

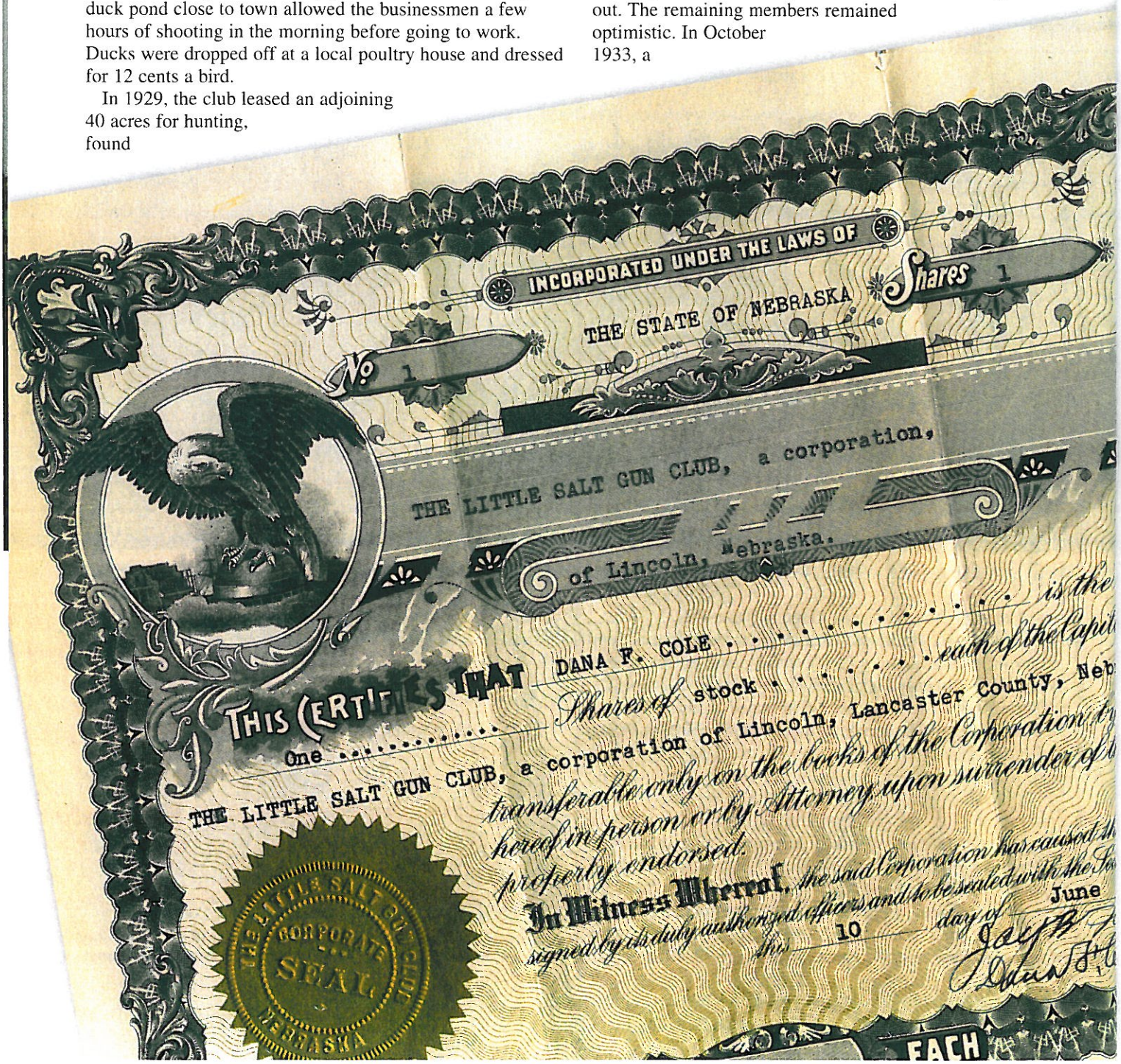
Common yellow-throats – small, secretive warblers of marshy and brushy shorelines – are again common on the wetlands.

The man proposed building a dike to enlarge the pond and sell hunting memberships. Cole loaned the man the money, and that autumn Cole and several friends hunted the pond regularly, killing a total of 850 ducks. Cole visited the company holding the mortgage on the land and said he wanted to buy it. "It isn't worth anything, it's worthless" the banker told him. In the spring of 1928, Cole and seven other Lincoln businessmen purchased the 40 acres of land for $2,000 and formed the Little Salt Gun Club "for recreation and social purposes."

The land was along Little Salt Creek, about two miles above its mouth, today a little more than a mile north of the intersection of Interstate 80 and North 27th Street. Within months the club grew to 10 members, the limit prescribed in the bylaws. The members immediately set about building a shack, pumping water from Little Salt Creek into the pond and refurbishing blinds left by previous hunters. Having a duck pond close to town allowed the businessmen a few hours of shooting in the morning before going to work. Ducks were dropped off at a local poultry house and dressed for 12 cents a bird.

In 1929, the club leased an adjoining 40 acres for hunting, found the shooting there satisfactory, and purchased it the following spring. For the next three decades, those 80 acres were a close-to-home getaway for members, their sons and their friends. In 1930 the club incorporated, retaining its original name and purpose – "to maintain hunting, fishing and recreation grounds; to maintain a club house thereon and other improvements necessary thereto," with the intent of "continuing 99 years." That same year, the club leased the 40 acres with a wetland that adjoined their land on the east, purchased Triumph Hen Scratch from Crete Mills to feed the English call ducks they kept in a pen by their shack, and purchased custom-made steel tanks from Nebraska Boiler in Lincoln and Dempster Manufacturing in Beatrice to be their shooting boxes.

The drought and depression of the 1930s strained even prosperous businessmen – interest payments on the club's mortgage were often late, and several members dropped out. The remaining members remained optimistic. In October 1933, a



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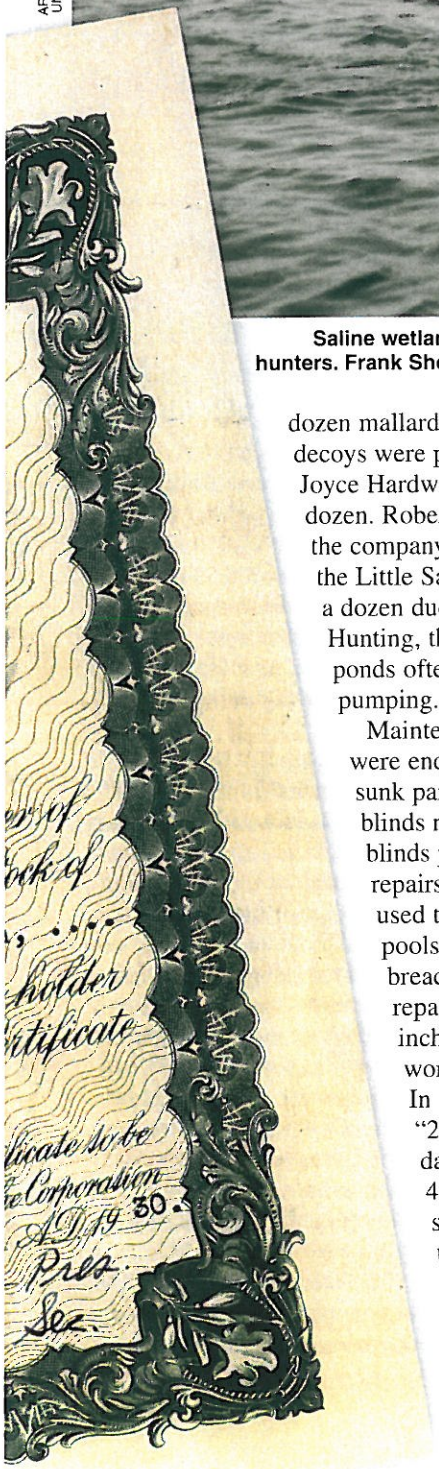
Saline wetlands were common on Lincoln's western and northern edges, and a frequent destination for duck hunters. Frank Shoemaker, the man for whom the marsh is named, took this photo near Lincoln in the early 1900s.



dozen mallard and a dozen redhead decoys were purchased from Henkle & Joyce Hardware Company at $8.50 a dozen. Robert M. Joyce, the Joyce in the company's name, was a member of the Little Salt Gun Club. A week later, a dozen duck heads were purchased. Hunting, though, was poor; the ponds often dry and not worth pumping.

Maintenance and improvements were endless – new blinds were sunk partially underground, old blinds repaired or moved, leaking blinds patched for another season; repairs made to an old tractor used to pump water into the pools before the hunting season; breached, low-level dikes repaired and raised a few more inches. During the 1930s the work was done by hired labor. In 1930 the club paid $75 for "2 men, 3 horses" to do nine days of work "repairing 4 dikes" and the road to the shack. After World War II the work would be done with dozers and dump trucks.

In 1939, James Stuart Sr. acquired a membership in the club. He would hold that membership for decades and serve as club president for many years after World War II. Stuart was one of few surviving officers of the Battle of the Bulge. He began hunting the club's ponds while still in college. "I would get up in the morning and in 20 minutes I would be at the club [grounds]," he recalled. "I would have my hunting clothes on. My going-to-school clothes were in the backseat of the car. I would shoot for 20 minutes or whatever period of time I could, quickly change my clothes and get to an eight o'clock class."

It was Stuart who brought Fred Craft, a former fraternity brother at the university, into the club in 1955, and they shared the same duck blind many mornings, as Fred's son Fritz said: "Watching Lincoln wake up." Fred was a professional engineer and the on-site manager of the club's land into the 1980s. It was Fred's idea to sink burial vaults to be used for duck hunting blinds in 1955.

"He wanted them delivered out at the gun club," Stuart recalled. "The water was sort of out of the lake, and he drew a picture of the lake and he said: 'Now, this is where I want this put.' One was in the center of the big pond. So the guy said, 'Well, okay.' He went out there and he was going to dig the hole. Those burial vaults must have weighed a thousand tons, you know. Of course he got stuck and he had to bring a tractor out and pull his truck out. He called Craft and said: 'Don't ever call me again.' We hunted out of those for years."

It is the nature of the shallow salt marshes to periodically dry during the summer and often remain dry into the autumn hunting season. The club's solution was to pump water from

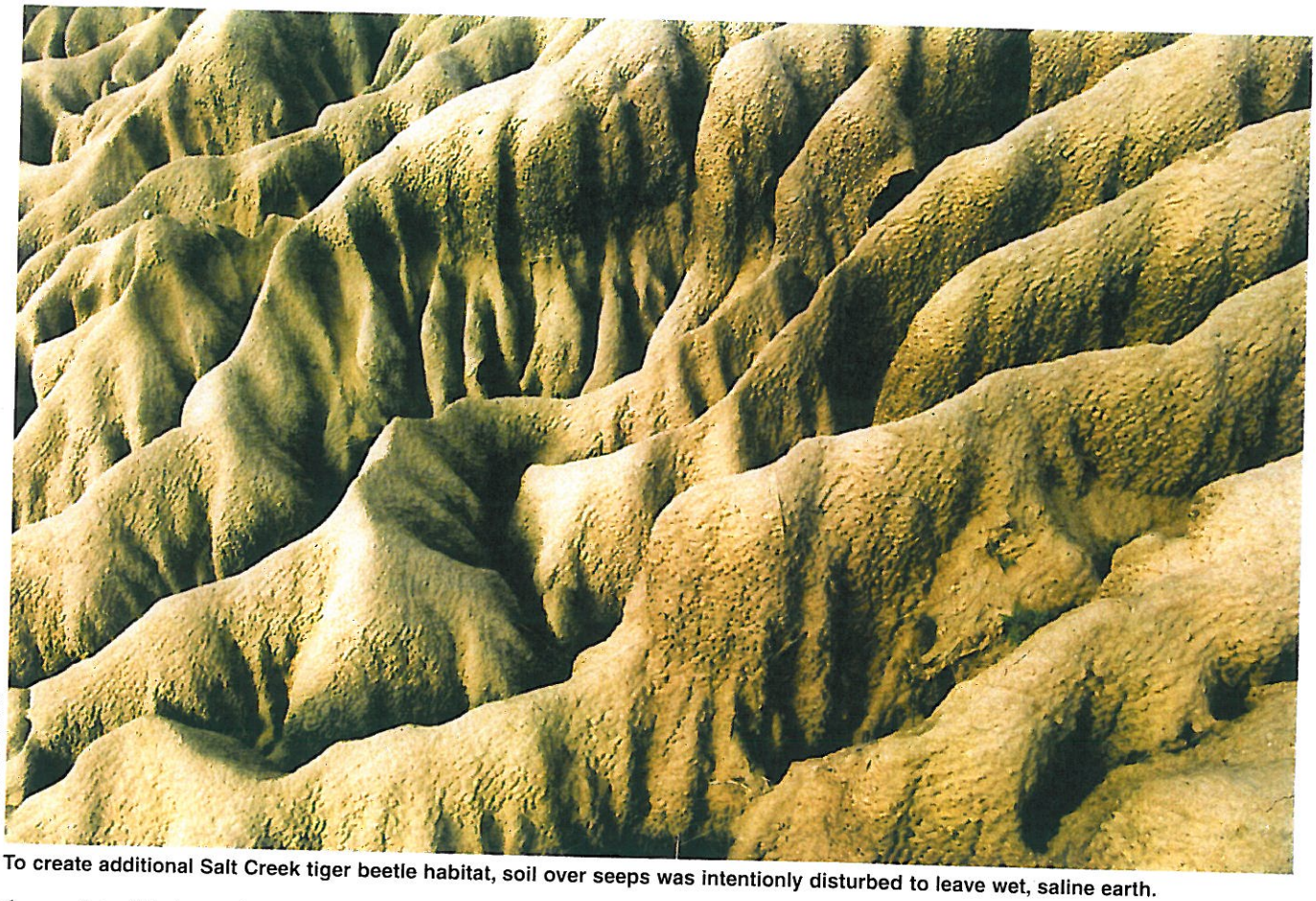


PHOTO BY JON FARRAR

To create additional Salt Creek tiger beetle habitat, soil over seeps was intentionly disturbed to leave wet, saline earth.

the creek to fill the pools. As decades passed, though, it became evident pumping fresh or slightly saline water into the ponds was converting them to freshwater ponds, and freshwater aquatic plants like cattails soon invaded the open waters where the hunters hoped to spread their decoys. Aquatic plant herbicides were tried, and Craft mowed the dry wetlands at different times in the summer to "keep the weeds down."

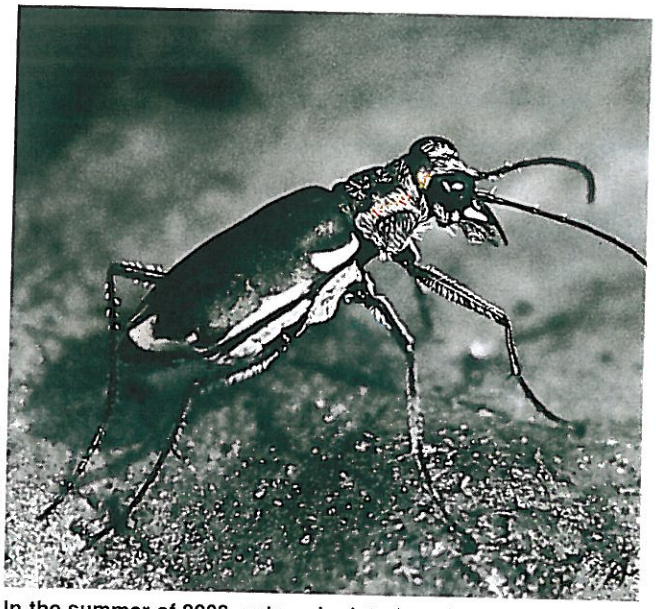


PHOTO BY JON FARRAR

In the summer of 2008, entomologists found 165 Salt Creek tiger beetles, the lowest number since the first survey in 1991.

Throughout the club's history the members hosted dignitaries, among them, on several occasions, Lieutenant Colonel James "Jimmy" Doolittle who led the first air raid on the Japanese home islands April 18, 1942, knowing they would not have enough fuel to return. One of Doolittle's pilots on the one-way raid launched from the carrier Hornet was Lt. Richard O. Joyce who after the war was a member of the club. Joyce's B-25 ran out of fuel over China. He parachuted to safety and spent two more years fighting in the China-Burma-India theater.

In 1960, the club again reorganized, legally becoming the Little Salt Development Company, a name suggesting the members had more in mind for their land than duck hunting. To the members, however, it remained the Little Salt Gun Club. The reorganization was prompted by the purchase of 80 acres of land lying immediately east of the club's land, including 40 acres it had been leasing. By the 1960s, Dana F. Cole was the only charter member remaining. Other members had passed their memberships to sons or their interests had been sold to other prominent Lincoln businessmen. The club considered purchasing land with wetlands to the north, but did not. In 1967, they had concrete rubble dumped in Little Salt Creek to allow foot traffic from one side of the property to the other.

An irrigation well was installed in the early-1980s and made filling the ponds easier, but the older club members seemed to require less hunting to be satisfied. Fred Craft wrote Stuart he was "weary" of the work with pumps, dikes and blinds and wanted to "bring on the young guys." By the 1980s, the land was increasingly being used for pheasant

hunting, and the number of birdwatchers asking permission to use the land was growing.

In 1987, Lincoln purchased 58 acres containing a saline wetland immediately southeast of the club's land as mitigation for wetlands destroyed by street construction in southwestern Lincoln and named it Arbor Lake. Everyone, including the Little Salt Gun Club, was beginning to see the remnant saline wetlands as more than just swamps to be drained and filled to make way for a housing development, or as a "close to home" place to hunt ducks. During the 1990s, the club talked with the Lower Platte South Natural Resources District about a conservation easement and investigated other wetland preservation programs to perpetually protect the land.

Making Shoemaker Marsh

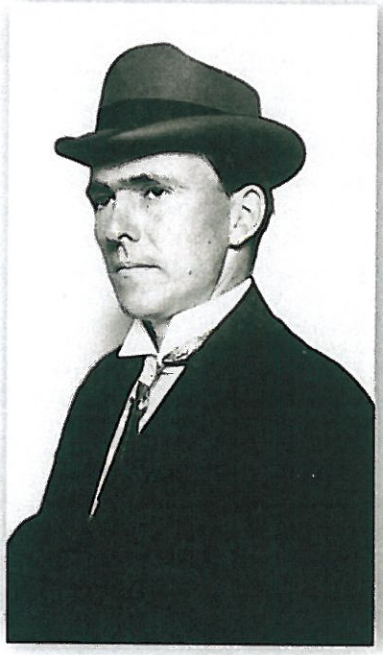
In June 2003, Lincoln purchased the Little Salt Gun Club's 160 acres. The purchase was negotiated by the Nebraska Game and Parks Commission. The two government entities had worked together protecting wetlands before, such as Arbor Lake, which is owned by the city but managed by the Commission. Because the Little Salt Gun Club land was small and so near the city limits, the Commission believed it was not the right fit to be a wildlife management area. Funds for the purchase came nearly equally from a Nebraska Environmental Trust grant to the city and a State Wildlife Grant award to the Commission by the U.S. Fish and Wildlife Service. The Saline Wetland Conservation Partnership, formed in 2002 and composed of governmental agencies and conservation organizations, provides additional funding and expertise managing the property. The new park was named Frank Shoemaker Marsh, after an early day amateur naturalist. Also in 2003, Tom Malmstrom was hired by Lincoln as the Saline Wetland Project Coordinator to oversee managing Shoemaker Marsh and other saline wetlands.

Funding to purchase the property was available in part because the Salt Creek tiger beetle, listed as a State Endangered Species, lives there. Two years after the purchase, the species was listed as endangered by the U.S. Fish and Wildlife Service because it was "one of the rarest insects in the United States." Surveys conducted by University of Nebraska-Lincoln entomologists in the summer of 2008 on saline wetlands known to have the rare beetle produced a total count of only 165 – all the known Salt Creek tiger beetles in the world – of which 29 were on Shoemaker Marsh.

Just as whooping cranes, piping plovers and least terns have had the legal clout and funding to bring protection and restoration to the central Platte River that has benefitted a host of other plants and animals, the rare tiger beetle has been the headline grabber in protecting the state's most rare and vanishing habitat. But tiger beetles are only one of the reasons to preserve saline wetlands – the wetlands provide flood protection, improve water quality and are habitat for many plant and animal species. The highest quality saline wetlands that remain are home to salt-tolerant plants rarely found in mid-continent – saltwort (a Nebraska endangered species), sea blite, saltmarsh aster and others. Eastern saline wetlands were never widespread. The most reliable estimate

Frank Shoemaker

Frank Shoemaker was born in Iowa in 1875, and moved to Omaha in 1897 to work as a stenographer and clerk for Western Union Telegraph Company. His youthful interest in natural history came with him, and he spent as much time as possible exploring nearby Missouri River woodlands in search of birds and insects. He began taking photographs in 1898, using 5-by-7 glass plate negatives. Over 3,000 of his photographs are now housed at the University of Nebraska-Lincoln Archives.



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Frank Shoemaker (1875-1948), an amateur naturalist, was particularly interested in tiger beetles.

During the early-1900s he occasionally accompanied University of Nebraska zoologists and botanists on expeditions to the Sandhills and the Panhandle, and in 1911 he was a "special student" at the university. Even before working in Lincoln, Shoemaker had traveled to the saline wetlands in northern Lancaster County to observe and photograph nature, particularly the many species of tiger beetles found there, which he collected extensively for specimens. He wrote tiger beetles were present in such "great numbers" they sometimes flushed ahead of him and "the ground seemed to rise and walk away."

Shoemaker never married and held a variety of jobs over his lifetime, leaving him free to travel for nature study. From 1910 through 1913 he worked as a photographer for universities in Lincoln and Omaha, and was a clinical photographer for the University Hospital in Omaha in the late-1920s and early-1930s. During the Depression he was a photographer for the Federal Art Project and held odd jobs in Sioux and Dawes counties. He lived in California from 1928 through 1942, when he returned to Lincoln. Shoemaker lived modestly, working as needed to support himself, pursuing his passion in life until his death in 1948.

– Information from a three-part article series about Frank Shoemaker (March, April and May 1987 *NEBRASKAland*) by Jim Ducey.

PHOTO BY ERIC FOWLER

An aerial view of Shoemaker Marsh, looking southwest, shows Little Salt Creek's meandering course and three wetlands areas.

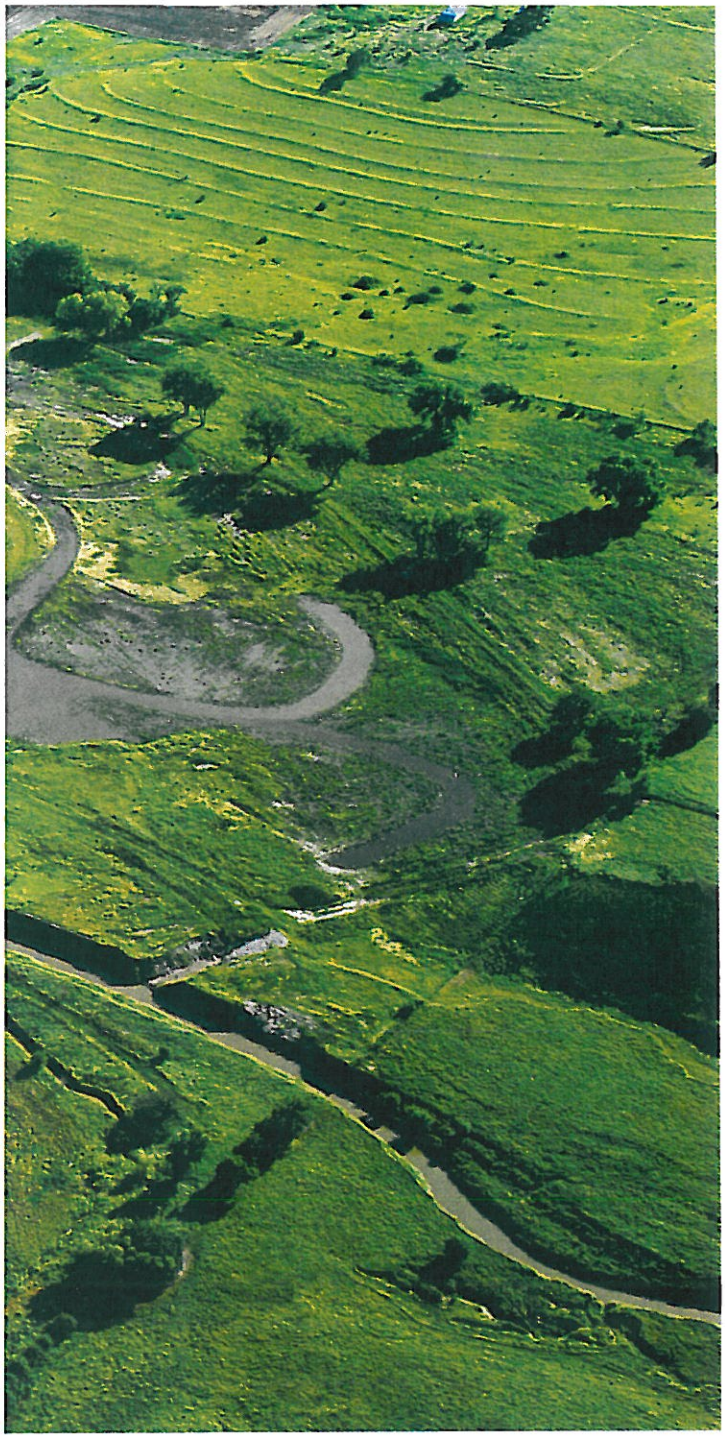
is about 20,000 acres at the time eastern Nebraska was settled. Today, less than 4,000 acres remain and many of those are highly degraded.

Complex Hydrology

Where does the saline water found in wetlands such as Shoemaker Marsh come from? The answer is deeply buried in ancient shales laid down in Cretaceous times, the Age of Reptiles, some 70 to 160 million years ago when much of central North America was covered by a vast inland ocean of marine waters. Overlying those deeply-buried shale deposits is Dakota sandstone, a soft, permeable rock that outcrops in eastern Nebraska.

For hundreds of thousands of years these salty waters have percolated upward, wicked to the surface during drought and filling the shallow basins of the upper Salt Creek drainage. During the dry months of summer, water in the basins evaporates and the salts precipitate out on the surface. With each cycle of replenishment and evaporation the soil became more saline.

While filling with garbage, construction rubble and soil caused the direct destruction of many saline wetlands in and near Lincoln, many were degraded in a more insidious way – the alteration of the complex hydrology that created and maintained them. The principal instrument was the straightening and confining of Salt Creek with levies to prevent it from flooding, flooding Lincoln in particular.



Once confined and straightened, the velocity of Salt Creek increased, its channel cutting deeper; and channels of smaller streams feeding into it, like Little Salt Creek, also carved deeper beds, creating steep, eroded banks. Periodic floods less frequently spilled into floodplain pools and basins. The water table fell and saline waters were less efficiently wicked to the surface. All of these changes were decades in the making.

Completely restoring the saline wetland's natural hydrology will never be feasible. The best managers can hope for is simulating the incredibly complex system. Before the first yard of earth was moved on Shoemaker Marsh, Malmstrom and the Saline Wetland Conservation Partnership gathered the best experts in many natural resources fields to advise the work. A technical advisory committee was formed, composed of representatives of all 11 local, state and federal sponsoring agencies and organizations, as well as professionals representing various scientific fields – soil scientists, hydrologists, engineers, botanists, entomologists, ornithologists – including three biologists from the Commission who had worked with wetland restoration for many years. A smaller core team spent days becoming familiar with the site, and met frequently to develop concepts for the restoration. Periodically they presented their ideas to the advisory committee for review and comment. A private engineering firm specializing in wetland restoration was contracted to develop the actual plan, which was reviewed and revised several times by both planning teams. The plan was completed in July 2006, and earthwork on the site was done between September 2006 and April 2007.

Prior to the construction phase, 21 acres of uplands that had been a soybean field were seeded to native grasses and forbs. Over the years, trees had encroached on the site's small remnant patches of native grassland. Many of the invasive trees were removed. "There was only one tree on the place when we bought it," Dana Cole recalled. Malmstrom said the objective is not to restore the entire area to grassland, but to leave some trees as habitat for woodland and woodland-edge species, particularly migratory songbirds. The trees on the margins of the area serve as visual barriers to enhance the experience of visitors in the wetlands. Additionally, Salt Creek tiger beetles are known to be attracted to bright lights and will fly considerable distances to reach them, making the beetles vulnerable to predation and disrupting the mating cycle. Should development encroach closer to Shoemaker, it is hoped the trees will serve as a visual barrier to the beetles as well.

About 50 acres of saline wetlands were present when the land was purchased, but others had become freshwater wetlands and were choked with aquatic vegetation, particularly cattails. Restoring salinity to the wetlands and allowing saline plant communities to recolonize was the primary objective of the restoration plan. Low-level dikes were created or repaired on each of the site's three wetland pools. Each dike has a

PHOTO BY JON FARRAR

Saltwort, a Nebraska endangered species, is a compact, low-growing, succulent plant found on wet saline soils.

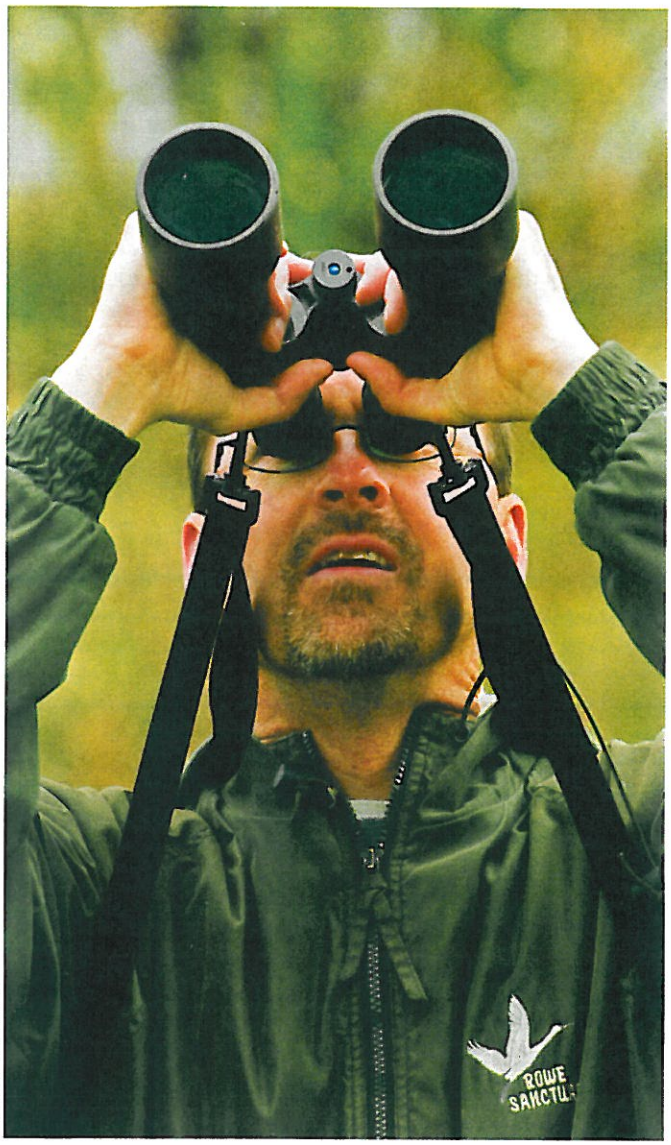


PHOTO BY JON FARRAR

Kevin Poague and other birders find not just wetland species on Shoemaker Marsh, but also grassland and woodland birds, including American bitterns, opposite.

control structure so the water level in the pools can be regulated and surplus water shunted to the creek. The natural cycle of saline wetlands – wet in the spring, dry in the summer and wet again in the autumn – can be simulated, explained Commission wetlands biologist Randy Stutheit, who has been on the core team since Shoemaker was purchased. "It gives us better control over both the freshwater and saline waters entering the wetlands." Malmstrom usually lowers the pools after the spring migration of waterbirds, and raises the water level again in the autumn to provide migration habitat. Water in the pools is completely dependant on precipitation, saline seeps and runoff. No creek or groundwater is pumped into the pools.

A consultant who worked on the project determined that numerous layers of saline soils existed in the soil column beneath the wetland's surface. Soil salinity was about 15 times greater 18 inches below the surface. During the earthwork phase of the project, silt was removed from some of the wetlands to uncover the saline soils. Earthwork avoided sites where rare saline plant communities existed. A berm was built on the north and east side of the wetland near 27th Street to trap sediment from runoff around the wetland.

Almost a mile of Little Salt Creek meanders through Shoemaker, so planners also addressed the problem of its down-cutting bed. The relationship between the creek, the wetlands, and the groundwater connecting them is not fully understood, but planners and managers knew the connection was and is important. Two small, in-stream weirs were installed, one on the north end of the property and one on the south end. Most of the concrete rubble the duck club had put in the creek was removed and a large rock weir was installed at the same location near the middle of the area, creating a four to five feet rise in the stream level. The weirs were built only high enough to stop Little Salt Creek from continuing to cut deeper. Higher weirs might have reversed the down-cutting by allowing sediment to accumulate upstream and re-build the streambed, but there was concern that could increase flooding on upstream private land during high-water periods.

Historically, Salt Creek tiger beetles were found on saline wetlands and wet salt flats. Since the destruction or degradation of most of these wetlands, the beetle's last retreat has been the mudflats and saline seeps on Little Salt Creek. Commission wetlands specialist Ted LaGrange, a member of the technical advisory committee, proposed additional stream-side tiger beetle habitat could be created by removing the vegetation at some of the saline seeps. At two locations where seeps were evident on Little Salt Creek's banks, backhoes were used to pull back the soil overburden, leaving wet, saline mudflats, the preferred habitat of Salt Creek tiger beetles. Tiger beetles were found on both sites in 2008.

Shoemaker's Future

No one expects the marsh to ever be what it once was, but every year it should be closer as the renovation work begins to bear fruit and more is learned about saline wetland hydrology. Saline plants should return and flourish fairly quickly in the restored wetlands. The restoration of a diverse prairie plant community will take longer. Simulating the complex hydrology that created and maintained the wetlands could require decades.

"What we did at Shoemaker," LaGrange said, "was to pull together the best expertise we knew of, come up with a plan we could implement and now we are watching how it plays out. It is an evolving process. Many of the things we are trying will probably work, some will not, or not as well as we'd like, and we will tweak what we are doing."

Even though Shoemaker is a city park, it will never be a "traditional park setting," Malmstrom said. "It will remain primitive, a park in the rough, but a great place for hikes or birdwatching close to the city."

Shoemaker Marsh has only minimal visitor development. There is a parking area off North 27th street, a handicap walkway to an overlook high above Little Salt Creek, another overlook near a wetland, a pedestrian bridge over the creek allowing access to the western half of the property, and dirt trails winding throughout. It is an ecologically significant site, one that will grow in complexity as the clock is slowly turned back. ■

PHOTO BY JON FARRAR

Nebraska's
Eastern Saline Wetlands

Come discover the beauty of Nebraska's most unique wetland resource. Teaming with life and history, Nebraska's Eastern Saline Wetlands offer visitors a number of outdoor activities such as wildlife watching, nature viewing, photography, and short hikes.

Nestled in the swales and depressions of the Salt Creek, Little Salt Creek, and Rock Creek drainage basins in Lancaster and Saunders counties, these wetlands are replenished by saline groundwater, which percolates through porous Dakota sandstone and underlying bedrock formations. The saline marshes and salt basins once covered an area of over 20,000 acres. Early settlers were enchanted by the abundance of waterfowl, fish, and other wildlife that the landscape attracted. The natural salt deposits appealed to some who believed that the salty brine could be harvested. In the late 1800s several commercial ventures were extracting the basins' wealth of salt. Although the salt industry was short-lived, the early prospect of developing the saline resources played a part in the selection of the City of Lancaster (renamed Lincoln) as the site of the new territorial capital.

Today, less than 4,000 acres of the saline wetlands remain. During the last century, more than 230 species of birds have been reported from the salt basins. The Salt Creek tiger beetle (*Cicindela nevadica lincolniana* Casey), a state and federally listed endangered species, is endemic to Nebraska eastern saline wetlands. These saline wetlands represent one of Nebraska's most unique and threatened natural resources.

The Nebraska Environmental Trust
preserving NATURAL NEBRASKA™ for future generations

saline wetlands conservation partnership

Several saline wetland sites offer an interesting opportunity to experience this unique ecosystem. Follow these directions to four saline wetland locations conveniently located off I-80.

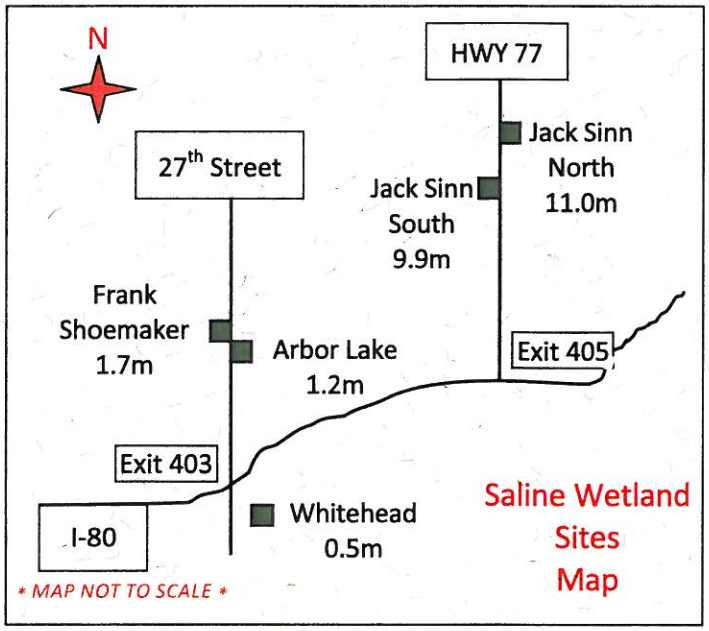
Whitehead Wetlands – take exit 403; go south on 27th St approx. 0.3m.; turn left on Whitehead Rd, head east for approx. 0.2m.to overview deck.

Arbor Lake – take exit 403; go north on 27th St approx. 1.2m.; parking lot on right.

Frank Shoemaker Marsh – take exit 403; go north on 27th St approx. 1.7m; parking lot on left.

Jack Sinn Wildlife Management Area (WMA), south complex – take exit 405; go north on highway 77 approximately 9.7m; turn left on Little Salt Rd. head west for approx. 0.2m to parking lot on right.

Jack Sinn WMA, north complex – take exit 405; go north on highway 77 approximately 10.7m; turn right on Ashland Rd. head east approx. 0.3m to parking lot on right.



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