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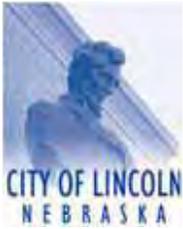
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CITIZEN'S ADVISORY COMMITTEE
MEETING 1
APRIL 15, 2008

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PROJECT: Little Salt Creek Watershed Masterplan

MEETING: Citizen's Advisory Group Meeting

DATE: 4/15/08

TIME: 2:30 – 4:00 pm

LOCATION: Lower Platte South Natural Resource District

Time	Topic
2:30 – 2:45	Introduction
2:45 – 3:15	Presentation
3:15 – 3:45	Small Group Activity
3:45 – 4:00	Discussions

Meeting Notes
Little Salt Creek Watershed Master Plan
Citizens Advisory Committee Meeting

April 15, 2008

The first meeting of the Citizens Advisory Committee (CAC) for the Little Salt Creek Watershed Master Plan was held on April 15, 2008 at the Lower Platte South Natural Resources District Office, 3125 Portia Street in Lincoln, Nebraska.

Craig Schroeder from the Heartland Center for Leadership Development began the meeting at 4:35 P.M. Present were:

Don Helmuth
Larry Hudkins
Merle Jahde
Susan Kuck
Jack Nagel
Gene Petersen
David Potter
Harold Roper
Dave Sands
Vicky Wheeler
Mark Whitehead
Ed Ubben, Lower Platte South NRD
Mark Meyer, Intuition & Logic
Susan McCrary, Intuition & Logic
Ed Kouma, City of Lincoln, Watershed Management Office
Ben Higgins, City of Lincoln, Watershed Management Office
Paul Zillig, Lower Platte South NRD
Craig Schroeder, Heartland Center for Leadership Development
Carmen Perzinski, Heartland Center for Leadership Development

Craig introduced Paul Zillig for opening comments and introduction of team members. Paul then introduced Mark Meyer from Intuition & Logic, who gave a PowerPoint presentation discussing the mission, goals and progress to date. The meeting was opened up to discussion and questions.

The suggestion was made that the newsletter and notebook could have been made available to the CAC team sooner. They might also like to have a joint meeting with the Technical Advisory Committee.

The questions and comments made by the team members are reflected in the group exercise. The team was divided into groups of three or four and asked to prioritize concerns in response to two questions. Then each small group reported to the group as a whole.

Question 1: What issues are most likely to demand the most attention?

- Protecting habitat and its diversity.
- Balancing reasonable development opportunities and watershed/environmental concerns.
- What is the effect of recommendations on current and future land use?
- Keep as much land in private ownership for both cost and future economic reasons.
- Government control vs. property rights.
- Reasonableness of expenses for projects – benefit vs. cost.
- Agency coordination after the planning process (i.e. everyone singing from the same choir book).

Question 2: What opportunity areas seem most critical to you?

- Education - inform public what Little Salt Creek was like and what it has become.
- Develop win/win solutions to balance development/environmental/agricultural concerns.
- Projects based on data research and cost/benefit analysis.
- Cost to taxpayers and landowners.
- Maintain local control and avoid reducing private property tax base.
- Use carrots rather than sticks. Give property owners incentives to make improvements. Use a voluntary approach – more policy than regulation.
- Preservation of agriculture.

Team members were reminded to fill out the comment cards or contact staff people with questions and encourage neighbors to attend the Open House on April 22.

Meeting was adjourned at 6:00 P.M.

Watershed Master Planning Little Salt Creek Basin Progress Summary July 2008

We are in the data collection and analysis phase of the Little Salt Creek Watershed Masterplan. Generally, we have gathered the large volume of existing data that is available for the watershed and we are generating new data from our Hydrologic & hydraulic, geomorphic, soils, and public involvement efforts. The following is an update on our progress:

WATERSHED INVENTORY

We have completed gathering the available GIS data from the City, County, NRD and other available sources for use as the base for our data gathering effort. We will continue to develop the data we produce as a result of this watershed master plan and make it accessible through the GIS system.

HYDROLOGY AND HYDRAULICS

The watershed hydrology is complete including evaluation of stormwater runoff and stream flows throughout the watershed for the 2-, 10-, 50-, 100-, and 500-year storm events. The model was calibrated using existing stream gauge data.

The hydraulic model is prepared and awaiting hydraulic structure survey data from our team survey crew. Over 70 stream structures (bridges, culverts) were surveyed for use in the model. Once this data is entered, we will begin running the hydraulic model and delineating floodplains.

WATER QUALITY

The Water Quality data collection is scheduled to begin in September, 2008.

GEOMORPHIC

The geomorphic field data collection, data reduction and diagnosis of dominant process are complete. We have also completed a supplemental photo analysis and diagnosed dominant process for those stream reaches where no field data was collected.

SOILS ASSESSMENT

Soil field sample collection is complete. Lab testing is being conducted and is scheduled for completion by the end of July 2008. Surveying selected seep elevations is tentatively scheduled for September of this year.

STRUCTURES

Survey control is established for the watershed and the hydraulic structure survey is scheduled for completion by the end of July 2008.

PUBLIC INVOLVEMENT & FACILITATION

The first TAC, CAC, and Public Meeting are complete. The second TAC meeting is scheduled for July 17, 2008 and the second CAC meeting is scheduled for the end of summer/early fall 2008. The first newsletter was mailed in April 2008 and the second newsletter was mailed in July 2008.

DELIVERABLES

The final report appendix section for the Aerial Photo Analysis has been submitted and reviewed. The draft Geomorphic report section and the Reach Summaries section including the supplemental photo analysis has been submitted for review. Website data for to-date progress and TAC, CAC, and Public Meeting information and notes were submitted and are available on the City website at <http://www.lincoln.ne.gov/city/pworks/watrshed/>. The draft Hydrology report section is scheduled for completion by the end of July 2008.

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CITIZEN'S ADVISORY COMMITTEE
MEETING 2
JANUARY 29, 2009

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INTUITION & N LOGIC

450 N. New Ballas Rd., Suite 264N St. Louis, MO 63141
314.432.2543 314.432.5812



PROJECT: Little Salt Creek Watershed Masterplan
I&L PROJECT NO.: 724
RE: CAC 2ND MEETING

DATE: 1-29-09

TIME: 5:00pm – 6:30pm

LOCATION: Loren C. Eiseley Library, 1530 Superior Street

Attendees:

Ed Kouma – City
Nicole Fleck-Tooze – City
Mike DeKalb – County
Randy Graham – PBS&J
Milan Wall – Heartland
Matt Harper – I&L
Doug Emery
David Grimes
Gary Hellerich
Don Helmuth
Chris Helzer
David Potter
Dave Sands
Mark Whitehead

Ben Higgins – City
Paul Zillig – LPSNRD
Doug Pillard – County
Kurt Mantonya – Heartland
Mark Meyer – I&L
Larry Hudkins
Merle Jahde
Susan Kuck
Don Linscott
Jack Nagel
Gene Petersen
Harold Roper
Vicky Wheeler

Who	Topic
Ed Kouma	<ul style="list-style-type: none"> • Introductions • Review Purpose of Watershed Master Plan • Review Study Goals and Objectives
Mark Meyer, PE and Randy Graham, PE (for H&H Update)	<ul style="list-style-type: none"> • Progress Updates – Mark Meyer, PE <ul style="list-style-type: none"> ○ From Our Last Meeting ○ Watershed Inventory ○ Soil Assessment ○ Stream Stability (geomorphic analysis) ○ H&H – Floodplain Mapping (Randy Graham, PE) <ul style="list-style-type: none"> ▪ Floodplain and Floodway ○ Water Quality Summary <ul style="list-style-type: none"> ▪ Bio-assessment results ▪ Water Quality Sampling results ○ Seep Elevations ○ Recommended Stormwater Standards ○ Watershed Master Plan Recommendations <ul style="list-style-type: none"> ○ 19 Capital Improvement Projects ○ 6 Structural Improvement Projects ○ 5 Natural Resources Projects ○ Public Involvement ○ From Our Last Meeting ○ What's next?
Ed Kouma	<ul style="list-style-type: none"> • Other discussion and adjourn

Meeting Notes
Little Salt Creek Watershed Master Plan
Citizens Advisory Committee Meeting

January 29, 2009

The second meeting of the Citizens Advisory Committee (CAC) for the Little Salt Creek Watershed Master Plan was held on January 29, 2009 at the Loren C. Eiseley Library, 1530 Superior Street in Lincoln, Nebraska.

The meeting was started by Ed Kouma at 5:00pm.

Present were:

David Grimes
Merle Jahde
Susan Kuck
Jack Nagel
Gene Petersen
David Potter
Vicky Wheeler
Mark Meyers, Intuition & Logic
Matt Harper, Intuition & Logic
Ed Kouma, City of Lincoln, Watershed Management Office
Ben Higgins, City of Lincoln, Watershed Management Office
Paul Zillig, Lower Platte South NRD
Milan Wall, Heartland Center for Leadership Development
Kurt Mantonya, Heartland Center for Leadership Development

Ed Kouma began the PowerPoint presentation by discussing the purpose, goals and objectives of the Watershed Master Plan, and then introduced Mark Meyer from Intuition & Logic who gave a progress update on each component of the Master Plan. The main updates for this meeting included water quality/bio-assessment report, the updated floodplain/floodway limits and Capital Improvement Projects.

The following is a summary of the major discussions:

Floodplain/Floodway Limits

- Updated floodplain limits maybe adopted by FEMA by 2012.
- As part of the Master Plan, all documentation will be ready to submit to FEMA.
- The property owners can come and talk to the City about the floodplain limits on their property.

Soil Assessment

- What does dispersive mean?
- High erodible soils. Once the soil gets wet, it loses its cohesive properties and in turn becomes high erodible.

BMPs and Water Quality Results

- Aside from detention ponds, other BMPs include bio-retention, rain gardens, and water quality BMPs as part of the outfall structure of the detention ponds.
- Past water quality testing was done in 2000. Our water quality and bio-assessment site matched the collection sites from the 2000 tests.

Capital Improvement Projects

- The grade controls will be constructed of either planted rock or sheet piles depending on the soil characteristics (dispersive soils – sheet piles, non-dispersive soils – planted rock).
- The stilling basins will be constructed of planted rock because they are out of the Salmo Soils (dispersive characteristics).
- The appropriate rock size needs to be used for these structures. Currently farmers just dump rock in the channel and it gets washed away.
- There were concerns that the woody debris will block the bridges and culverts.
- This is true, but it is a balancing act. The debris jams will form and continue to wash away and rebuild with each rain event.
- CIP 11 could possibly be replaced when the highway comes through (State Project).

Other Discussions

- What is Salt Creek doing?
- Salt Creek is no long down cutting.
- Is there a re-evaluation of the Master Plan?
- Yes. As the CIPs are built, someone at the City or NRD is responsible to make sure they are constructed property and maintained.
- Recommendation that NW 12th Street, north of Raymond Road, be closed to public traffic. It is dirt road that is frequently flooded and muddy and often times a victim of trash dumping.
- Recommendation to add more deer crossing signs near the intersection of 14th Street and Mill Road.

Meeting was adjourned at 6:30 P.M.

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April 27, 2009

«Title» «First_Name» «Last_Name»
«Address_Line_1»
«Address_Line_2»
«City», «State» «ZIP_Code»

RE: Little Salt Creek Watershed Master Plan DRAFT Report

Dear «Title» «Last_Name»:

Thank you again for your involvement with the Little Salt Creek Watershed Master Plan Citizen's Advisory Committee. Your review and input to date has been invaluable to this effort. The Draft Little Salt Creek Watershed Master Plan Report is complete and ready for your review and comment. For your convenience, we have enclosed the DRAFT Executive Summary of the Master Plan. The entire DRAFT report will be available on the project website beginning May 6th for your use if you would like to review a particular section of the report. The website address is:

<http://www.lincoln.ne.gov/city/pworks/watrshed/mplan/lsc/index.htm>

Please review these items at your convenience over the next few weeks and direct any comments in writing to Ed Kouma at the City of Lincoln no later than May 22nd. Ed can be reached by mail or email at the following address:

Ed Kouma
901 North 6th Street
Public Works and Utilities, Street Maintenance Building
Lincoln, NE 68508
ekouma@lincoln.ne.gov

The next and final CAC Meeting will be on May 14, 2009 at the Lower Platte South NRD office from 5:00pm to 6:30pm. The NRD office address is:

Lower Platte South NRD
3125 Portia Street
Lincoln, NE 68501

Please plan on attending with questions and comments for discussion. If you have any questions or would like additional information, please call me at (636) 777-3000 to discuss. Thank you again and I look forward to seeing all of you again on the 14th.

Best regards,

Mark Meyer, P.E
Principal Civil Engineer

CITIZEN'S ADVISORY COMMITTEE
MEETING 3
MAY 14, 2008

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INTUITION & N LOGIC

16253 Swingley Ridge Rd, Suite 100 St. Louis, MO 63017
636-777-3000 P 314.432.5812 F



PROJECT: Little Salt Creek Watershed Masterplan
I&L PROJECT NO.: 724
RE: CAC 3rd MEETING

DATE: 5-14-09

TIME: 5:00pm – 6:30pm

LOCATION: Lower Platte South NRD Office, 3125 Portia Street

Invitees:

Ed Kouma – City
Nicole Fleck-Tooze – City
Mike DeKalb – County
Randy Graham – PBS&J
Milan Wall – Heartland
Matt Harper – I&L
Doug Emery
David Grimes
Gary Hellerich
Don Helmuth
Chris Helzer
David Potter
Dave Sands
Mark Whitehead

Ben Higgins – City
Paul Zillig – LPSNRD
Doug Pillard – County
Kurt Mantonya – Heartland
Mark Meyer – I&L
Larry Hudkins
Merle Jahde
Susan Kuck
Don Linscott
Jack Nagel
Gene Petersen
Harold Roper
Vicky Wheeler

Who	Topic
Ed Kouma, PE	<ul style="list-style-type: none"> • Introductions • Review Purpose of Watershed Master Plan • Review Study Goals and Objectives
Mark Meyer, PE	<ul style="list-style-type: none"> • Little Salt Creek Watershed Master Plan FINAL DRAFT REPORT Review • What's Next • Comments and Discussion Regarding Master Plan
	<ul style="list-style-type: none"> • Adjourn

Citizens Advisory Committee Meeting Summary May 14, 2009

The Little Salt Creek Watershed Master Plan Citizens Advisory Committee (CAC) met for its third scheduled meeting on May 14, 2009, at the offices of the Lower Platte South Natural Resources District at 3125 Portia Street in Lincoln, Nebraska. Five TAC members attended, along with seven members of the project team.

Ed Kuoma of the City of Lincoln opened the meeting with an overview of the agenda and a review of the city's approach to watershed management master planning and the key elements of each project. Mark Meyer of Intuition & Logic presented the elements of the plan, which is nearing completion and noted that the current draft is available in total on the city's website. He reviewed the proposed Capital Improvement Projects (CIPs) contained in the plan.

Discussion after the presentation focused on these topics:

- Whether costs benefits of the proposed projects were considered.
- How certain were the projections for continued incision in the stream bed, given the history of incision in this watershed.
- Methods for funding the proposed improvements.
- Why today's technology may produce different results in terms of floodplain boundaries, versus earlier studies.
- Explanation of why the July 1993 flood was considered a 500-year event.
- Whether the proposed structures would change the rate of incision.
- What was the total cost of the master plan project.
- Whether hard copies of the plan, in it current form, could be provided to committee members on request.
- What restrictions a landowner may face if putting in a culvert on his own.
- How to get permits to build in a floodplain.
- Steps in securing Corps of Engineers approval for CIPs.

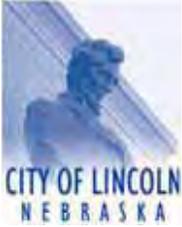
Mark thanked the committee for its suggestions and asked them to make any subsequent comments in writing, using either the comment sheet provided at the meeting or via e-mail. He said that committee members were asked to send their comments by May 22. With that, the meeting was adjourned.

Note: One member, Vicky Wheeler, completed a comment sheet indicating the following:

“Excellent plan, solve the problems while they're still minor and go to the source of the problem. It's appropriate to spend 'minor' funds before the problem escalates and 'major' funds are required.”

TECHNICAL ADVISORY COMMITTEE
MEETING 1
APRIL 15, 2008

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PROJECT: Little Salt Creek Watershed Masterplan
MEETING: Technical Advisory Group Meeting

DATE: 4/15/08

TIME: 4:30 – 6:00 pm

LOCATION: Lower Platte South Natural Resource District

Time	Topic
4:30 – 4:45	Introduction
4:45 – 5:15	Presentation
5:15 – 6:00	Discussion

Minutes
Little Salt Creek Watershed Master Plan
Technical Advisory Committee Meeting

April 15, 2008

The first meeting of the Technical Advisory Committee for the Little Salt Creek Watershed Master Plan was held on April 15, 2008 at the Lower Platte South Natural Resources District Office, 3125 Portia Street in Lincoln, Nebraska.

Craig Schroeder from the Heartland Center for Leadership Development began the meeting at 2:35 P.M. Everyone introduced themselves. Present were:

John Bender, Nebraska Dept. of Environmental Quality
Terry Genrich, City of Lincoln, Parks and Recreation
Bob Harms, U.S. Fish and Wildlife Service
Edwin Harvey, University of Nebraska
Thomas Malmstrom, City of Lincoln, Parks and Recreation Department
Dennis Schroeder, Natural Resource Conservation Service
Dan Schulz, Lower Platte South NRD
Ed Ubben, Lower Platte South NRD
Mark Meyers, Intuition & Logic
Susan McCrary, Intuition & Logic
Randy Graham, PBS&J
Ed Kouma, City of Lincoln, Watershed Planning Office
Ben Higgins, City of Lincoln, Watershed Planning Office
Mike Dekalb, Lincoln-Lancaster County Planning Department
Paul Zillig, Lower Platte South NRD
Craig Schroeder, Heartland Center for Leadership Development
Carmen Perzinski, Heartland Center for Leadership Development

Craig introduced Mark Meyer from Intuition & Logic, who made a PowerPoint presentation discussing the mission, goals and progress to date. The meeting was opened up to discussion and questions by team members.

Much of the discussion centered on the fact that this study will be different from previous watershed master plans. Only a small portion of the watershed is within the city limits, and the remainder is mainly agricultural with very little development identified in the 2030 Comprehensive Plan.

Additional points to consider were these:

- Look at the existing study for the lower watershed, evaluate and adjust.
- The erosion is not entirely due to surface water or bank instability, ground water flow patterns must be taken into consideration.
- Find out what's there. Discover the processes driving the instability. Identify the floodway/floodplain.
- Make sure we are not creating future problems in the basin by trying to fix problems with erosion control, bank stability. If we can improve things, do it. If not, leave it alone.

- Create a viable master plan that will be useful to the county, not create future problems.
- Good resource management, land easement management. This is a unique area. The water quality also depends on sedimentation and salinity. There will be other people using the data to develop critical knowledge of the area.
- The basin doesn't behave like a typical watershed; it's ground water dependent with different areas having varying sodium and chloride levels. There should be continuous ground water monitoring.
- There is little known about the wetlands and the Tiger Beetle. The Tiger Beetle count keeps going down. The critical habitat is the bare essential and hasn't been finalized. May need to look at recovery of Tiger Beetle boundaries. Raising the water level isn't going to restore habitat. The beetles are now in the lower parts of the watershed.

The meeting was adjourned at 4:00 P.M.

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TECHNICAL ADVISORY COMMITTEE
MEETING 2
JULY 17, 2008

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PROJECT: Little Salt Creek Watershed Masterplan
I&L PROJECT NO.: 724
RE: TAC 2ND MEETING

DATE: 7/17/08

TIME: 1:00pm – 4:00 pm

LOCATION: Lincoln Engineering Services Facility, 531 Westgate Blvd., Suite 100, Training Room

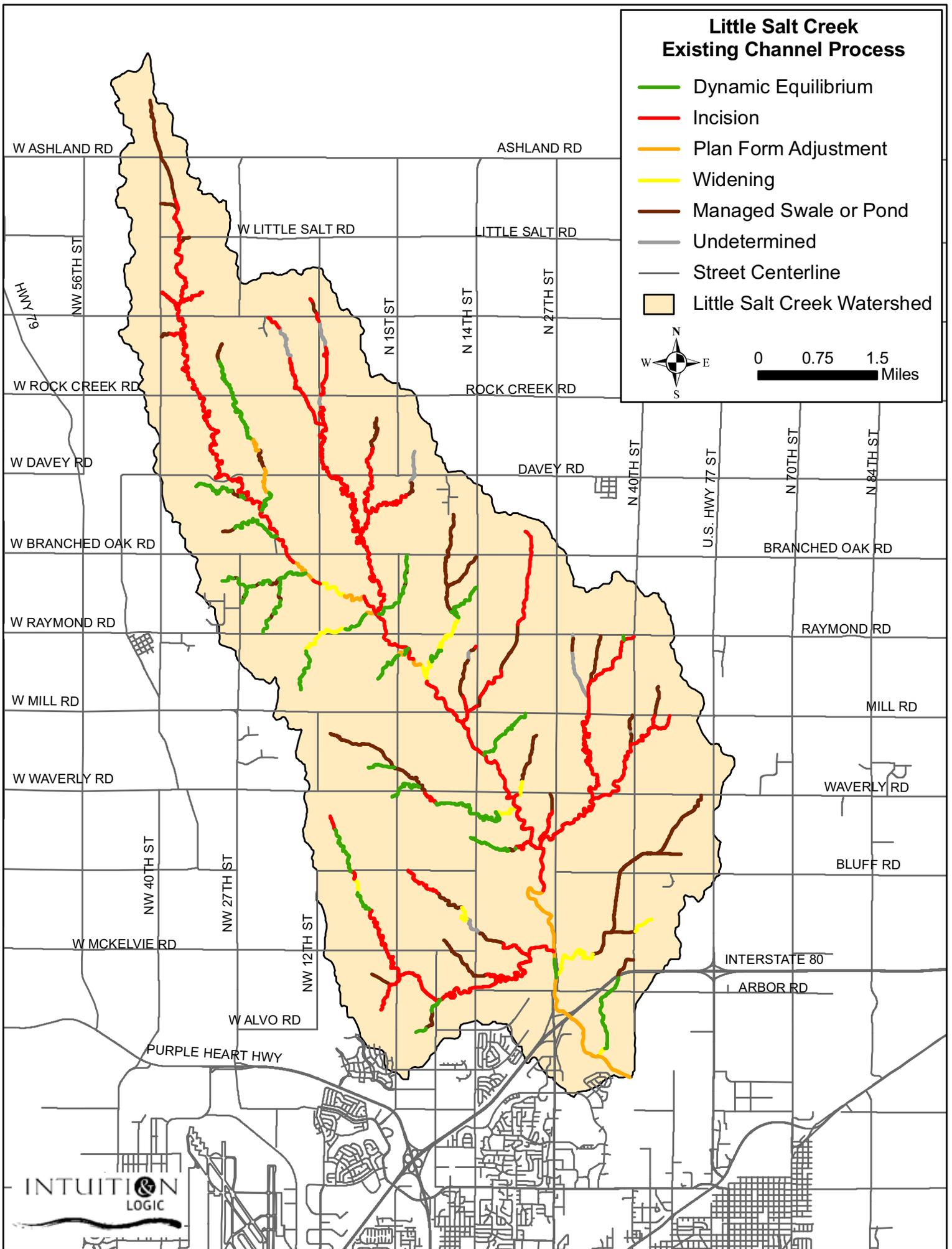
Time	Topic
1:00 - 1:15	<ul style="list-style-type: none"> • Introductions • Purpose of Watershed Master Plan • Study Goals and Objectives
1:15 - 1:20	<ul style="list-style-type: none"> • Update on recent rain events
1:20 - 1:30	<ul style="list-style-type: none"> • Major Study Components • Progress Updates <ul style="list-style-type: none"> ○ Watershed Inventory Complete ○ Hydrology Complete ○ Hydraulic Progress Update ○ Soils Boring and Analysis Progress Update ○ Stream Stability Progress Update
1:30 - 2:00	<ul style="list-style-type: none"> • Stream Stability Analysis Methods <ul style="list-style-type: none"> ○ Background Data and Historic Aerial Photo Analysis ○ Field Work • Initial Stream Stability Findings – Dominant Processes and future Stream Instability
2:00 - 4:00	<ul style="list-style-type: none"> • Discussion Themes from last TAC meeting • Questions for discussion • What's Next

Little Salt Creek Existing Channel Process

- Dynamic Equilibrium
- Incision
- Plan Form Adjustment
- Widening
- Managed Swale or Pond
- Undetermined
- Street Centerline
- Little Salt Creek Watershed



0 0.75 1.5 Miles



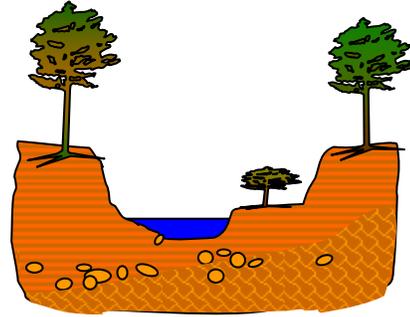
Little Salt Creek Dominant Processes

Five dominant processes were identified in Little Salt Creek as follows:

1. *Dynamic Equilibrium* – A channel that is generally in a natural condition where bed and bank materials are balanced with erosive and depositional forces. Channel adjustments are generally gradual. Streams in dynamic equilibrium often have a two-stage or multi-stage channel shape, a lack of systemic bed or bank erosion, and permanent woody vegetation growing close to the water surface or channel bed. This typically describes a pre-disturbance or recovered condition.
2. *Incision* – Channel incision is a process of vertical channel adjustment, or channel downcutting, generally in response to an alteration upstream or downstream of the incising reach. Channelization frequently induces upstream-migrating incision whereas sediment starvation may induce incision in a downstream reach. Incision occurs when bed material is more easily removed from the channel bed than it is from the stream banks. Incision is characterized by actively migrating breaks in bed slope called knick points, perched trees and steep banks.
3. *Widening* – Channel widening is characterized by widespread erosion and bank failures as banks reach or exceed critical bank height, a deep “V” or “U”-shaped cross-section, inactive or perched floodplains, and unconsolidated bed material. Widening occurs as the channel adjusts in cross-section to a new flow or sediment regime. Steep and unstable channel banks fail to a stable shape, thereby increasing channel width and sediment load. Channels that are widening typically exhibit widespread erosion and mass wasting, along with deposition of unconsolidated material liberated from eroding stream banks.
4. *Plan Form Adjustment* – Plan form Adjustment occurs as the channel changes its alignment. This can take many forms including meander cut-off or increase in meander amplitude. However, in this watershed, the most common incarnation of this process was accelerated meander advance. That is, the natural wave form of the stream moves downstream at an accelerated rate. Excess sediment is often a driver of this process. Channels in accelerated meander advance typically exhibit a cut bank on the outside of bends downstream of the apex with scour at the toe and an advancing unconsolidated bar on the inside of the bend. The bar is typically irregularly shaped and more than 1/3 across the channel. The downstream side of bar is frequently steep, and the bar material is unsorted.
5. *Managed Swale and Pond* – This is not a natural process but refers to ongoing maintenance of a waterway. In most cases, these are farm ponds or straightened and graded swales.

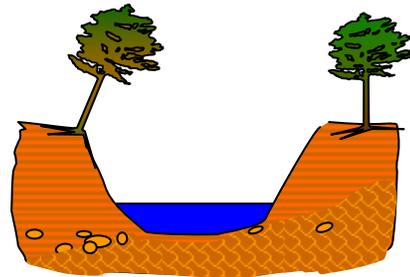
Stage I Pre-disturbance

- Bed and bank materials balanced with erosive forces
- Permanent woody vegetation near the water line
- Two-stage channel shape evident at about 1.8 year return interval



Stage II Disturbance

- Channel altered, hydrology or sediment inputs modified
- Removal of permanent woody vegetation near the water line
- Two-stage channel shape eliminated or no longer supported by flow conditions



Stage III Incision

- Downcutting liberates sediment
- Lost or perched bankfull floodplains
- "U" shaped channel
- Woody vegetation high on bank with many "surfer" trees

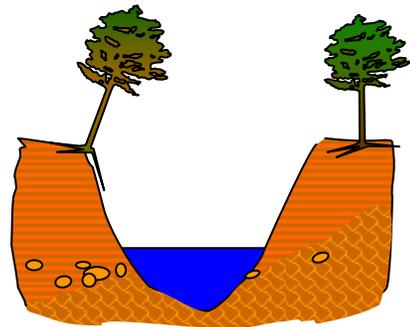
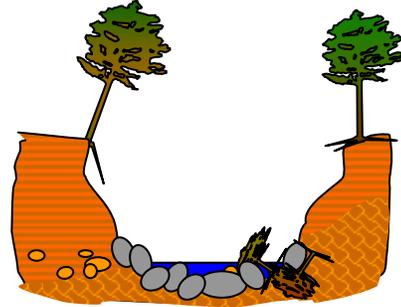


Figure 8-2
Channel Evolution Model (from Simon, 2001).

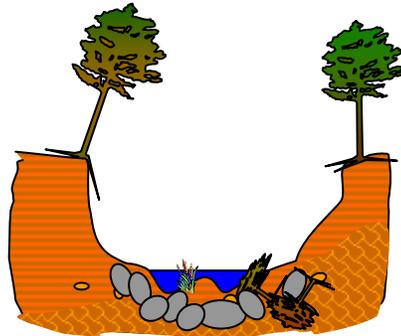
Stage IV Channel Widening

- Widespread bank failures as banks exceed critical height or were undercut by toe scour
- Channel adjusts to new flow regime
- Significant sediment loads generated; most significant erosion hazard in this phase
- Bank armoring generally ineffective



Stage V Deposition

- Deposition begins from liberated sediment
- Vegetation establishes near water line



Stage VI Recovery and Reconstruction

- Bankfull floodplains may be reconstructed from liberated sediment
- Woody vegetation establishes near water line
- Stability re-established

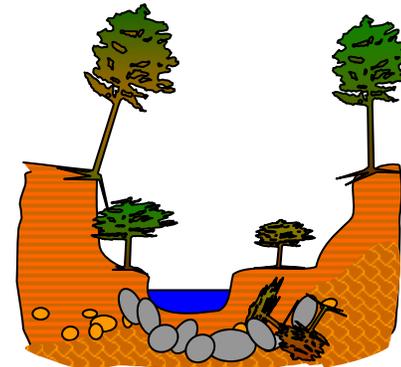
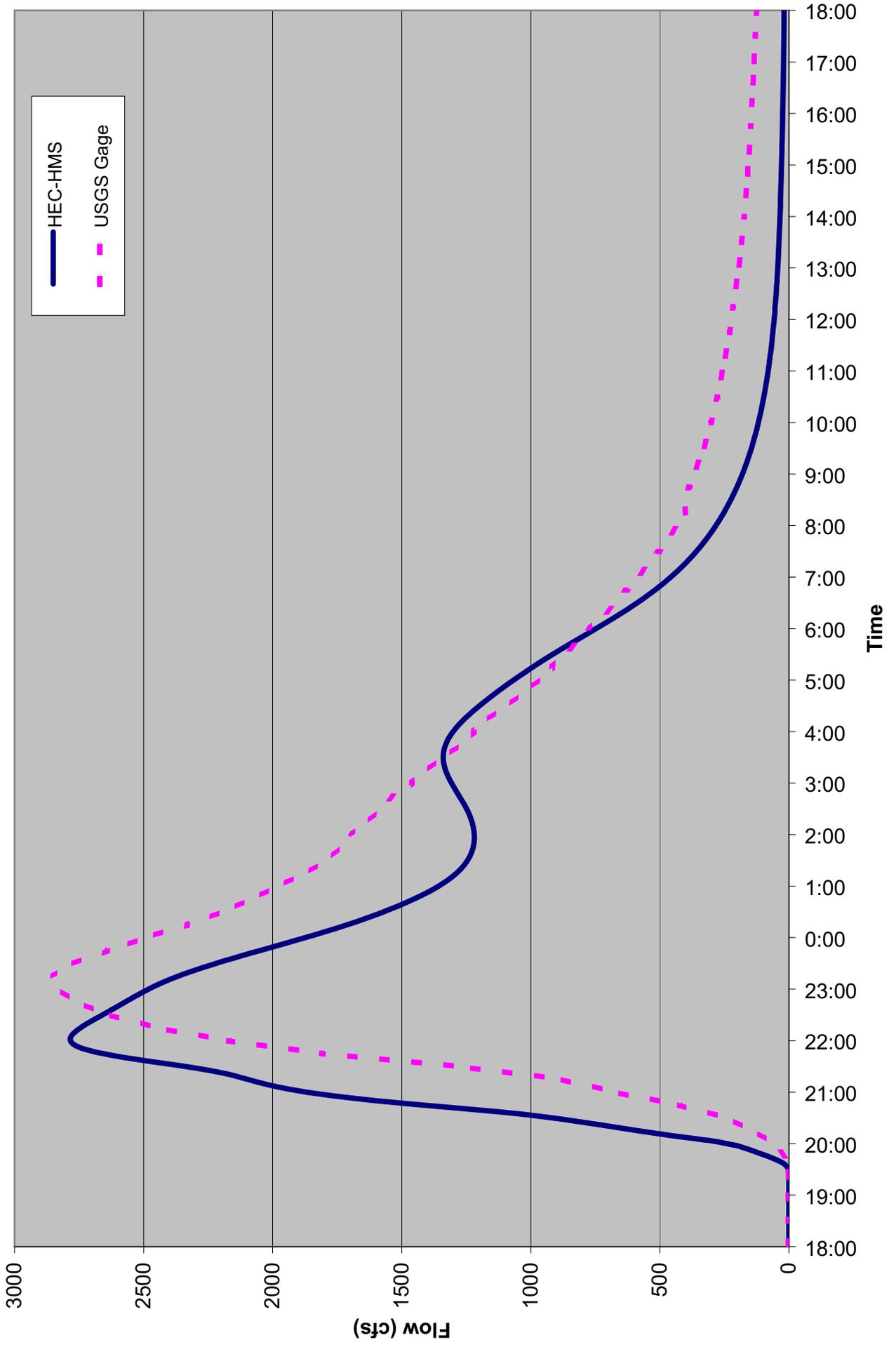
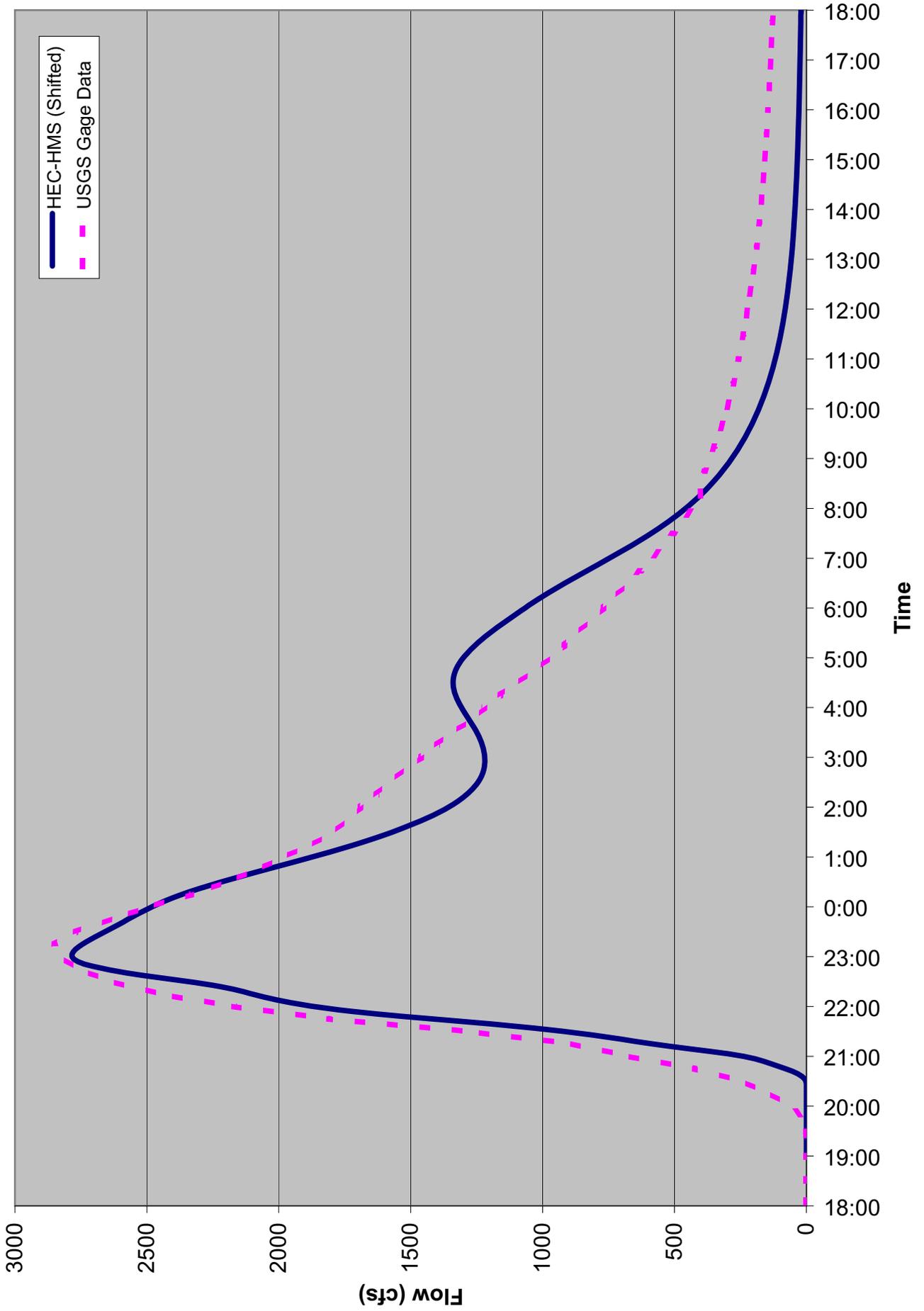


Figure 8-2
Channel Evolution Model (cont.).

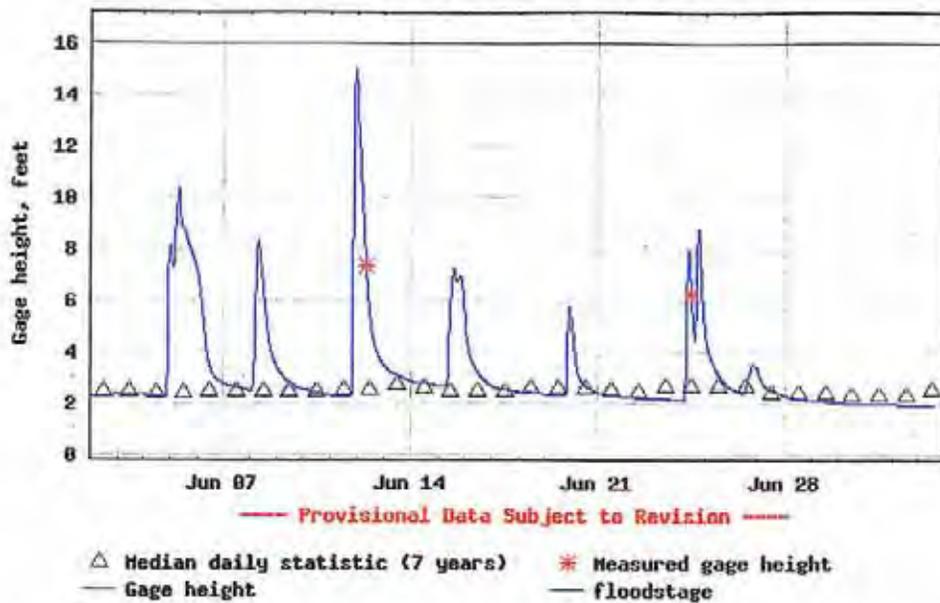
Little Salt Creek Calibration - June 11, 2008



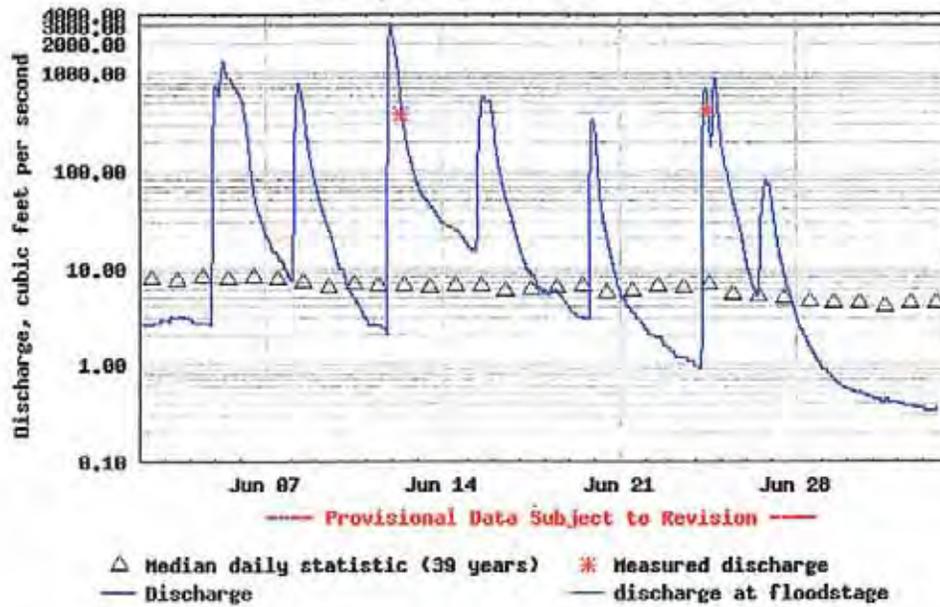
Little Salt Creek Calibration - June 11, 2008



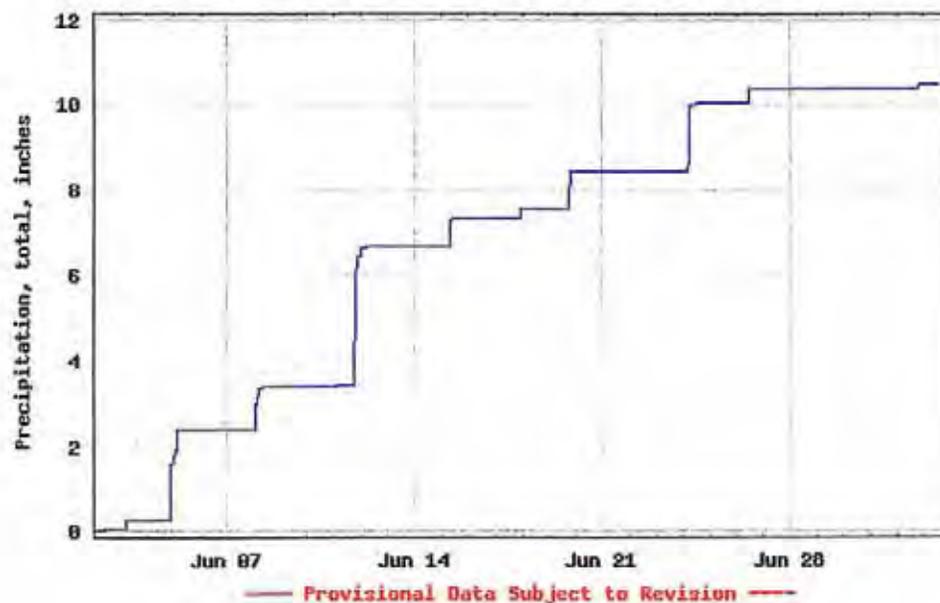
USGS 06803510 Little Salt Creek near Lincoln, Nebr.

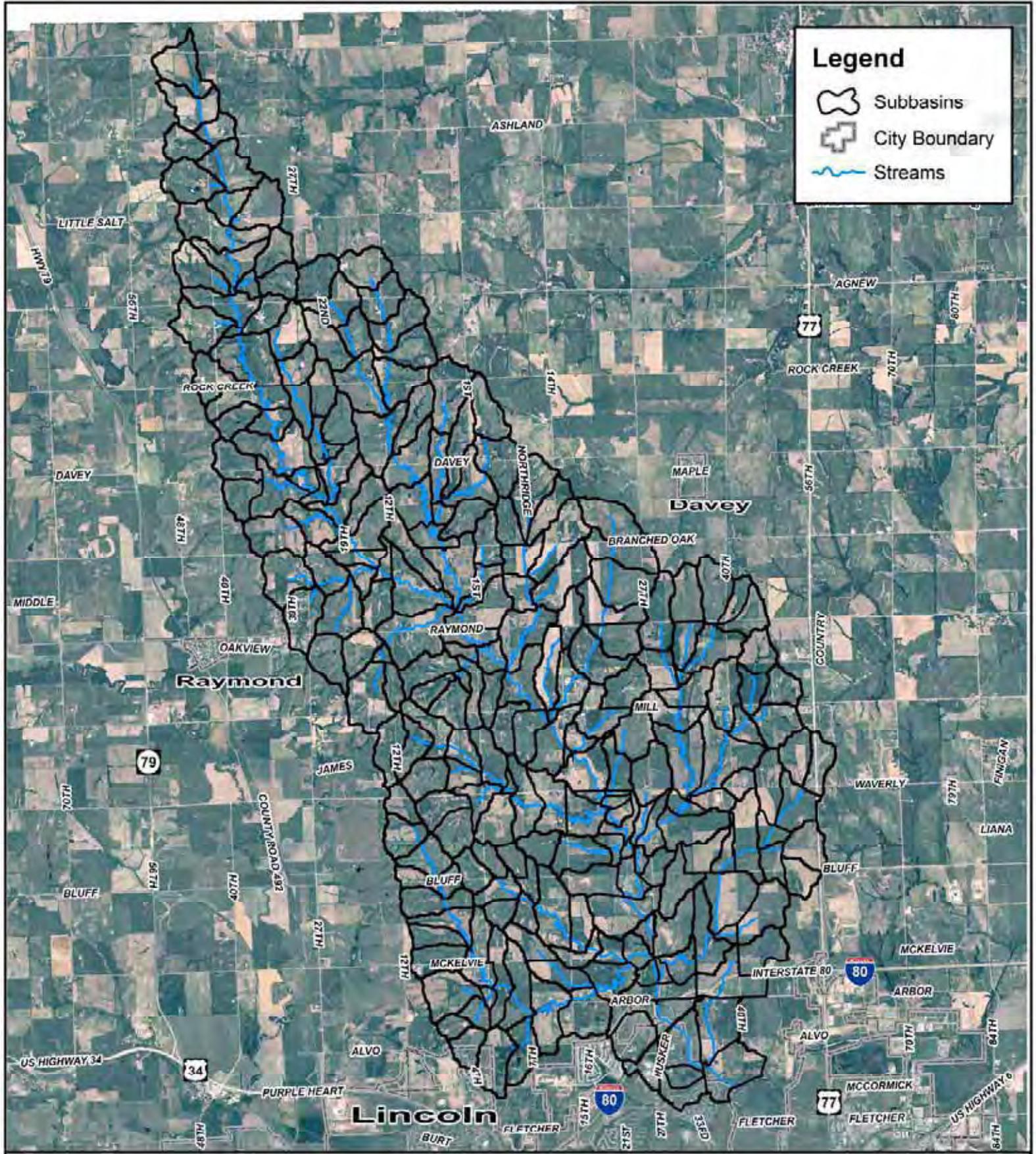


USGS 06803510 Little Salt Creek near Lincoln, Nebr.



USGS 06803510 Little Salt Creek near Lincoln, Nebr.

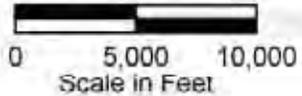




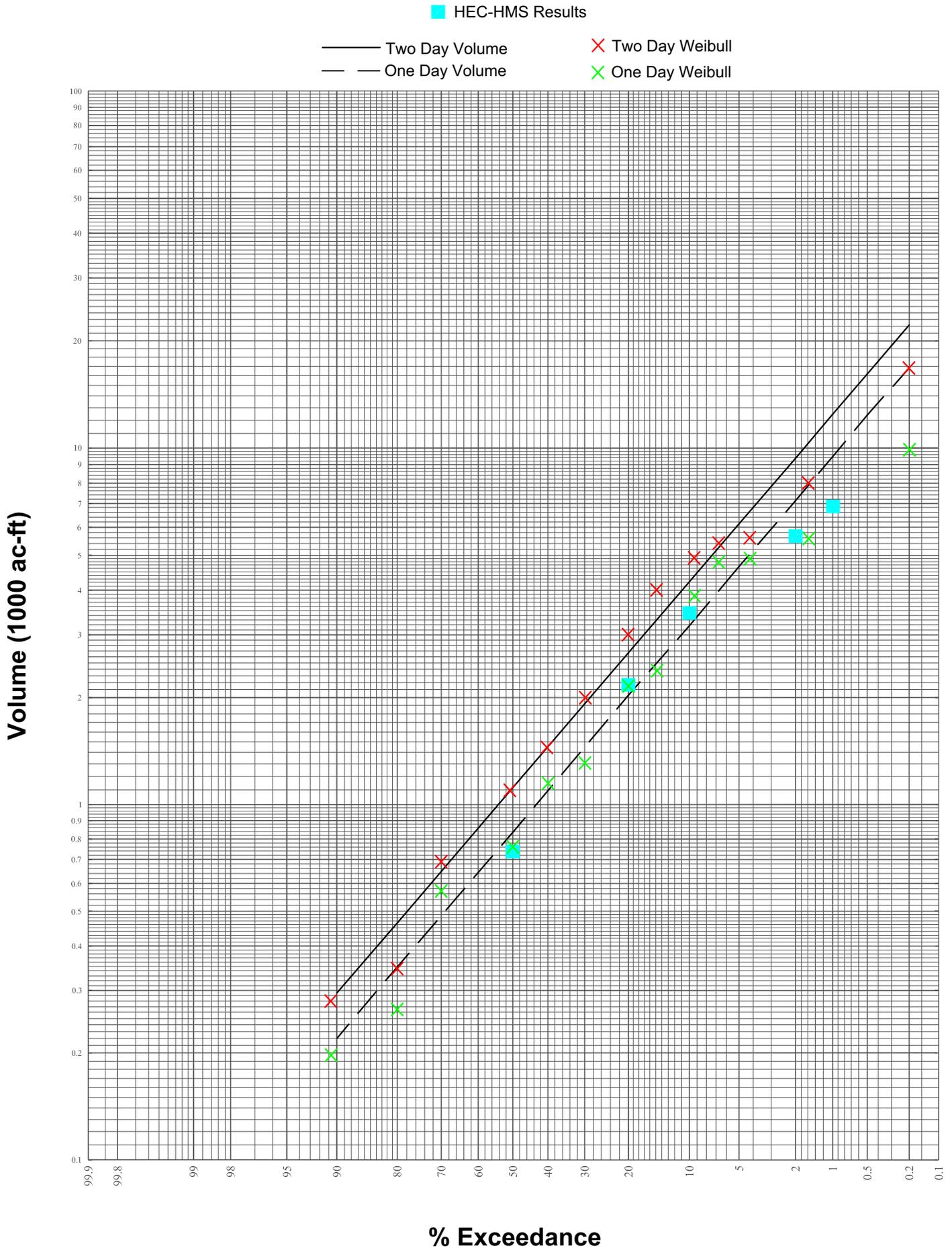
Legend

-  Subbasins
-  City Boundary
-  Streams

Subbasin Delineation
 Watershed Master Planning Little Salt Creek Basin
 City of Lincoln, PBSJ Project No. 10000923



Volume-Duration-Frequency Analysis



Meeting Notes
Little Salt Creek Watershed Master Plan
Technical Advisory Committee Meeting

July 17, 2008
Possible Approaches to Managing Channel Erosion

The second meeting of the Technical Advisory Committee for the Little Salt Creek Watershed Master Plan was held on July 17, 2008 at the City of Lincoln Engineering Services Facility, 531 Westgate Blvd., Suite 100, Training Room. Several approaches to managing channel erosion in the watershed were discussed. Following are the results of these discussions:

Raise Channel Grade:

- Slowly raising the channel grade is a possible means to rebuilding the stream. Raising the grade in limited areas where incision is less than 3 to 4 feet would be best. Upstream of Raymond Road is an example of this area.
- Raising the bed in areas where the channel is deeply incised (downstream of Raymond Road) would have a negative effect on flooding.
- Installing structures to raise the grade and pool water to the desired future grade was also discussed and determined to be impractical because this aggregation may be too slow of a process. Sediments stay in suspension and will not settle to cause the aggradation.

Regrade Channel Banks

- Laying back channel banks can benefit tiger beetle habitat. Substantially regrading the channel banks and overbanks through widening reaches can create tiger beetle habitat and wetlands.
- This was done near the Shoemaker Marsh and initial results indicate that this approach was successful for habitat.

Protect Structures

- We need to protect the structures, habitat, and wetlands. There are 73 structures (bridges, culverts) in the watershed. Grade controls can be placed at the road crossings as the bridges/culverts are replaced.

Sample Projects

- Pilot projects could be added to the Masterplan to illustrate some of the approaches discussed.
- Upstream of Raymond Road is a possible pilot project location to create close habitat for natural tiger beetle migration.
- Artesian wells could also be a pilot project used to bring the salt back to the surface within the saline wetlands where salt has diminished.
- The University and water conservation agencies may want to get together to provide information for a pilot project and identify parcels that need protection. I&L will contact Tierney Brosius for more information on potential pilot projects.

Grade Control at Confluence

- Grade control at the confluence with Salt Creek to protect Little Salt Creek as Salt Creek degrades.

Do Nothing

- Let the channel incise, widen and meander without intervention.
- This approach may tend to dry up wetlands near the top of bank as the water table falls.
- This approach may continue to allow mass wasting where chunks of habitat slump into the channel and are washed away.

Other Discussion

- Protecting farm fields alone may not be enough of a reason to do something in this watershed.
- If you do something, make sure there is a “back-up” tiger beetle population not affected by what was done.

Meeting Notes
Little Salt Creek Watershed Master Plan
Technical Advisory Committee Meeting

July 17, 2008
Summary of Meeting Discussions

The second meeting of the Technical Advisory Committee for the Little Salt Creek Watershed Master Plan was held on July 17, 2008 at the City of Lincoln Engineering Services Facility, 531 Westgate Blvd., Suite 100, Training Room.

In Attendance:

Ed Harvey, University of Nebraska
Tom Malmstrom, City of Lincoln, Parks and Recreation Department
Dan Schulz, Lower Platte South NRD
Ed Ubben, Lower Platte South NRD
Mark Meyer, Intuition & Logic
Matt Harper, Intuition & Logic
Randy Graham, PBS&J
Ed Kouma, City of Lincoln, Watershed Planning Office
Ben Higgins, City of Lincoln, Watershed Planning Office
Mike Dekalb, Lincoln-Lancaster County Planning Department
Paul Zillig, Lower Platte South NRD
Milan Wall, Heartland Center for Leadership Development
Robert Prager, Intuition & Logic
Doug Pillard, Lancaster County Engineering
Tierney Brosius, University of Nebraska
Steve Spomer, University of Nebraska
Ted LaGrange, Nebraska Game and Parks
Dennis Schroeder, Natural Resource Conservation Service
Terry Genrich, City of Lincoln, Parks and Recreation

Following is a summary of major discussions and decisions:

Study Objective Wording Discussion

- Tom Malmstrom suggested changing the wording of Study Objectives to “conserve” instead of “consider” critical habitat.
- The Masterplan should not just “conserve” the critical habitat, but also the recovery areas in the Eastern saline wetlands.

Hydrologic Model Discussion

- Draft Hydrology Section of the report is complete.
- PBS&J used USGS rain gage at Arbor and 27th Street to calibrate the model.
 - More gages would be better, but the location of this one is good for this watershed.
- The model accounted for storage in the upper part of the watershed.
- Future land use was not taken into consideration since there is very little change in the watershed planned for the future.

- The water quality storm will be modeled as scoped.

Soil Boring Locations and Testing

- Soils are being tested now.
- The soil boring locations were chosen based on observed indicators of possible dispersive soils and the different soil types in those locations.
- Pin holes test will be performed on the soil samples.
- The Engineering College has a report on dispersive soils in the watershed. I&L will Contact Ed Harvey regarding report.

Saline Wetlands/Critical Habitat

- There are different levels/categories of saline wetlands.
- I&L will show the different categories (1, 2, 3, etc.) of saline wetlands on the Saline Wetlands Exhibit.

Generation of Woody Debris in Watershed

- Woody corridor in northern watershed is too narrow to produce sufficient woody debris to form debris jams that act as grade control.
- Possibly more trees historically based on historic publications
- Discussion of what documents were we using.
- Lost many trees to fires and farming in the early years of Lincoln.

Wetlands or Tiger Beetle Habitat

- The role of incision on changes in habitat. Is incision bad?
- The question should be split up between wetlands and tiger beetle habitat.
- Flooding hurts the tiger beetle colonies.
- Bars are hunting habitat for the tiger beetle.
- Tiger beetle habitat is the same in both wetlands and creek banks.
- Water table dropping is a problem near the wetlands.
- At Whitehead and Shoemaker groundwater follows incision.
- At Whitehead they are seeing freshwater layer from stormwater runoff that sits on top of the saltwater lens.
- Saltwater is coming out in the streams and not in the wetland.

Raising Channel

- Have been doing work on Rock Creek outside of habitat to restore habitat.
- Let channel naturally raise the bed with structural grade controls but without deep standing water
- Shallow water is best for tiger beetle.
- Except for raising the channel for habitat, no reason to work on the watershed this far away from Lincoln (Farmland, etc.).
- Need to be careful with trapping sediment in the upper reaches
- Sediment will stay in suspension and wash through the watershed

Structure Protection

- Need to be careful with trapping sediment in the upper reaches
- Sediment will stay in suspension and wash through the watershed

Structure Protection

- Bridges and structures need to be protected.
- Is it more feasible to replace structures than stabilize watershed?
- The City is not going to build structures just to build them.
- All CIP projects are rated using a standard priority rating system.

Current Restoration Efforts

- Laying back slopes along main stem near Shoemaker Marsh have helped habitat.
- Sheet pile grade controls are currently being used to halt gullies out of wetlands.
- Helmuth Site – excavated down to saline layer to help saline wetland
- There is a rock riprap reach with a 5' drop in grade at Shoemaker Marsh.
- Discussed possibility of pre-widening the incised reaches in areas that will not affect the bridge structures in an effort to create or enhance habitat as well as providing capacity and lowering channel erosion.

Doing Work on Salt Creek or Near Confluence

- Discussed if we can do something on Salt to help Little Salt?
- The City has been looking at flooding on Salt Creek and looking at the individual basins through the watershed studies.

Pilot Projects

- Possibly have pilot projects as part of the Masterplan.
- Upstream of Raymond – good pilot area.
- At the lake north of Raymond, there are isolated tiger beetle colonies and former sites for tiger beetles.
- Possible pilot project to lay back the slopes in deeply incised areas at the seep locations.

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TECHNICAL ADVISORY COMMITTEE
MEETING 3
JANUARY 29, 2009

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INTUITION & N LOGIC

450 N. New Ballas Rd., Suite 264N St. Louis, MO 63141
314.432.2543 314.432.5812



PROJECT: Little Salt Creek Watershed Masterplan
I&L PROJECT NO.: 724
RE: TAC 3RD MEETING

DATE: 1-29-09

TIME: 2:00pm – 4:00pm

LOCATION: Loren C. Eiseley Library, 1530 Superior Street

Attendees:

Ed Kouma – City	Ben Higgins – City
Nicole Fleck-Tooze – City	Paul Zillig – LPSNRD
Mike DeKalb – County	Kurt Mantonya – Heartland
Randy Graham – PBS&J	Mark Meyer – I&L
Milan Wall – Heartland	Edwin Harvey – UNL
Matt Harper – I&L	Leon Higley – UNL
Terry Genrich – Lincoln Parks & Rec.	John Moeschen – USACE
Thomas Malmstrom – Lincoln Parks & Rec.	Dennis Schroeder – NRCS
Doug Pillard – Lancaster County Engineering	Bob Harms – U.S. Fish & Wildlife
Dan Schulz – LPSNRD	Steve Spomer – UNL
Ed Ubben – LPSNRD	Tierney Brosius – UNL
John Bender – Nebraska Dept. of Environ. Quality	Ted LaGrange – Nebraska Game & Parks

Who	Topic
Ed Kouma	<ul style="list-style-type: none"> • Introductions • Review Purpose of Watershed Master Plan • Review Study Goals and Objectives
Mark Meyer, PE and Randy Graham, PE (for H&H Update)	<ul style="list-style-type: none"> • Progress Updates – Mark Meyer, PE <ul style="list-style-type: none"> ○ Watershed Inventory ○ Soil Assessment ○ Stream Stability (geomorphic analysis) ○ H&H – Floodplain Mapping (Randy Graham, PE) <ul style="list-style-type: none"> ▪ Floodplain and Floodway ○ Water Quality Summary <ul style="list-style-type: none"> ▪ Bio-assessment results ▪ Water Quality Sampling results ○ Seep Elevations ○ Recommended Stormwater Standards ○ Watershed Master Plan Recommendations <ul style="list-style-type: none"> ○ 19 Capital Improvement Projects ○ 6 Structural Improvement Projects ○ 5 Natural Resources Projects ○ Themes from last TAC meeting ○ Discussion ○ What's next?
Ed Kouma	<ul style="list-style-type: none"> • Other discussion and adjourn

Meeting Notes
Little Salt Creek Watershed Master Plan
Technical Advisory Committee Meeting

January 29, 2009

The third meeting of the Technical Advisory Committee for the Little Salt Creek Watershed Master Plan was held on January 29, 2008 at the Loren C. Eiseley Library, 1530 Superior Street in Lincoln, Nebraska.

The meeting was started by Ed Kouma at 2:00pm.

Present were:

John Bender, Nebraska Dept. of Environmental Quality
Terry Genrich, City of Lincoln, Parks and Recreation
Edwin Harvey, University of Nebraska
Thomas Malmstrom, City of Lincoln, Parks and Recreation Department
Ted LaGrange, Nebraska Game & Parks
Doug Pillard, Lancaster County Engineering
Greg Weber, Natural Resource Conservation Service
Dave Kohake, Natural Resource Conservation Service
Bruce Evens, Natural Resource Conservation Service
Ed Ubben, Lower Platte South NRD
Mark Meyer, Intuition & Logic
Matt Harper, Intuition & Logic
Randy Graham, PBS&J
Ed Kouma, City of Lincoln, Watershed Planning Office
Ben Higgins, City of Lincoln, Watershed Planning Office
Mike Dekalb, Lincoln-Lancaster County Planning Department
Paul Zillig, Lower Platte South NRD
Milan Wall, Heartland Center for Leadership Development
Kurt Mantonya, Heartland Center for Leadership Development

Ed Kouma began the PowerPoint presentation by discussing the purpose, goals and objectives of the Watershed Master Plan, and then introduced Mark Meyer from Intuition & Logic who gave a progress update on each component of the Master Plan. The main updates for this meeting included water quality/bio-assessment report, the updated floodplain/floodway limits and Capital Improvement Projects.

The following is a summary of the major discussions:

Water Quality and Bio-Assessment

- The water quality is poor within the watershed based on the water quality and bio-assessment testing.
- What the benchmark was for justifying that the water quality is poor? Is the water quality poor compared to a normal stream or a saline stream?
- Streams are usually compared to like streams.

- John Bender would like more information on the water quality testing baseline. He has used the Central Plains Center for Bio-Assessment at the University of Kansas (Lawrence, KS) for information before.

Stormwater BMPs

- Ed Ubben asked if consideration or recommendations made to account for situations in areas where freshwater runoff is bad.
- Mark Meyer responded with the recommended BMPs are for the watershed, and this sounds like a project specific BMP.
- Ed Ubben asked if we want to consider agriculture BMPs (conservation farming practices).

Capital Improvement Projects

- In regards to the CIPs, Ted LaGrange asked if the grade control structures are at grade. Mark Meyer responded with yes.
- There was a lot of discussion regarding the restoration of a woody corridor in an attempt to create woody debris to allow woody debris jams to form. Comments were made about the woody debris getting hung up on bridges and culverts. There are pluses and minuses to the increase in woody debris. The riparian corridor CIP is a long term project.
- Terry Genrich asked and recommended that grasses can be used in conjunction with the woody debris.
- The Nebraska Game & Parks can help with making sure the correct densities and species are used in the Riparian Corridor Restoration CIP.
- Ed Harvey asked if evapotranspiration was taken into account with planting all these trees and what affect it would have on the watershed. Mark Meyer answered no.

Natural Resource Projects

- Wait until his study is complete before any specific projects are recommended.
- The projects should not be site specific. Maybe they should be more general or list out the possible sites.
- A list of additional considerations could be included so someone doesn't just take the project description from the report and run with it.
- Add a statement about the need for coordination with ongoing research (i.e. UNL, Nebraska Game & Parks, etc.).
- There is concern that information provided (i.e. Whitehead wetland project) is getting published without citing of who provided the information.
- More time is needed to do research before the Natural Resource Project recommendations can be made.
- Add a note that UNL is working with the City to develop the best possible result for the natural resources in the watershed.
- The natural resources need to be in the Master Plan so in the future when funding is available, the ideas don't get lost.
- There is a unique approach to the natural resource projects that needs to be taken in to account and needs to be acknowledged in the Master Plan.

- Since we are identifying wetlands in the watershed, then maybe we look at the generalization of enhancing the wetlands (not project specific).
- Artesian wells, as recommended at Whitehead Wetland, would be good at all the wetlands in the watershed.
- The recommendations should be more general, allowing more time to do more research and identify more sites.
- The report needs to recognize that more research needs to be done before anything gets constructed.
- There should be a disclaimer about the impact on the Tiger Beetle Habitat, i.e. there are other agencies to get approval from. It isn't just a cut and dry project.

Possible Funding Sources for the Natural Resource Projects

- Multiple possible funding sources were given.
 - Ed Harvey:
 - Natural Science Money through the EPA
 - His research is getting to the point now that he may have additional opportunities for federal funding.
 - Tom Malmstrom:
 - U.S. Soil & Water 319 Grant
 - Section 6 – Federal
 - Nebraska Environmental Trust
 - WRP
 - CRP
 - 5-star Program (wetlands)
 - State Wildlife Grand Funds
 - U.S. Fish & Wildlife Agency (Bob Harms)

Other Discussions or additional studies

- Ed Harvey has been collecting water quality samples and performing the standard field parameters for the past 4 years.
 - The dominating chemistry in the water is sodium chloride.
 - The nutrient loading is minimal compared to the sodium chloride.
 - A thesis was published in December and is available.
- Tom Malmstrom suggested more study on the vegetation in the watershed.
- Steve Spomer suggested more bio-assessment samples at the sights where Tiger Beetles have been found.
 - This would give potential ideas on their prey.
- Tom Malmstrom and NRCS representatives discussed a method they are using at Arbor Lake called EM38 in which they are using an electric wand over the saline soils to determine if endangered species exist.
- Tom Malmstrom requested an earlier notice of the meeting (1 month).

The meeting was adjourned at 4:00 P.M.



April 27, 2009

«First_Name» «Last_Name»
«Company_Name»
«Address_Line_1»
«Address_Line_2»
«City», «State» «ZIP_Code»

RE: Little Salt Creek Watershed Master Plan DRAFT Report

Dear «First_Name»:

Thank you again for your involvement with the Little Salt Creek Watershed Master Plan Technical Advisory Committee. Your review and input to date has been invaluable to this effort. The Draft Little Salt Creek Watershed Master Plan Report is complete and ready for your review and comment. For your convenience, we have enclosed the DRAFT Executive Summary of the Master Plan. The entire DRAFT report will be available on the project website beginning May 6th for your use if you would like to review a particular section of the report. The website address is:

<http://www.lincoln.ne.gov/city/pworks/watrshed/mplan/lsc/index.htm>

Please review these items at your convenience over the next few weeks and direct any comments in writing to Ed Kouma at the City of Lincoln no later than May 22nd. Ed can be reached by mail or email at the following address:

Ed Kouma
901 North 6th Street
Public Works and Utilities, Street Maintenance Building
Lincoln, NE 68508
ekouma@lincoln.ne.gov

The next and final TAC Meeting will be on May 14, 2009 at the Lower Platte South NRD office from 2:00pm to 4:00pm. The NRD office address is:

Lower Platte South NRD
3125 Portia Street
Lincoln, NE 68501

Please plan on attending with questions and comments for discussion. If you have any questions or would like additional information, please call me at (636) 777-3000 to discuss. Thank you again and I look forward to seeing all of you again on the 14th.

Best regards,

Mark Meyer, P.E
Principal Civil Engineer

TECHNICAL ADVISORY COMMITTEE
MEETING 4
MAY 14, 2009

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INTUITION & N LOGIC

16253 Swingley Ridge Rd, Suite 100 St. Louis, MO 63017
636-777-3000 314.432.5812



PROJECT: Little Salt Creek Watershed Masterplan
I&L PROJECT NO.: 724
RE: TAC 4th MEETING

DATE: 5-14-09
TIME: 2:00pm – 4:00pm
LOCATION: Lower Platte South NRD, 3125 Portia Street

Invitees:

- | | |
|--|--------------------------------------|
| Ed Kouma – City | Ben Higgins – City |
| Nicole Fleck-Tooze – City | Paul Zillig – LPSNRD |
| Mike DeKalb – County | Kurt Mantonya – Heartland |
| Randy Graham – PBS&J | Mark Meyer – I&L |
| Milan Wall – Heartland | Edwin Harvey – UNL |
| Matt Harper – I&L | Leon Higley – UNL |
| Terry Genrich – Lincoln Parks & Rec. | John Moeschen – USACE |
| Thomas Malmstrom – Lincoln Parks & Rec. | Dennis Schroeder – NRCS |
| Doug Pillard – Lancaster County Engineering | Bob Harms – U.S. Fish & Wildlife |
| Dan Schulz – LPSNRD | Steve Spomer – UNL |
| Ed Ubben – LPSNRD | Tierney Brosius – UNL |
| John Bender – Nebraska Dept. of Environ. Quality | Ted LaGrange – Nebraska Game & Parks |

Who	Topic
Ed Kouma, PE	<ul style="list-style-type: none"> • Introductions • Review Purpose of Watershed Master Plan • Review Study Goals and Objectives
Mark Meyer, PE	<ul style="list-style-type: none"> • Little Salt Creek Watershed Master Plan FINAL DRAFT REPORT Review • What's Next • Comments and Discussion Regarding Master Plan
	<ul style="list-style-type: none"> • Adjourn

Technical Advisory Committee Meeting Summary **May 14, 2009**

The Little Salt Creek Watershed Master Plan Technical Advisory Committee (TAC) met for its fourth scheduled meeting on May 14, 2009, at the offices of the Lower Platte South Natural Resources District at 3125 Portia Street in Lincoln, Nebraska. Seven TAC members attended, along with seven members of the project team.

Ed Kuoma of the City of Lincoln opened the meeting with an overview of the agenda and a review of the city's approach to watershed management master planning and the key elements of each project. Mark Meyer of Intuition & Logic presented the elements of the plan, which is nearing completion and noted that the current draft is available in total on the city's website. He reviewed the proposed Capital Improvement Projects contained in the plan.

Discussion after the presentation focused on these topics:

- Requirements related to permitting by the Corps of Engineers and, if agricultural land is affected, by NRCS.
- Making sure that dispersive soils are specifically identified for testing, not the sedimentation that may be present.
- Coordinating grade controls with scheduled bridge replacements by Lancaster County.
- Considering opportunities to restore some historic stream meanderings in the upper watershed.
- Considering showing the water quality assessment as a bar graph.
- Noting that any project on a wetland requires an assessment.

Mark thanked the committee for its suggestions and asked them to make any subsequent comments in writing, using either the comment sheet provided at the meeting or via e-mail. He said that committee members were asked to send their comments by May 22. With that, the meeting was adjourned.

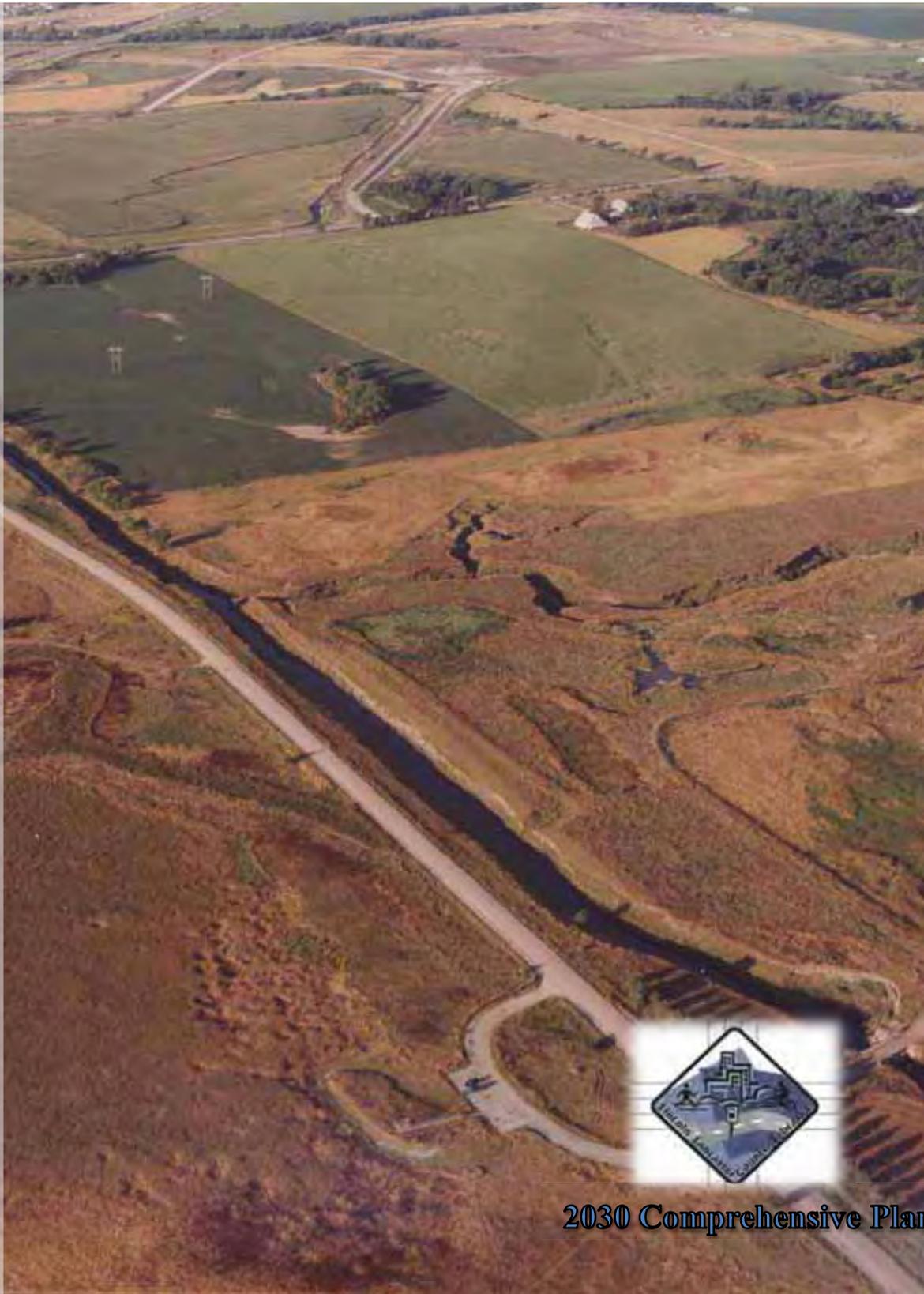
CITIZEN'S ADVISORY COMMITTEE
TECHNICAL ADVISORY COMMITTEE
BINDER MATERIALS

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Little Salt Creek Watershed Master Plan

Technical Advisory Committee



Lower Platte South
Natural Resources District

INTUITION &
LOGIC

Association With:
BS&J
Heartland Center
University of Nebraska
Lincoln
Perracon
& Consulting



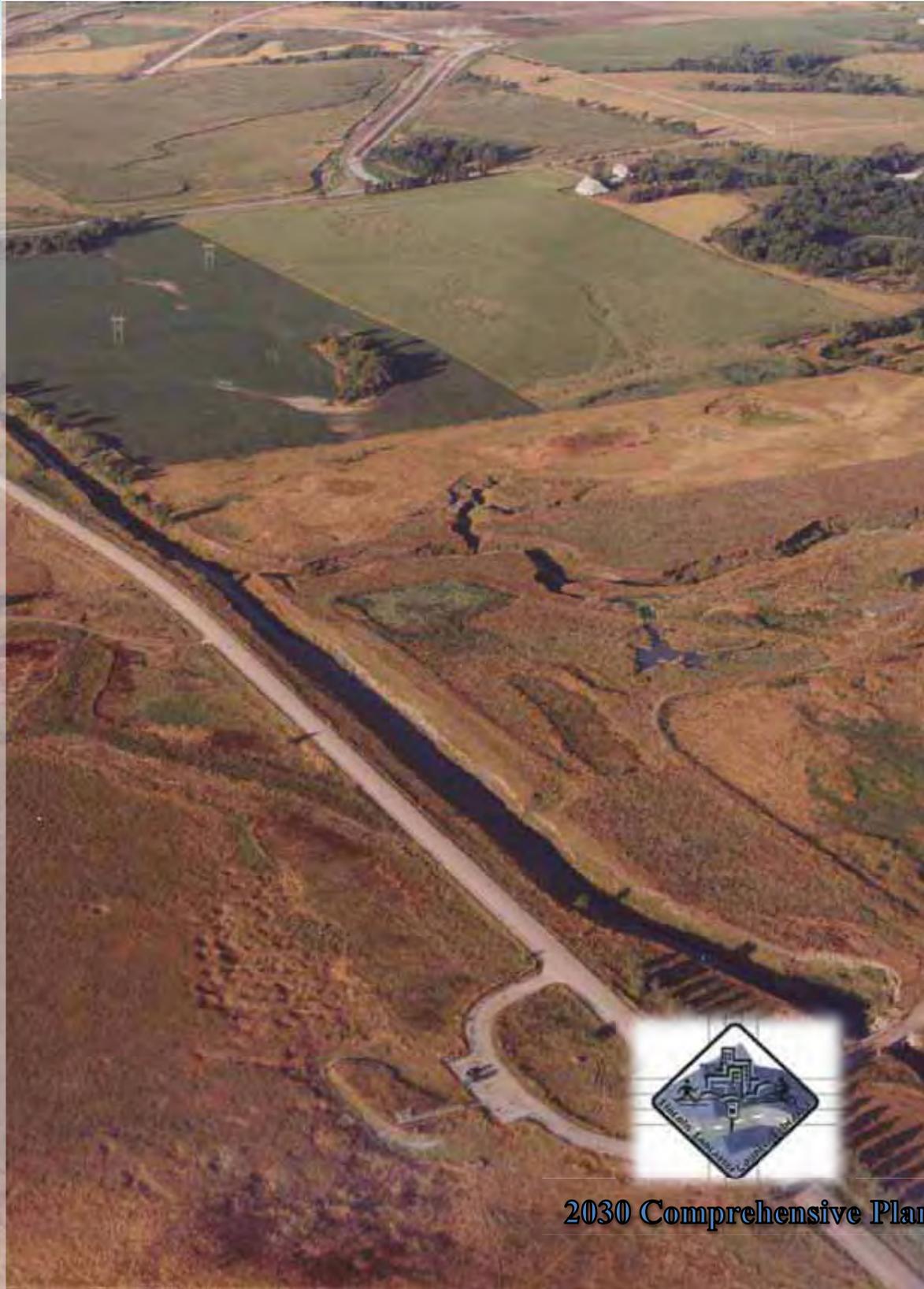
2030 Comprehensive Plan

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Little Salt Creek Watershed Master Plan

Citizen's Advisory Committee



Lower Platte South
Natural Resources District



Association With:
BS&J
Heartland Center
University of Nebraska
Lincoln
Perracon
& Consulting



2030 Comprehensive Plan

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Section 3

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Section 4

Technical Advisory Committee Meeting 2 (_____).....

Section 5

Technical Advisory Committee Meeting 3 (_____).....

Section 6

Technical Advisory Committee Meeting 4 (_____).....



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Watershed Map.....

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Section 3

Citizen’s Advisory Committee Meeting 1 (April 15, 2008).....

Section 4

Citizen’s Advisory Committee Meeting 2 (_____).....

Section 5

Citizen’s Advisory Committee Meeting 3 (_____).....



Little Salt Creek Watershed Master Plan Project Description

The Little Salt Creek Watershed Basin Planning Study will develop long-term planning tools and improvement projects to address water quality, flood management, and stream stability to provide guidance for sustainable urban growth in the watershed.

The project goals include:

- Maintain a proactive stakeholder and public involvement process.
- Update floodplain and floodway maps
- Identify flooding, erosion, and/or water quality problems
- Consider Critical Habitat and Rare or sensitive environmental resources.
- Develop Projects
 - Limits, Priority and Cost
- Develop guidelines and recommendations for future development
- Identify potential funding sources for future studies and/or projects



Technical Advisory Committee Mission Statement

The Mission of the Technical Advisory Committee (TAC) is to provide technical advice and expertise to the project study team. The TAC will review project elements, findings and recommendations as provided by the project team at four meetings during the course of the study. TAC members will be expected to provide comments at the formal meeting and through informal communications between meetings.



Citizen's Advisory Committee Mission Statement

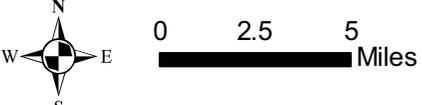
The Little Salt Creek Citizens Advisory Committee represents interests from the Salt Creek watershed and the community as a whole and serves as a resource for the project team in development of a master plan for watershed management. The committee serves on behalf of the citizens who live or work in the watershed or who may be impacted by the findings of this study.

Committee members are charged with the careful review of existing data and new findings of the study as results are compiled by the project study team. The committee will provide input regarding recommendations developed by the team. They will be asked to review project study findings, raise questions, make recommendations and share information among themselves, the public they represent and the project team. Committee members will be asked to make every effort to attend the three public meetings of the committee and the two open houses and to review project study information provided by the project team.

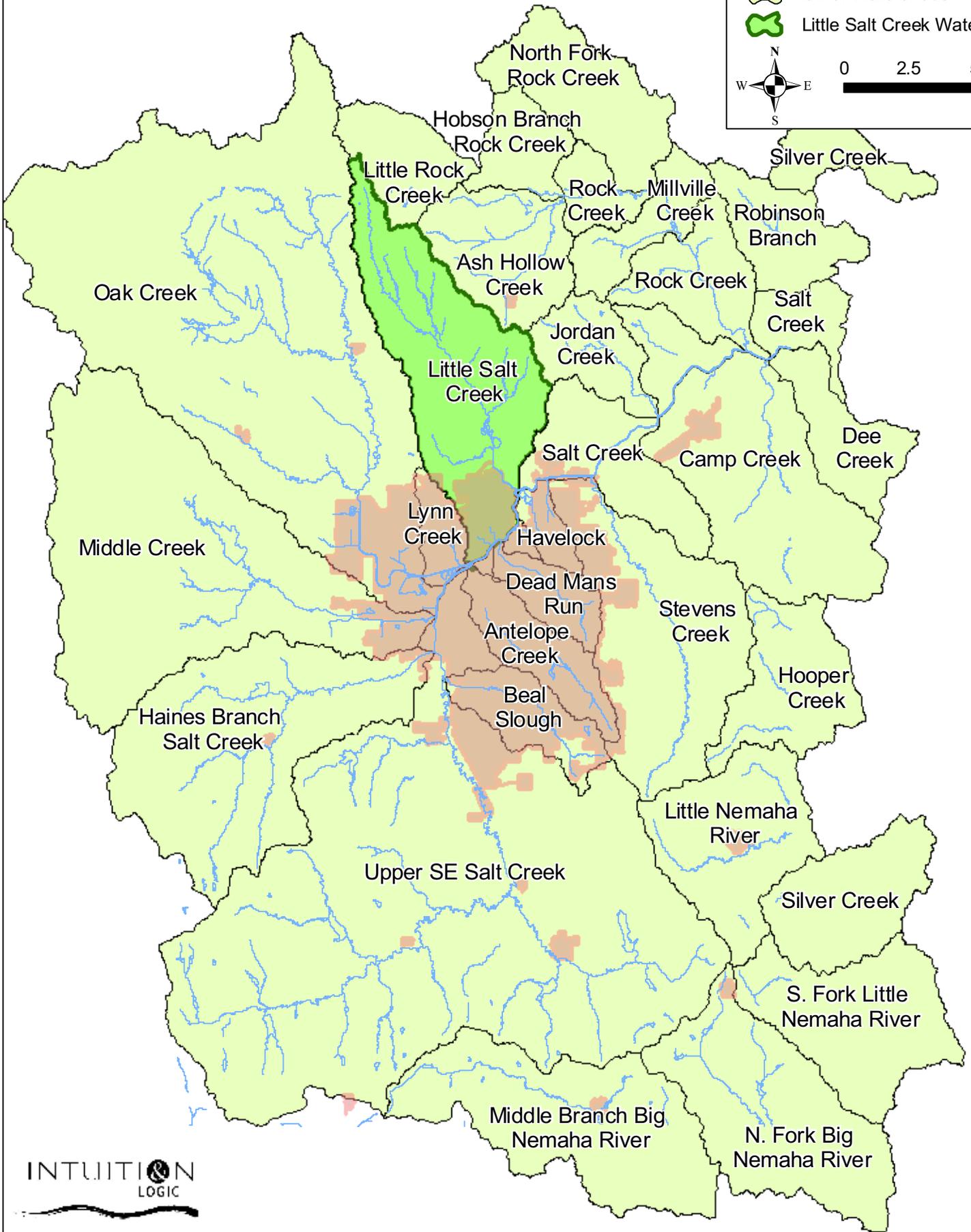


Lancaster County Watersheds Map

Stream Centerline
Other Watersheds
Little Salt Creek Watershed



0 2.5 5 Miles

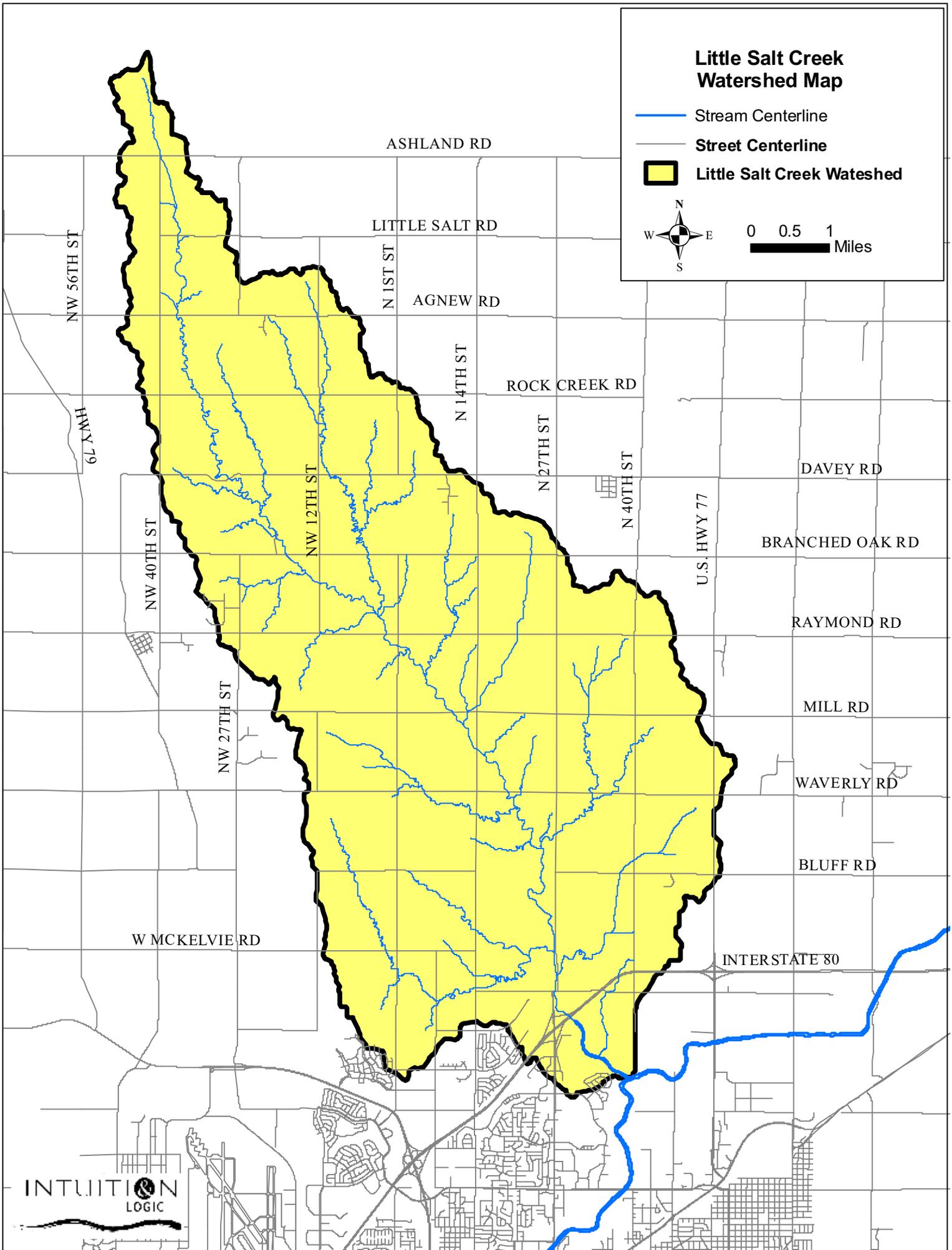


Little Salt Creek Watershed Map

-  Stream Centerline
-  Street Centerline
-  Little Salt Creek Watershed



0 0.5 1 Miles



Little Salt Creek Watershed Master Plan City/County/NRD Project Team Members

Name	Agency	Address	Phone	Email
Ed Kouma	City of Lincoln Watershed Management	Public Works and Utilities, Street Maintenance Building 901 North 6th Street Lincoln, NE 68508	402-441-7018	EKouma@lincoln.ne.gov
Paul Zillig	Lower Platte South NRD	PO Box 83581 Lincoln, NE 68501-3581	402-476-2729	pzillig@lpsnrd.org
Mike DeKalb	City of Lincoln/Lancaster County Planning	555 South 10th, Room 213 Lincoln, NE 68508	402-441-6370	mdekalb@lincoln.ne.gov
Ben Higgins	City of Lincoln Watershed Management	Public Works and Utilities, Street Maintenance Building 901 North 6th Street Lincoln, NE 68508	402-441-7589	bhiggins@lincoln.ne.gov
Nicole Fleck-Tooze	City of Lincoln Public Works	Public Works and Utilities 555 South 10th Street, Room 203 Lincoln, NE 68508	402-441-6173	ntooze@lincoln.ne.gov
Doug Pillard	Lancaster County Planning	555 South 10th, Room 213 Lincoln, NE 68508	402-441-7681	dpillard@co.lancaster.ne.us

Little Salt Creek Watershed Master Plan Consultant Team Members

Mark Meyer	Intuition & Logic (Project Manager)	16253 Swingley Ridge Road, Suite 100 St. Louis, MO 63017	314-432-2543	mark@iincworld.com
Robert Prager	Intuition & Logic (Geomorphology)	1306 Autumn Trace Amelia Island, FL 32034- 5400	904-261-5555	robert@iincworld.com
Munsell McPhillips	Intuition & Logic (Water Quality)	1306 Autumn Trace Amelia Island, FL 32034- 5400	904-261-5555	munsell@iincworld.com
Sue McCrary	Intuition & Logic (Project Coordination)	16253 Swingley Ridge Road, Suite 100 St. Louis, MO 63017	314-432-2543	sue@iincworld.com
Randall Graham	PBS&J (Hydraulics &Hydrology)	13508 Discovery Drive Omaha, NE 68137	402-502-3222	rrgraham@pbsj.com
Milan Wall	Heartland Center (Public Involvement)	650 "J" Street, Suite 305-C Lincoln, Nebraska 68508	402-474-7667	mwall@heartlandcenter.info
Kurt Mantonya	Heartland Center (Public Involvement)	650 "J" Street, Suite 305-C Lincoln, Nebraska 68508	402-474-7667	kmantonya@heartlandcenter.info
Steven Spomer	University of Nebraska-Lincoln (Entomology)	Dept. of Entomology 208 Plant Industry Bldg. University of Nebraska Lincoln, NE 68583-0816	402-472-8698	sspomer1@unl.edu
Brad Levich	Terracon (Soil Analysis)	3220 North 20th Street, Suite 3 Lincoln, NE 68521	402-466-3911	balevich@terracon.com

Little Salt Creek Watershed Master Plan Technical Advisory Committee Members

Name	Agency	Address	Phone	Email
Terry Genrich	City of Lincoln Parks & Recreation	2740 A Street Lincoln, NE 68502	402-441-7939	tgenrich@lincoln.ne.gov
Doug Pillard	Lancaster County Planning	555 South 10th, Room 213 Lincoln, NE 68508	402-441-7681	dpillard@co.lancaster.ne.us
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Dan Schulz	Lower Platte South NRD	PO Box 83581 Lincoln, NE 68501-3581	402-476-2729	dschulz@lpsnrd.org
Ed Ubben	Lower Platte South NRD	PO Box 83581 Lincoln, NE 68501-3581	402-476-2729	eubben@lpsnrd.org
John Bender	Nebraska Dept. of Environmental Quality	1200 "N" Street, Suite 400 PO Box 98922 Lincoln, Nebraska 68509	402-471-4201	john.bender@ndeq.state.ne.us
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John Moeschel	U.S. Army Corps of Engineers	Wehrspann Field Office. 8901 South 154th Street. Omaha, NE 68138-3635	402-896-0896	john.l.moeschen@usace.army.mil
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Bob Harms	U.S. Fish & Wildlife Services	U.S. Fish and Wildlife Service 203 West Second Street Grand Island, Nebraska 68801	308-382-6468 x17	robert_harms@fws.gov

Little Salt Creek Watershed Master Plan Citizen's Advisory Committee Members

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Chris Helzer	PO Box 438 Aurora, NE 68818	(402) 694-4191	chelzer@inc.org
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Merle Jahde	3600 NW 126th St Lincoln, NE 68524		merlejd@aol.com
Susan Kuck	692 W. Lakeshore Dr. Lincoln, NE 68528	(402) 475-1712	susankuck@alltel.net
Jack Nagel	4100 Rock Creek Rd Davey, NE 68336	(402) 430-6717	sorghumjac@windstream.net
Gene Petersen	16900 NW 19th Raymond, NE 68428	(402) 783-2026	gpetersen@windstream.net
David Potter	2435 22nd Rd. Valparaiso, NE 68065	(402) 784-0262	dpotter@jeo.com
Harold Roper	7441 N. 40th St. Davey, NE 68336	(402) 466-3997	heroper@gmail.com
Dave Sands	233 S. 13th St., Suite 1712 Lincoln, NE 68508	(402) 438-5263	dsandsnlt@alltel.net
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Little Salt Creek Watershed Master Plan Project Description

The Little Salt Creek Watershed Basin Planning Study will develop long-term planning tools and improvement projects to address water quality, flood management, and stream stability to provide guidance for sustainable urban growth in the watershed.

The project goals include:

- Maintain a proactive stakeholder and public involvement process.
- Update floodplain and floodway maps
- Identify flooding, erosion, and/or water quality problems
- Consider Critical Habitat and Rare or sensitive environmental resources.
- Develop Projects
 - Limits, Priority and Cost
- Develop guidelines and recommendations for future development
- Identify potential funding sources for future studies and/or projects



PUBLIC MEETING 1
APRIL 22, 2008

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PROJECT: Little Salt Creek Watershed Masterplan
I&L PROJECT NO.: 724
RE: 4-22-08 Public Meeting

DATE: 4/22/08
TIME: 5:00pm – 7:00 pm
LOCATION: Lincoln North Star High School, 5801 North 33rd

Time	Topic
4:00-4:30	<p>ROOM SET-UP</p> <p><u>Front of room</u></p> <ul style="list-style-type: none"> • 1 table on left for Ed, Mark, Paul, Milan, etc • 1 small table for projector and Laptop • Screen in center • The small table with projector and laptop will be used after the presentation as the interactive GIS station where residents can locate their house. <ul style="list-style-type: none"> ○ We are considering using this as the locator instead of the big map where people circle their house. It is more technical and we immediately have an image of where the attendees live. <p><u>Center of room</u></p> <ul style="list-style-type: none"> • 50 Chairs theatre style facing screen • Chairs set with an isle down the middle <p><u>Back of room</u></p> <ul style="list-style-type: none"> • 1 table for sign in sheets and comment sheets with 4 chairs and pencils • 1 table with cookies and refreshments <p><u>Right side of room</u></p> <ul style="list-style-type: none"> • H&H station - 1 table <ul style="list-style-type: none"> ○ Existing flood map, Aerial photos, items from other watersheds • Geomorphology station – 1 table <ul style="list-style-type: none"> ○ Field work maps, photos of watershed, photos of before and after projects <p><u>Left side of room</u></p> <ul style="list-style-type: none"> • Natural Resource station – 1 table <ul style="list-style-type: none"> ○ Photos of Salt Wort, Tiger Beetle, Saline Wetlands, saline wetlands map, Native prairie map • Community Involvement station <ul style="list-style-type: none"> ○ Watershed map handouts, newsletters, website information, CAC-TAC-City-County-NRD-Consultant contact information, existing project map

	<p>NOTES: Milan will bring notices to put on doors in the building directing them to open house room</p> <p>Kurt will confirm with the maintenance staff how we want this set up. The maintenance staff will have the room set with tables and chairs when we arrive.</p>
5:00	Open door
5:25	Milan Wall – Announce that we will start in 5 minutes and to find a seat
5:30 – 5:35	Milan Wall – Welcome and agenda review, introduce Ed Kouma
5:35 – 5:45	Ed Kouma – Watershed master planning overview, introduce Mark Meyer
5:45 – 6:00	Mark Meyer – Presentation on scope, back to Milan Wall
6:00 – 6:05	Milan Wall – Final slide to discuss the information stations, Which one is where, Invite them to visit the stations and ask team members any questions they may have at the stations and to invite them to complete comment forms.
6:05 – 7:00	Activity at stations
7:00	Milan Wall – Announce that the meeting is ended. Thank people for attending, remind them of final open house, remind them to sign up for news letters

Little Salt Creek Watershed Master Plan City/County/NRD Project Team Members

Name	Agency	Address	Phone	Email
Ed Kouma	City of Lincoln Watershed Management	Public Works and Utilities, Street Maintenance Building 901 North 6th Street Lincoln, NE 68508	402-441-7018	EKouma@lincoln.ne.gov
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Ben Higgins	City of Lincoln Watershed Management	Public Works and Utilities, Street Maintenance Building 901 North 6th Street Lincoln, NE 68508	402-441-7589	bhiggins@lincoln.ne.gov
Nicole Fleck-Tooze	City of Lincoln Public Works	<i>Public Works and Utilities</i> 555 South 10 th Street, Room 203 <i>Lincoln, NE 68508</i>	402-441-6173	ntooze@lincoln.ne.gov

Little Salt Creek Watershed Master Plan Consultant Team Members

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Little Salt Creek Watershed Master Plan Technical Advisory Committee Members

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Ed Ubben	Lower Platte South NRD	PO Box 83581 Lincoln, NE 68501-3581	402-476-2729	eubben@lpsnrd.org
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Edwin Harvey	University of Nebraska-Lincoln	School of Natural Resources 603 Hardin Hall University of Nebraska Lincoln, NE 68583-0996	402-472-8237	feharvey1@unl.edu
Leon Higley	University of Nebraska-Lincoln	Dept. of Entomology 208 Plant Industry Bldg. University of Nebraska Lincoln, NE 68583-0816	402-472-8689	lhigley1@unl.edu
John Moeschel	U.S. Army Corps of Engineers	Wehrspann Field Office. 8901 South 154th Street. Omaha, NE 68138-3635	402-896-0896	john.l.moeschen@usace.army.mil
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Bob Harms	U.S. Fish & Wildlife Services	U.S. Fish and Wildlife Service 203 West Second Street Grand Island, Nebraska 68801	308-382-6468 x17	robert_harms@fws.gov

Little Salt Creek Watershed Master Plan Citizen Advisory Committee Members

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Gary Hellerich	2854 County Rd. A Valparaiso, NE 68065	(402) 784-2987	
Don Helmuth	1101 Mill Rd. Raymond, NE 68428	(402) 477-3907	dhelmuth@earthlink.net
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Dave Sands	233 S. 13th St., Suite 1712 Lincoln, NE 68508	(402) 438-5263	dsandsnit@alltel.net
John Schleich	6230 Doe Creek Circle Lincoln, NE 68516	(402) 434-7368	
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Mark Whitehead	2537 Randolph St. Lincoln, NE 68510	(402) 435-3509	

Little Salt Creek Watershed Master Plan Project Information

Goal

Develop long-term planning tools and improvement projects to address water quality, flood management, and stream stability and provide guidance for sustainable urban growth in the watershed.

Study Objectives

- Maintain a Proactive Stakeholder and Public Involvement process
- Update Floodplain and Floodway Maps
- Identify Flooding, Erosion, and/or Water Quality Problems
- Consider Critical Habitat and Rare or Sensitive Environmental Resources
- Develop Guidelines and Recommendations for Future Development
- Identify Potential Funding Sources for Future Studies and/or Projects

Additional Information

www.lincoln.ne.gov

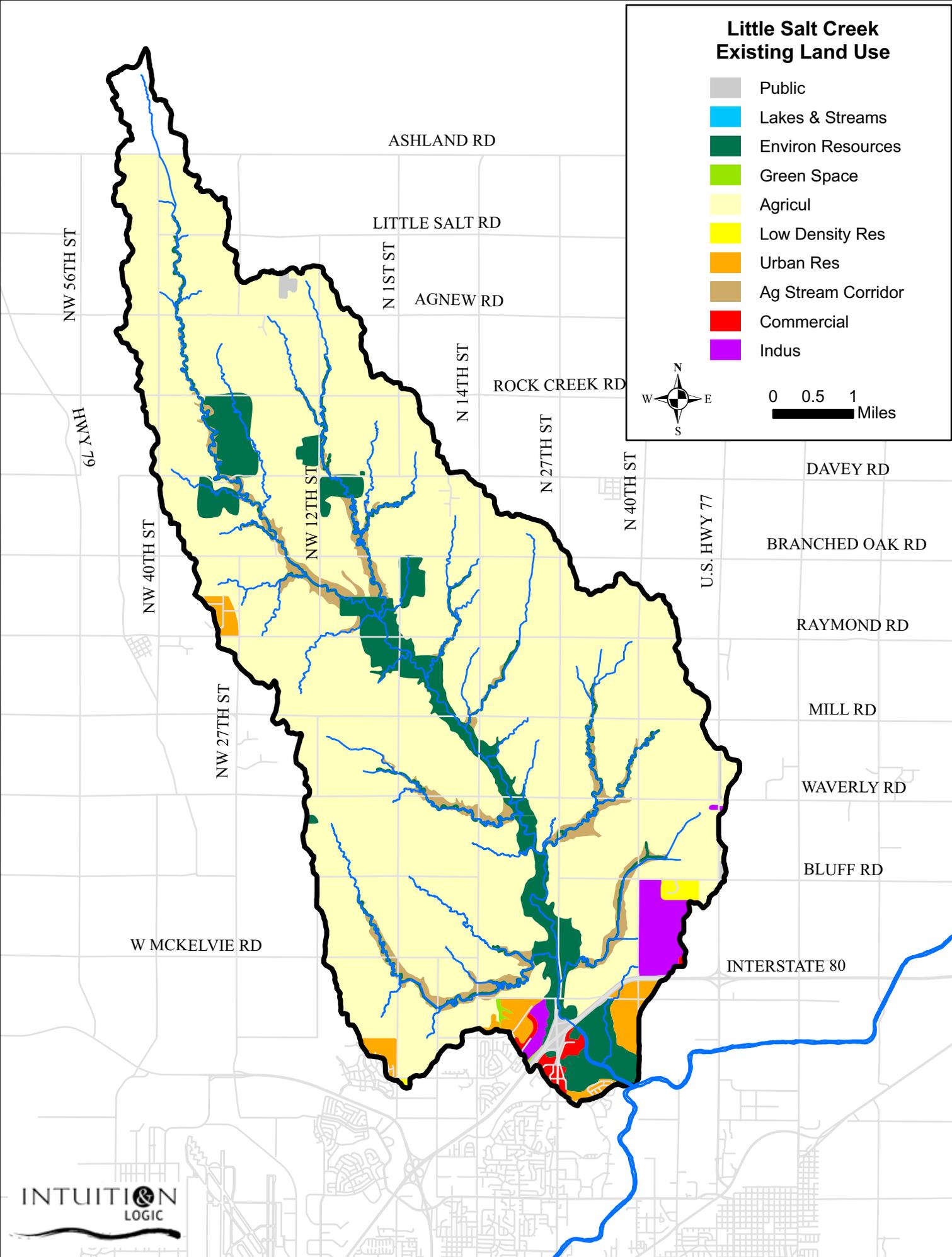
Keyword “watershed”

Little Salt Creek Existing Land Use

- Public
- Lakes & Streams
- Environ Resources
- Green Space
- Agricul
- Low Density Res
- Urban Res
- Ag Stream Corridor
- Commercial
- Indus



0 0.5 1 Miles

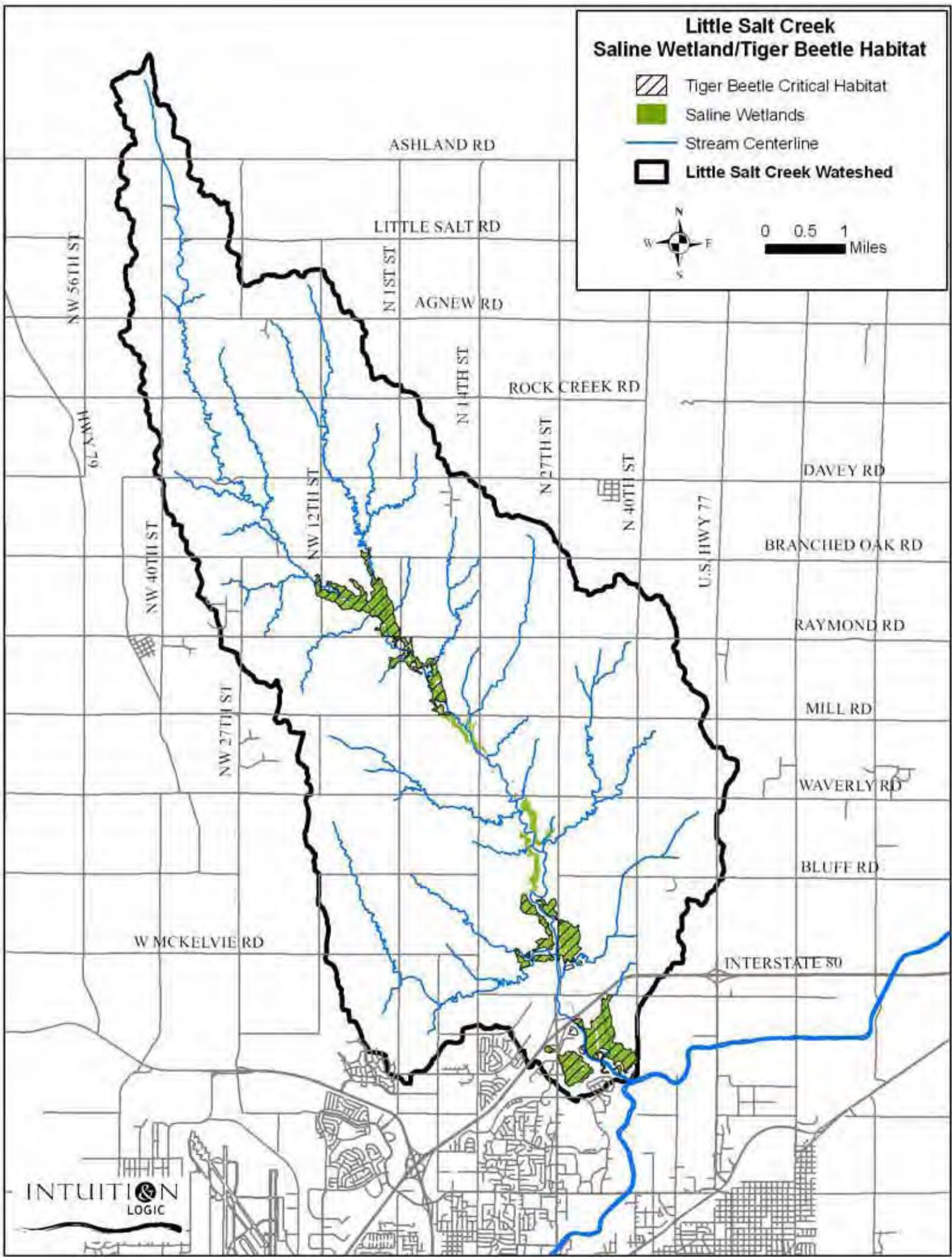


Little Salt Creek Saline Wetland/Tiger Beetle Habitat

-  Tiger Beetle Critical Habitat
-  Saline Wetlands
-  Stream Centerline
-  Little Salt Creek Watershed



0 0.5 1 Miles

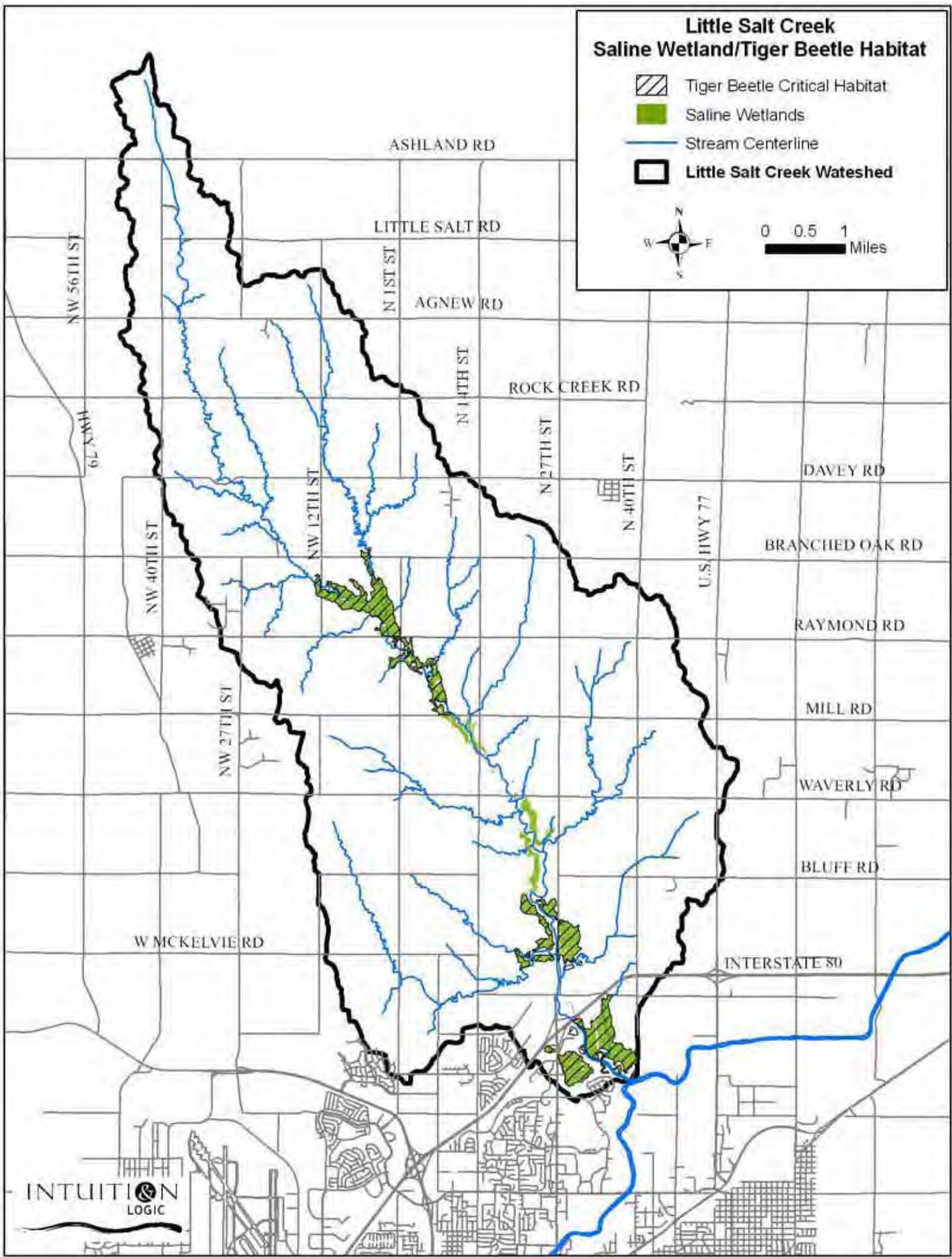


Little Salt Creek Saline Wetland/Tiger Beetle Habitat

-  Tiger Beetle Critical Habitat
-  Saline Wetlands
-  Stream Centerline
-  Little Salt Creek Watershed



0 0.5 1 Miles

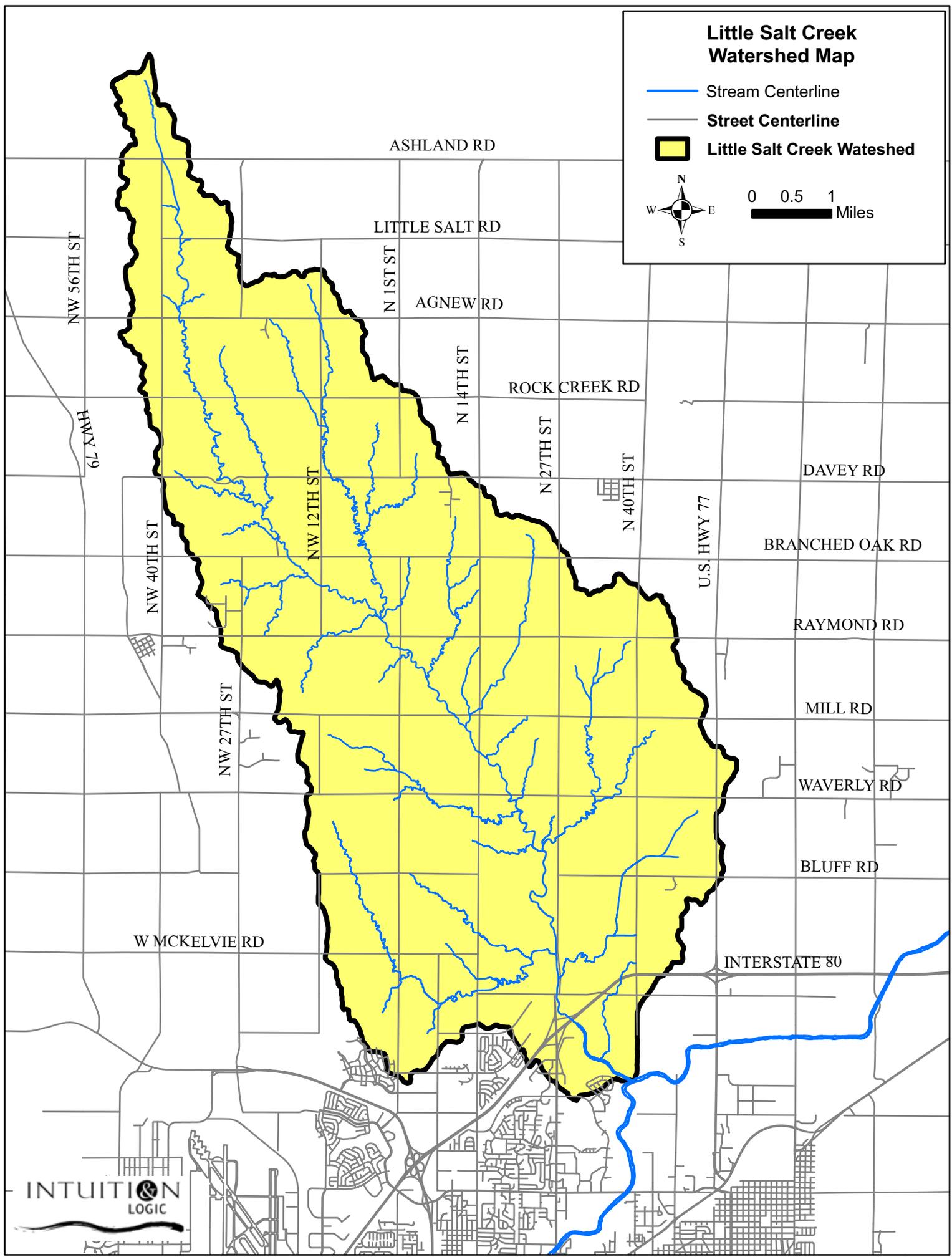


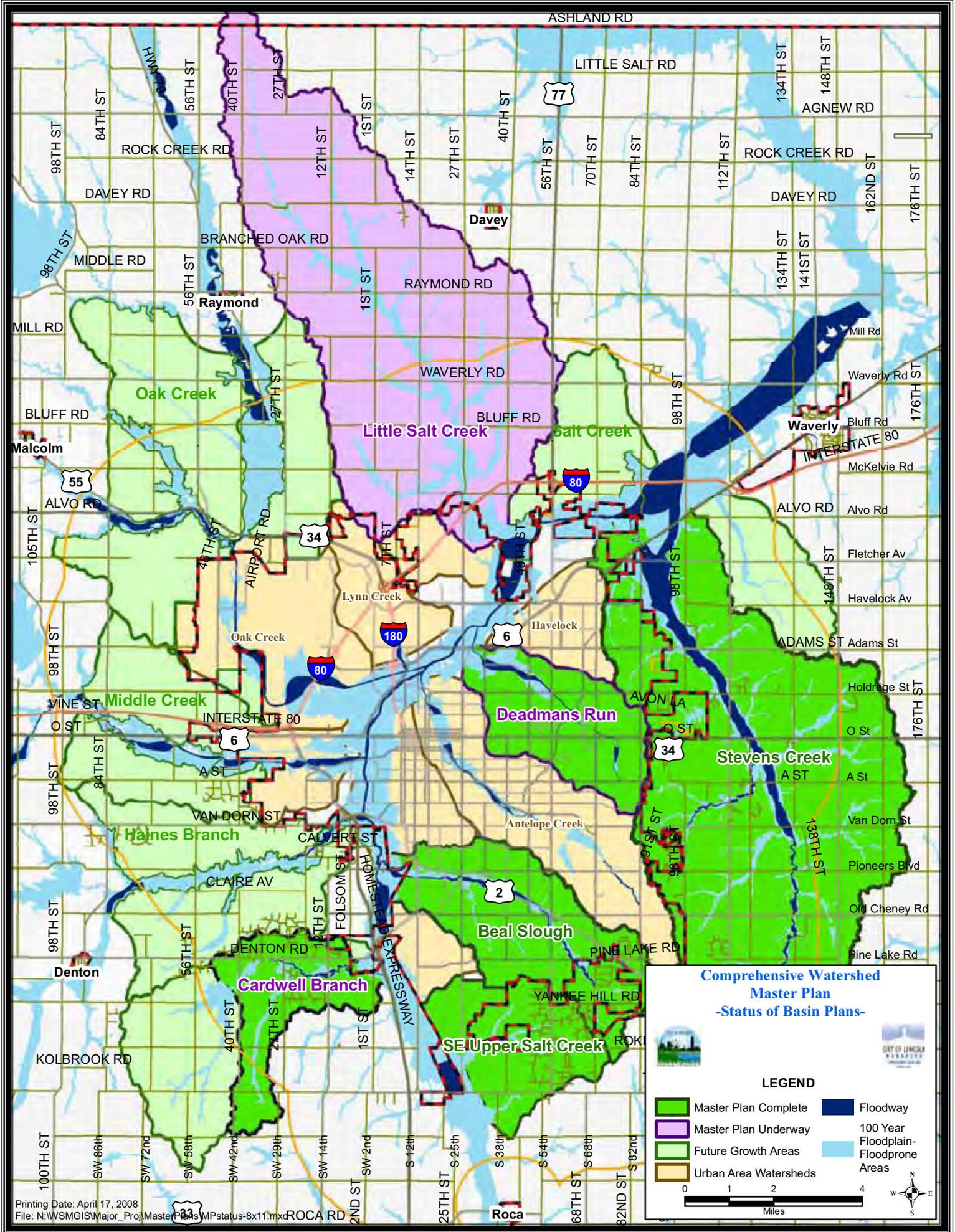
Little Salt Creek Watershed Map

-  Stream Centerline
-  Street Centerline
-  Little Salt Creek Watershed



0 0.5 1 Miles





First Little Salt Creek Watershed Open House
April 22, 2008
Prepared by
Kurt Mantonya
Heartland Center for Leadership Development

1. Promoting the Open House:

Almost 1000 newsletters were sent to property owners within the project area. The City of Lincoln provided electronic digital billboards at two locations, one on north 14th street and the other on north 27th street. North Star High School was selected as host site because of its proximity to the watershed and because it offered a commons area large enough to accommodate the public, presentation space, and five information stations.

2. The Agenda:

The open house was scheduled from 5:00 p.m. to 7:00 p.m. with a presentation at 5:30 p.m. The agenda was designed to be brief but informative on the project scope, goals of the project, and timeline. Milan Wall from the Heartland Center opened the meeting, reviewed the agenda and discussed the information stations. Milan introduced Ed Kouma from the City of Lincoln, and Ed discussed the partnership between the city and Lower Platte South Natural Resources District, the goals and objectives of the study and the components of the study. Mark Meyer of Intuition and Logic discussed each component of the project that included public involvement and the Citizen Advisory Committee, mapping, stream stability, soil assessment, water quality, natural resources, the watershed inventory and the project timeline. Participants were then invited to visit the information stations to ask questions of the project. An additional information station was set up after the presentation where citizens could look at a property via a GIS system.

3. Attendance and Evaluation:

Thirty-five participants signed in, including 13 public citizens, 11 project team members, 6 NRD board members, 2 CAC members and 3 TAC members. A comment card was provided at the sign-in table. Participants were encouraged to write their comments and leave with staff after the open house or mail it to the Heartland Center. No comment cards were received after the open house.

Little Salt Creek Watershed Public Information Meeting

Tuesday, April 22, 2008

North Star High School

Name	Phone	Email
Sue Dobberstein	429-2686	

Address	City	Zip
3629 So 77th	Lincoln, NE	68506

Name	Phone	Email
Steve Zechmann	476-9953	zechmann@windstream ¹

Address	City	Zip
3400 Prairieview dr	Lincoln	68504

Name	Phone	Email
Jim Kumm		

Address	City	Zip
1000 W. Dawcy Rd	Dawcy	68336

Name	Phone	Email
H Dale Hebensoth	785-7045	

Address	City	Zip
3862 Mill Rd	Dawcy Nels	68336

Name	Phone	Email
Doug Samuelson		

Address	City	Zip

Name	Phone	Email
Tom MALMSTROM		

Address	City	Zip

Name	Phone	Email
Thyllis Kumm		

Address	City	Zip

Name	Phone	Email
Tim Bunt		

Address	City	Zip

Name	Phone	Email
Bob C Anderson		

Address	City	Zip
4941 So. 73 St	Lincoln	

Name	Phone	Email
John Schauer	408 467 6242	

Address	City	Zip
5020 Waverly Road	Lincoln NE	68514

2219 B ST

LINCOLN

68502

Name	Harold Roper	Phone	466-3997	Email	heroper@gmail.com
Address	7441 No 44 th St.	City	Davey	Zip	68336

Name	Ann Watson	Phone		Email	
Address	12200 N 1 st St	City	Raymond	Zip	

Name	Casper L Hemming	Phone	785-2375	Email	
Address	601 Raymond Rd	City	Raymond	Zip	68428

Name	Vicky Lee Wheeler	Phone	476-1981-	Email	vwheeler@aol.com
Address	13401 W 14 th St	City	Raymond	Zip	68428

Name	Richard Bremer	Phone	467-1219	Email	
Address	3636 Bluff Rd	City	Davey Mo	Zip	68336

Name	Phyllis Hergemader	Phone	421-7085	Email	
Address	NRA Board	City		Zip	

Name	Amy Boren	Phone	785-2901	Email	aeboren33@hotmail.com
Address	15848 N. 40 th	City	Davey	Zip	68336

Name	LARRY SWANSON	Phone	483-1274	Email	
Address	616 N 86	City	Lincoln	Zip	68505

Name	Greg Osborn	Phone	402-477-0103	Email	
Address	2144 Manchester Dr	City	Lincoln	Zip	68503

2435 22nd Rd VALPARAISO

City

Zip 67065

Name *Craig Kreiner*
Address

Phone
City

Email
Zip

Name *Walter Robertson*
Address

Phone
City

Email *wda.berk@ps.o*
Zip

Name
Address

Phone
City

Email
Zip

Little Salt Creek Watershed Public Information Meeting

Tuesday, April 22, 2008

North Star High School

Name	Phone	Email
<i>Kim Reitan</i>		
Address	City	Zip
<i>Horn Knose</i>	<i>1</i>	

Name	Phone	Email
Address	City	Zip

Name	Phone	Email
Address	City	Zip

Name	Phone	Email
Address	City	Zip

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Name	Phone	Email
Address	City	Zip

Name	Phone	Email
Address	City	Zip

Little Salt Creek Watershed Public Information Meeting

Tuesday, April 22, 2008

North Star High School

Name	Phone	Email
Ben Higgins		
Address	City	Zip
Jeffs		

Name	Phone	Email
Mark Meyer		
Address	City	Zip
Ben -		

Name	Phone	Email
Sue McCrary		
Address	City	Zip
Ed - city		

Name	Phone	Email
Matt		
Address	City	Zip
Paul		

Name	Phone	Email
Milan		
Address	City	Zip
Kurt		

Name	Phone	Email
Carmen		
Address	City	Zip

Name	Phone	Email
Address	City	Zip

Name	Phone	Email
Address	City	Zip

Name	Phone	Email
Address	City	Zip

Name	Phone	Email
Address	City	Zip

PUBLIC MEETING 2
FEBRUARY 24, 2009

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PROJECT: Little Salt Creek Watershed Masterplan
I&L PROJECT NO.: 724
RE: 2-24-09 Public Meeting

DATE: 2/24/09
TIME: 5:00pm – 7:00 pm
LOCATION: Lower Platte South Natural Resource District, 3125 Portia Street

Time	Topic
4:00-4:30	<p>ROOM SET-UP</p> <p><u>Front of room</u></p> <ul style="list-style-type: none"> • 1 table on left for Ed, Mark, Paul, Milan, etc • 1 small table for projector and Laptop • Use drop down screen from ceiling • The small table with projector and laptop will be used after the presentation as the interactive GIS station where residents can locate their house. <ul style="list-style-type: none"> ○ We are considering using this as the locator instead of the big map where people circle their house. It is more technical and we immediately have an image of where the attendees live. <p><u>Center of room</u></p> <ul style="list-style-type: none"> • 30 Chairs theatre style facing screen • Chairs set with an isle down the middle <p><u>Back of room</u></p> <ul style="list-style-type: none"> • 1 table for sign in sheets and comment sheets with 4 chairs and pencils • 1 table with cookies and refreshments <p><u>Right side of room</u></p> <ul style="list-style-type: none"> • H&H station - 1 table <ul style="list-style-type: none"> ○ Floodplain Map Exhibit Boards (entire watershed and tiles), Aerial photos, floodway and floodplain boundary, 1-mile and 3-mile city boundaries. • CIP station - 1 table <ul style="list-style-type: none"> ○ One Exhibit Board with a Mastermap showing all the project locations. ○ Include multiple Exhibit Boards with 7 or 8 projects per board including descriptions, costs, pictures, etc. <p><u>Left side of room</u></p> <ul style="list-style-type: none"> • Water Quality/Bio-assessment station <ul style="list-style-type: none"> ○ Water quality and bio assessment information • Community Involvement station <ul style="list-style-type: none"> ○ Watershed map handouts, newsletters, website information, CAC-TAC-City-County-NRD-Consultant contact information, existing project map

	<p>NOTES: Milan will bring notices to put on doors in the building directing them to open house room.</p>
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5:00	Open door
5:25	Milan Wall – Announce that we will start in 5 minutes and to find a seat
5:30 – 5:35	Milan Wall – Welcome and agenda review, introduce Ed Kouma
5:35 – 5:45	Ed Kouma – Watershed master planning overview, introduce Mark Meyer
5:45 – 6:00	Mark Meyer – Presentation on scope and update on project (floodplain, CIPs, guidelines, water quality), back to Milan Wall
6:00 – 6:05	Milan Wall – Final slide to discuss the information stations, Which one is where, Invite them to visit the stations and ask team members any questions they may have at the stations and to invite them to complete comment forms.
6:05 – 7:00	Activity at stations
7:00	Milan Wall – Announce that the meeting is ended. Thank people for attending and remind them to sign up for newsletters.

Little Salt Creek Watershed Master Plan Project Information

Goal

Develop long-term planning tools and improvement projects to address water quality, flood management, and stream stability and provide guidance for sustainable urban growth in the watershed.

Study Objectives

- Maintain a Proactive Stakeholder and Public Involvement process
- Update Floodplain and Floodway Maps
- Identify Flooding, Erosion, and/or Water Quality Problems
- Consider Critical Habitat and Rare or Sensitive Environmental Resources
- Develop Guidelines and Recommendations for Future Development
- Identify Potential Funding Sources for Future Studies and/or Projects

Additional Information

www.lincoln.ne.gov

Keyword “watershed”

Little Salt Creek Watershed Master Plan City/County/NRD Project Team Members

Name	Agency	Address	Phone	Email
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Mike DeKalb	City of Lincoln/ Lancaster County Planning	555 South 10th, Room 213 Lincoln, NE 68508	402-441-6370	mdekalb@lincoln.ne.gov
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Nicole Fleck-Tooze	City of Lincoln Public Works	<i>Public Works and Utilities</i> 555 South 10 th Street, Room 203 <i>Lincoln, NE 68508</i>	402-441-6173	ntooze@lincoln.ne.gov

Little Salt Creek Watershed Master Plan Consultant Team Members

Mark Meyer	Intuition & Logic (Project Manager)	16253 Swingley Ridge Road, Suite 100 St. Louis, MO 63017	636-777-3000	mark@iilincworld.com
Robert Prager	Intuition & Logic (Geomorphology)	1306 Autumn Trace Amelia Island, FL 32034- 5400	904-261-5555	robert@iilincworld.com
Munsell McPhillips	Intuition & Logic (Water Quality)	1306 Autumn Trace Amelia Island, FL 32034- 5400	904-261-5555	munsell@iilincworld.com
Matt Harper	Intuition & Logic (Project Coordination)	16253 Swingley Ridge Road, Suite 100 St. Louis, MO 63017	636-777-3000	matt@iilincworld.com
Randall Graham	PBS&J (Hydraulics &Hydrology)	13508 Discovery Drive Omaha, NE 68137	402-502-3222	rrgraham@pbsj.com
Milan Wall	Heartland Center (Public Involvement)	650 "J" Street, Suite 305-C Lincoln, Nebraska 68508	402-474-7667	mwall@heartlandcenter.info
Kurt Mantonya	Heartland Center (Public Involvement)	650 "J" Street, Suite 305-C Lincoln, Nebraska 68508	402-474-7667	kmantonya@heartlandcenter.info
Steven Spomer	University of Nebraska-Lincoln (Entomology)	Dept. of Entomology 208 Plant Industry Bldg. University of Nebraska Lincoln, NE 68583-0816	402-472-8698	sspomer1@unl.edu
Brad Levich	Terracon (Soil Analysis)	3220 North 20th Street, Suite 3 Lincoln, NE 68521	402-466-3911	balevich@terracon.com

Little Salt Creek Watershed Master Plan Technical Advisory Committee Members

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Ed Ubben	Lower Platte South NRD	PO Box 83581 Lincoln, NE 68501-3581	402-476-2729	eubben@lpsnrd.org
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Dennis Schroeder	Natural Resource Conservation Service	8000 S 15th Street, Suite D Lincoln, NE 68512	402-423-9683	dennis.schroeder@ne.usda.gov
Bob Harms	U.S. Fish & Wildlife Services	U.S. Fish and Wildlife Service 203 West Second Street Grand Island, Nebraska 68801	308-382-6468 x17	robert_harms@fws.gov
Steven Spomer	University of Nebraska-Lincoln (Entomology)	Dept. of Entomology 208 Plant Industry Bldg. University of Nebraska Lincoln, NE 68583-0816	402-472-8698	Sspomer1@unl.edu
Tierney Brosius	University of Nebraska-Lincoln (Entomology)	Dept. of Entomology 208 Plant Industry Bldg. University of Nebraska Lincoln, NE 68583-0816	402-750-6713	tierneyberger@hotmail.com

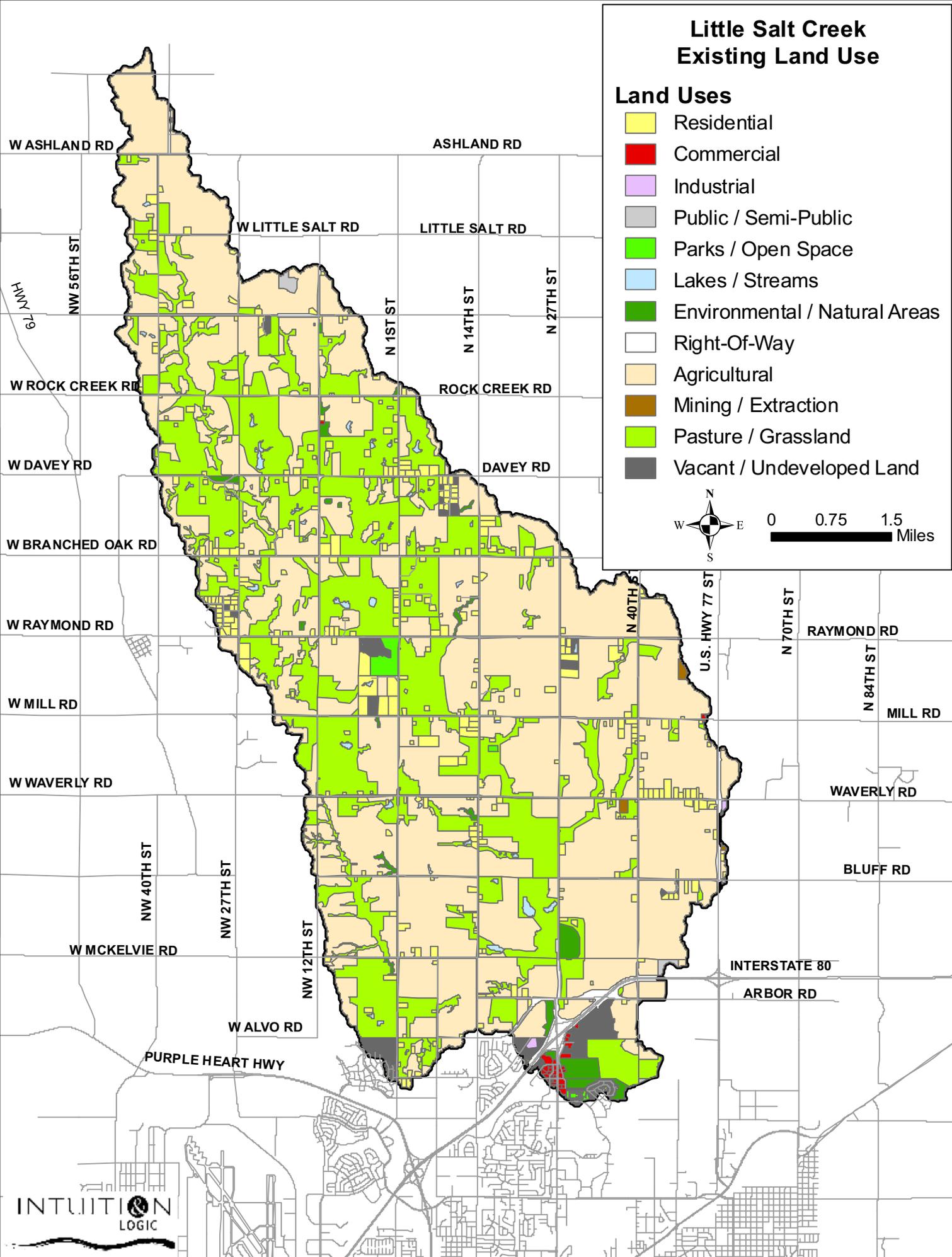
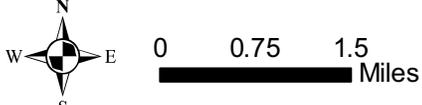
Little Salt Creek Watershed Master Plan Citizen's Advisory Committee Members

Name	Address	Phone	Email
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Mark Whitehead	2537 Randolph St. Lincoln, NE 68510	(402) 435-3509	mwhitehead@u-stop.com

Little Salt Creek Existing Land Use

Land Uses

- Residential
- Commercial
- Industrial
- Public / Semi-Public
- Parks / Open Space
- Lakes / Streams
- Environmental / Natural Areas
- Right-Of-Way
- Agricultural
- Mining / Extraction
- Pasture / Grassland
- Vacant / Undeveloped Land

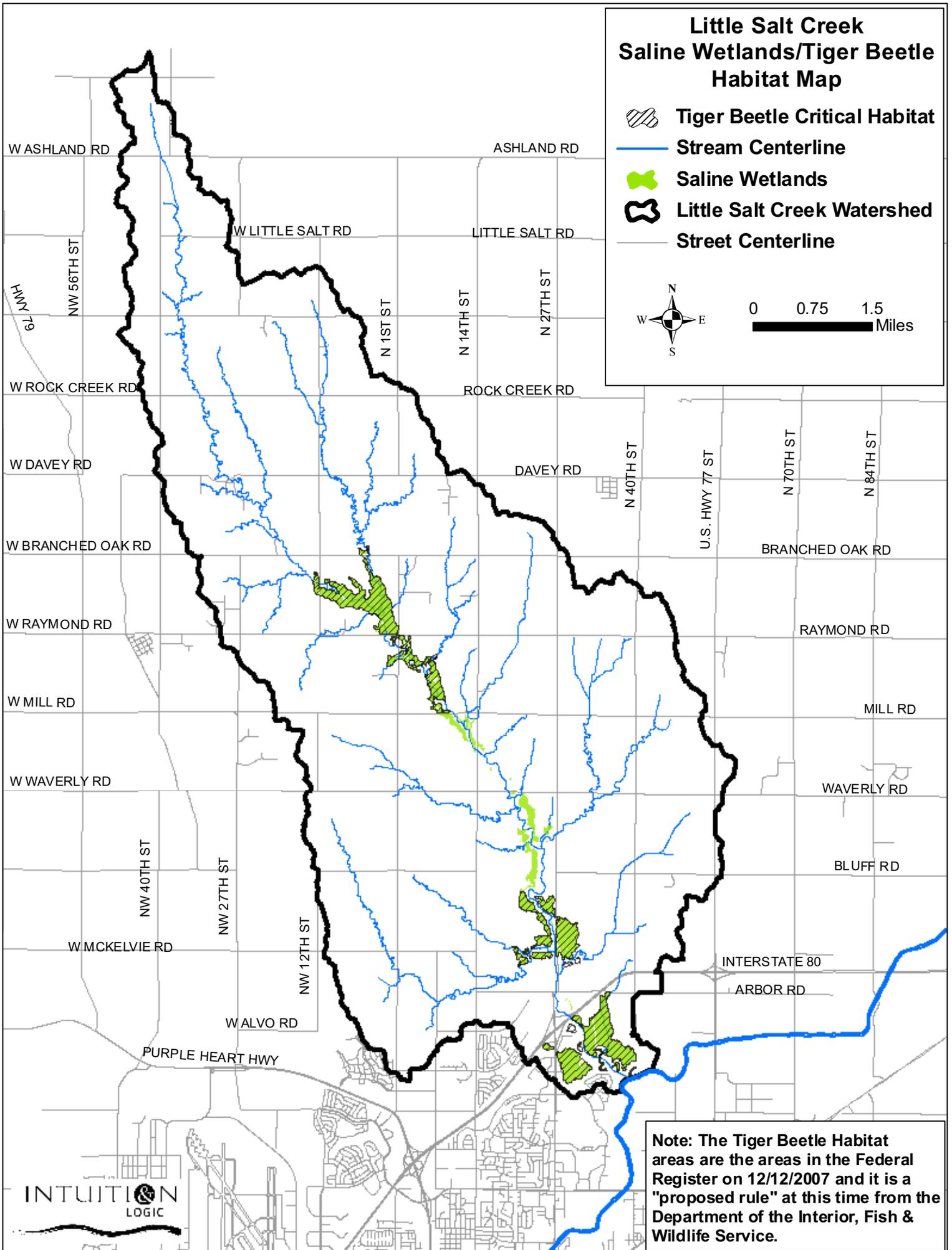


Little Salt Creek Saline Wetlands/Tiger Beetle Habitat Map

-  Tiger Beetle Critical Habitat
-  Stream Centerline
-  Saline Wetlands
-  Little Salt Creek Watershed
-  Street Centerline



0 0.75 1.5
Miles



Note: The Tiger Beetle Habitat areas are the areas in the Federal Register on 12/12/2007 and it is a "proposed rule" at this time from the Department of the Interior, Fish & Wildlife Service.

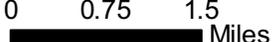
Little Salt Creek Watershed Map

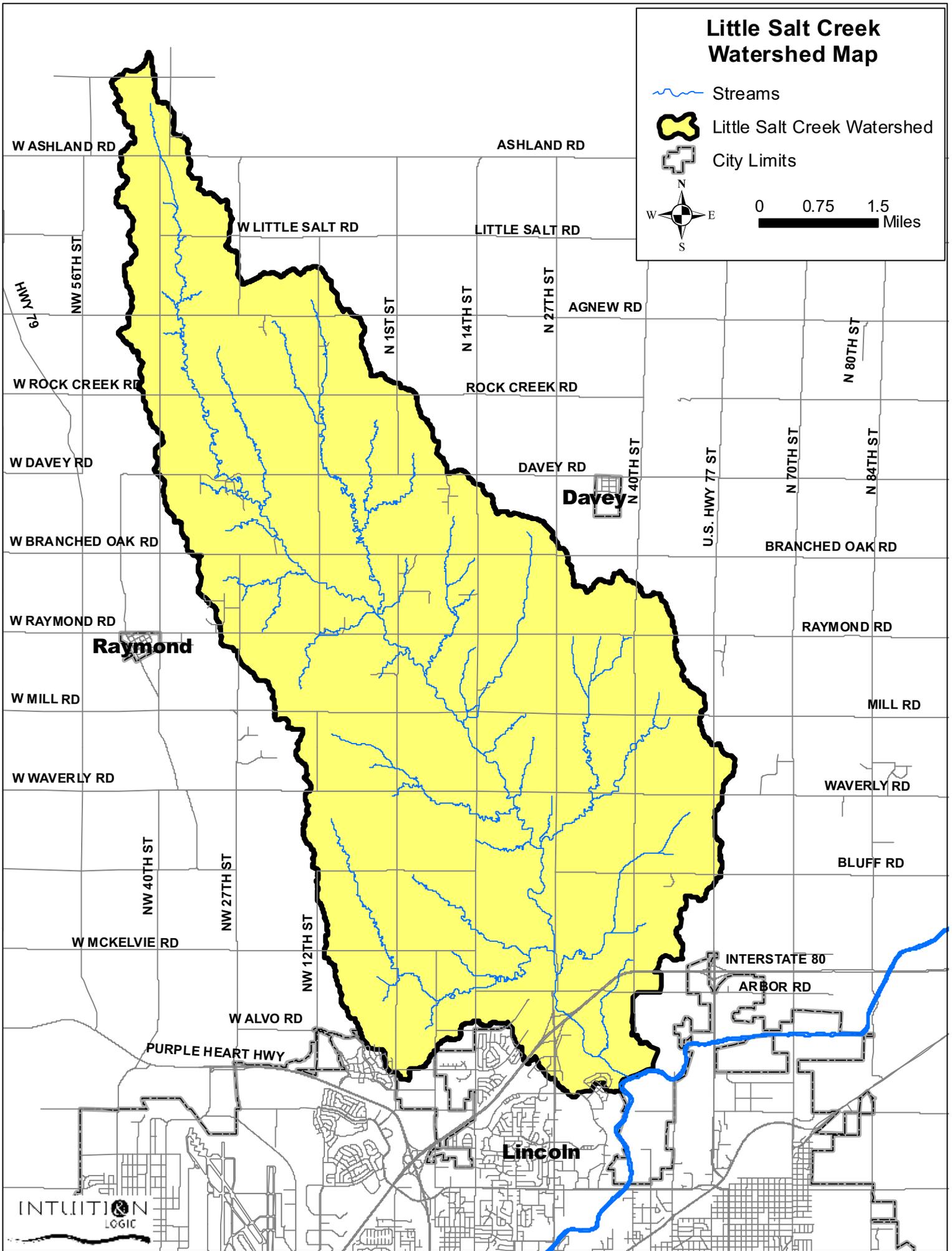
 Streams

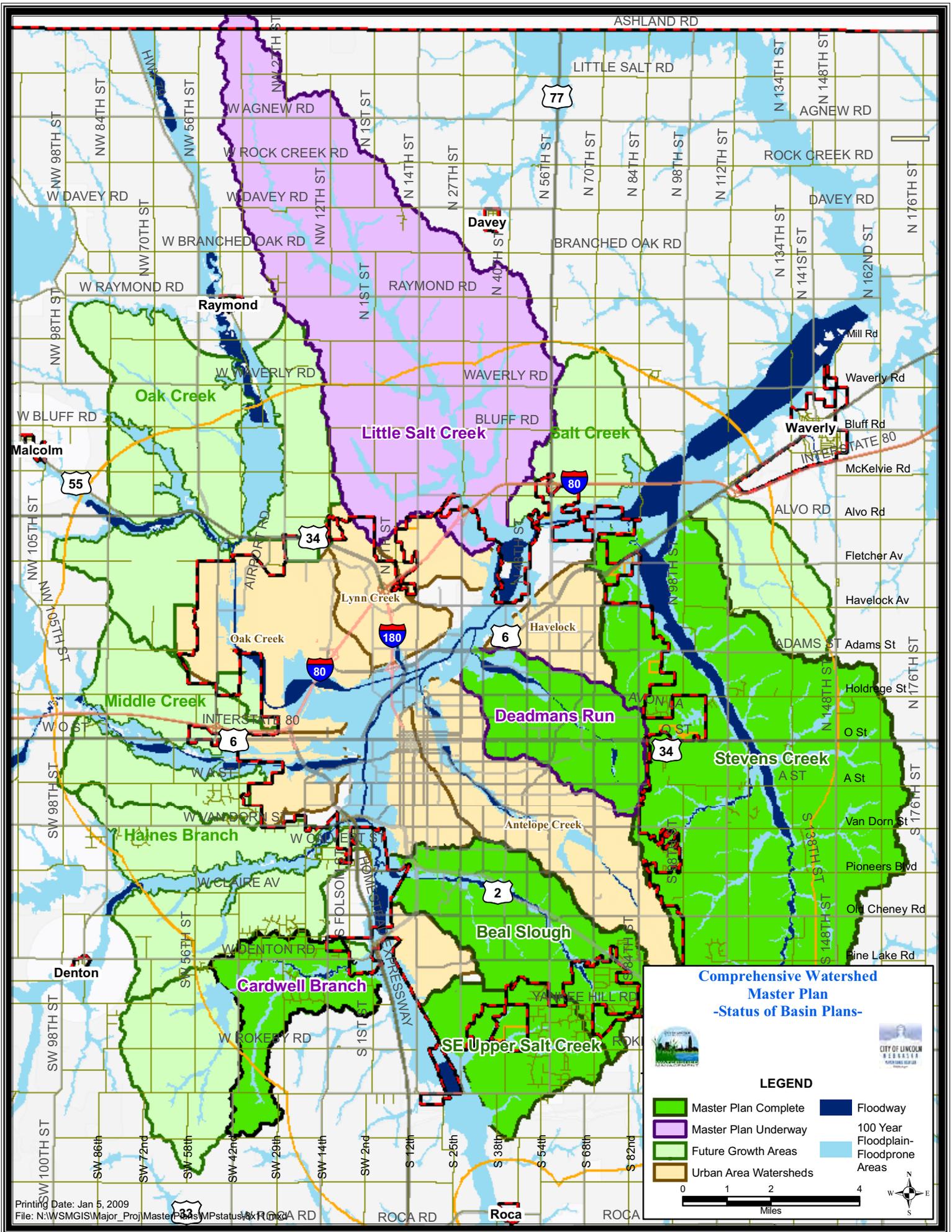
 Little Salt Creek Watershed

 City Limits

 N
W E
S

 0 0.75 1.5 Miles





Comprehensive Watershed Master Plan -Status of Basin Plans-




LEGEND

<ul style="list-style-type: none"> Master Plan Complete Master Plan Underway Future Growth Areas Urban Area Watersheds 	<ul style="list-style-type: none"> Floodway Floodplain Floodprone Areas
--	---



0 1 2 4 Miles



Second Little Salt Creek Watershed Open House
February 24, 2009
Prepared by
Kurt Mantonya
Heartland Center for Leadership Development

1. Promoting the Open House:

Almost 1100 newsletters were sent to property owners within the project area. The City of Lincoln provided electronic digital billboards within the vicinity of 14th street and Superior street. The City of Lincoln sent approximately 250 letters to property owners within the watershed who may be impacted by changes in the floodplain mapping. An article in the February 23, 2009 edition of the Lincoln Journal Star further promoted the open house. The Lower Platte South NRD conference room was selected as host site as it was large enough to accommodate the public, presentation space, and five information stations.

2. The Agenda:

The open house was scheduled from 5:00 p.m. to 7:00 p.m. with a presentation at 5:30 p.m. The agenda was designed to be brief but informative on the purpose of the watershed Master Plan and the study goals and objectives. Milan Wall from the Heartland Center opened the meeting, reviewed the agenda and discussed the information stations. Milan introduced Paul Zillig from the Lower Platte South NRD. Paul discussed the partnership between the City and Lower Platte South Natural Resources District, the goals and objectives of the study and the components of the study. Mark Meyer of Intuition and Logic discussed each component of the project that included the following:

- Public Involvement and the Citizen Advisory Committee
- Watershed Inventory
- Floodplain Mapping
- Stream Stability
- Natural Resources
- Seep Elevation Survey
- Water Quality
- Soil Assessment
- Watershed Master Plan Recommendations and the Study Findings

Participants were then invited to visit the information stations to ask questions about the project. One station included an interactive GIS system where property owners could see more detailed mapping of their specific parcel.

3. Attendance and Evaluation:

Fifty-nine participants signed in, including 40 members of the public, 10 project team members, six NRD board members, two CAC members and one TAC member. A comment card was provided at the sign-in table. Participants were encouraged to write their comments and leave with staff after the open house or mail it to the Heartland Center. One comment was received stating that they learned that more of their property will be in the new floodplain and that it was very informative.

Little Salt Creek Watershed Open House

Tuesday, February 24, 2009

Lower Platte South NRD

Name	Phone	Email	
Don Johnson	477-2523		+
Address	City	Zip	
2523 WEST A	LINCOLN	68522	
Name	Phone	Email	staff
Ed Kouma			
Address	City	Zip	
City of Lincoln			
Name	Phone	Email	staff
Randy Graham			
Address	City	Zip	
PBS & J			
Name	Phone	Email	+
Lois & Homung	785-2375		
Address	City	Zip	
601 Raymond Rd	Raymond	68428	
Name	Phone	Email	+
ROBE CERSE	402-477-5544		
Address	City	Zip	
605 W BLUFF RD.	Lincoln	68531	
Name	Phone	Email	+
MARION STILLINGER	-		
Address	City	Zip	
Name	Phone	Email	+
South Dambur			
Address	City	Zip	
Name	Phone	Email	+
Angie Paney			
Address	City	Zip	
Name	Phone	Email	+
Brandon Vanitek	785 2163		
Address	City	Zip	
15800 N 1st	Raymond	68428	
Name	Phone	Email	+
George Mills	402-477-9409	emills@lincolnd.com	
Address	City	Zip	
LOS Waverly Rd	Raymond	68428	

Little Salt Creek Watershed Open House

Tuesday, February 24, 2009

Lower Platte South NRD

Name	Phone	Email
<i>[Handwritten Name]</i>		
Address	City	Zip
<i>70</i>		

Name	Phone	Email
<i>Ron + Patsy Mellen</i>		
Address	City	Zip

Name	Phone	Email
<i>KEVIN STEELE</i>		
Address	City	Zip

Name	Phone	Email
<i>TOM PAVEY</i>		
Address	City	Zip
<i>525 W. Raymond Rd</i>	<i>Raymond</i>	<i>68428</i>

Name	Phone	Email
<i>Karen Brauer</i>		
Address	City	Zip

Name	Phone	Email
<i>Doug Samuelson</i>		
Address	City	Zip

Name	Phone	Email
<i>Miguel Mel Siller</i>		
Address	City	Zip

Name	Phone	Email
<i>Jim Johnson</i>	<i>479-2343</i>	
Address	City	Zip

Name	Phone	Email
<i>Pat Kitchen</i>	<i>476-8763</i>	<i>kuckiel@windstream.net</i>
Address	City	Zip
<i>6449 Cascade Dr</i>	<i>Imperial</i>	<i>68504</i>

Name	Phone	Email
<i>[Handwritten Name]</i>		
Address	City	Zip

Little Salt Creek Watershed Open House

Tuesday, February 24, 2009

Lower Platte South NRD



Name	Phone	Email	
<i>Eloisa & Marcy Robinson</i>	<i>438-1216</i>		+
Address	City	Zip	
<i>5717 Enterprise Dr</i>	<i>Lincoln, NE</i>	<i>68521</i>	
Name	Phone	Email	
<i>TOM MALMSTROM</i>			TAC
Address	City	Zip	
<i>CITY/LPSNRD</i>			
Name	Phone	Email	
<i>GARY HUGH</i>			+
Address	City	Zip	
Name	Phone	Email	
<i>DAVID POKER</i>			NRD
Address	City	Zip	
<i>LPS NRD</i>			
Name	Phone	Email	
<i>MIKE JEFFERS</i>			+
Address	City	Zip	
Name	Phone	Email	
<i>Craig Kreiner</i>			+
Address	City	Zip	
Name	Phone	Email	
<i>Richard Kreiner</i>			+
Address	City	Zip	
Name	Phone	Email	
<i>Michael Henry</i>			+
Address	City	Zip	
Name	Phone	Email	
<i>HARRY Muhlbach</i>	<i>430-7304</i>		+
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	<i>Lincoln</i>	<i>68514</i>	
Name	Phone	Email	
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Address	City	Zip	
<i>1250 1st St</i>	<i>Wayne</i>	<i>68336</i>	

Little Salt Creek Watershed Open House

Tuesday, February 24, 2009

Lower Platte South NRD



Name	James Jotho	Phone	402 783 5553	Email	JAJV@... +
Address		City		Zip	

Name	Jack Nagel	Phone	430 6717	Email	CAC
Address		City	Douglas	Zip	68336

Name	Julia Tina Workman	Phone	402 785-2048	Email	+
Address		City	Raymond	Zip	

Name	Richard Parrott	Phone	476-8314	Email	+
Address	2050 Arbor Rd	City	Lincoln	Zip	68531

Name	James Nagel	Phone		Email	+
Address	11255 N56	City	Lincoln	Zip	68514

Name	Steve Larrick	Phone		Email	NRD
Address		City		Zip	

Name	Milan	Phone		Email	
Address		City		Zip	

Name	Kurt	Phone		Email	
Address		City		Zip	

Name	Mike Dekalb	Phone		Email	
Address		City		Zip	

Name	Paul Zillig	Phone		Email	
Address		City		Zip	

Ed Ubben, Mark M. Matt Harper, Ben H.

Little Salt Creek Watershed Open House

Tuesday, February 24, 2009

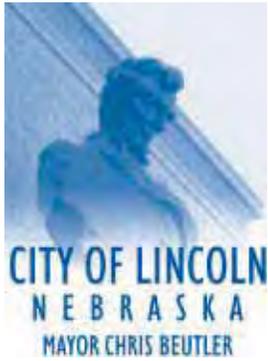
Lower Platte South NRD

Name RUSSELL MILLER	Phone 498-2671	Email +
Address 341 S 52	City	Zip 68510
Name Clara Munn	Phone 477-0242	Email NRD
Address 5000 N7	City	Zip
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Address 9801 N. 14th	City Lincoln	Zip
Name Harold Roper	Phone	Email CAC
Address 7441 No 40 th	City	Zip
Name Annette Hraban	Phone 783-3020	Email +
Address 732 W Raymond Rd	City	Zip
Name Jim Kumm	Phone 785-2765	Email +
Address	City	Zip
Name Roger Bush	Phone 742-7263	Email +
Address 13601 W Windridge	City Lincoln NE	Zip 68528
Name Ron Case	Phone	Email NRD
Address 2420 N. 78th	City	Zip
Name Jim Kearney	Phone 402-489-2754	Email +
Address 4226 Locust St	City Lincoln	Zip 68514

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NEWSLETTERS

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WATERSHED NEWS

APRIL 2008

A Publication Sponsored by the
City of Lincoln and the Lower Platte South Natural Resources District (NRD)

LITTLE SALT CREEK WATERSHED MASTER PLAN



Little Salt Creek south of Raymond Road

Introduction

The City of Lincoln (City) and Lower Platte South Natural Resources District (LPSNRD) staff, as well as other planning and design engineers, are developing the Little Salt Creek Watershed Master Plan. The Little Salt Creek Watershed is located north of the City of Lincoln and flows into Salt Creek just southeast of I-80 at 27th Street. The objective of the study is to develop a master plan that will proactively forecast, evaluate, and manage stormwater quantity and quality, channel stability, maintenance and operations, and financial impacts as well as environmental impacts that are occurring today or are projected to result from future development or other changes in the basin. The master plan will consider potential impacts to unique and sensitive environmental resources in the watershed, including rare saline wetlands, the state-endangered saltwort plant (*Salicornia rubra*) and the Salt Creek Tiger Beetle (*Cicindela nevadica lincolniana*). This project will also include hydraulic and hydrologic modeling to determine flood prone areas. All information gathered will be provided in a Geographic Information System (GIS) format compatible with the City of Lincoln's GIS database.

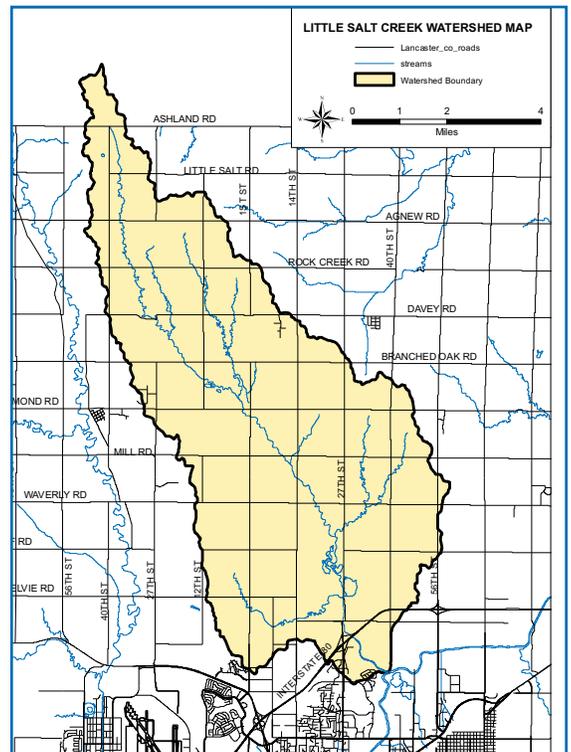
We are beginning Phase I of this multi-phase project. This phase includes:

- A watershed inventory to collect, compile and evaluate existing data about the watershed.
- A geomorphic analysis to determine potential erosion and other stream stability issues along Little Salt Creek and its tributaries.
- Hydrologic and hydraulic models to determine flood prone areas.
- Preliminary identification of Best Management Practices (BMPs) and/or Capital Improvement Projects (CIPs) to address problem areas.
- Prioritization of problem areas based on degree of flooding or erosion, potential impacts to environmental resources, importance of habitat/resource protection, and location relative to the future growth of Lincoln.

Future Phases

Future phases of this project may include the following:

- Revising the FEMA Digital Flood Insurance Rate Maps (DFIRMs) for the area downstream of the 14th Street bridge.
- A limited stream bioassessment.



(Continued on page 2)

Little Salt Creek Watershed Master Plan (cont.)

- Water quality testing to determine potential water quality issues.
- Final identification of BMPs and CIPs to address flooding, erosion and water quality problem areas.
- Formulation of guidelines and recommendations for future development in the watershed.
- Identification of potential funding sources for future studies and/or implementation of BMPs and CIPs, and the creation of the final master plan.

Field Work

Project team members have been gathering information along the creek and its major tributaries. Field work will continue through the month of May. Field work for this phase includes a geomorphic inventory during which project team members from Intuition & Logic walk the streams and collect information to determine the creek's condition and stability. Information gathered includes bed and bank material, bank height, bank erosion or failure, head-cuts in the channel bed, representative pool-riffle spacing, channel cross section, channel and riparian corridor vegetation, channel constrictions, debris jam potential, relative sediment movement, scour lines and debris lines. Information will be collected on hand-held computers and incorporated into the GIS database for the watershed.

Other field work for this phase includes field visits by project team members from PBS&J, who are developing the hydrologic and hydraulic models. PBS&J uses field visits to verify assumptions in their models. A&E Engineering is surveying bridges and culverts where roads cross the creek for information used to inform the hydraulic model. Terracon is conducting soil testing. The testing helps determine potential stream stability issues due to the presence of highly erodible soils.

Public Involvement

The Little Salt Creek Watershed Master Plan study process will feature a range of public participation opportunities designed to provide information on the approach to the study, gather input from stakeholders, and share preliminary recommendations for floodplain and floodway improvements.



Little Salt Creek just north of Arbor Road

THE PROJECT TEAM

This is a joint project led by the City of Lincoln and the Lower Platte South Natural Resources District (NRD).

The consulting team is comprised of Intuition & Logic in association with PBS&J, Terracon, the University of Nebraska-Lincoln, A&E and Heartland Center for Leadership Development. For more information, contact:

Ed Kouma

Lincoln Public Works/Utilities Department
Phone: (402) 441-7018 Fax: (402) 441-8609
E-mail: ekouma@lincoln.ne.gov

Paul Zillig

Lower Platte South Natural Resources District
Phone: (402) 476-2729 Fax: (402) 476-6454
pzillig@lpsnrd.org

The public participation components will include open houses, a citizen advisory committee, a technical advisory committee, and this newsletter.

- The first open house will focus on the approach to the study. A second open house will provide an update on the study's findings and present final recommendations from the study team.
- A 20-member citizen advisory committee, appointed by Mayor Beutler, will meet three times to hear project updates and provide advice on possible capital improvement projects. A 12-member technical advisory committee will also meet four times over the course of the study.
- Six issues of the Watershed News will provide updates to a broad range of interests in the watershed.

Throughout all phases, the project team encourages public involvement and will work to foster resource agency coordination.

MEET THE TEAM

ED KOUMA

CITY OF LINCOLN



How did you get interested in the field of water resources engineering?

Many years ago in Engineering College, I decided water related issues would continue to be of highest importance as the years go on so I chose a career in water resources. It has been fulfilling to be involved in such an important aspect of society over the years.

Why does working on the Little Salt Creek Project interest you?

It is important for our community to understand the watersheds of the area and having a master plan for each of the major watersheds is the best way to do that. We have the opportunity to guide development in the Little Salt Creek Basin and to decrease potential

flood hazards, protect stream channels, conserve natural resources and preserve water quality for future generations.

What are your day-to-day duties for the Little Salt Creek project?

My duties include acting as the City's project manager for the Little Salt Creek Watershed Master Plan effort. I help to coordinate the efforts of the consultants with the City and the Lower Platte South Natural Resources District and monitor the progress of the master plan study.

What do you see as the most important part of your job?

I feel the most important part of my job is public education about water resources. Each of us has a role to play in protecting the quality of runoff water and managing it in a way that protects our streams and lakes. As the awareness of personal responsibility grows we will see the results in the environment around us.

What do you enjoy most about working for the city?

I like being part of an organization that is proactive and progressive but most of all I enjoy the people I work for and with. They are good people!

AVAILABLE ON THE WEBSITE

Work has begun on the Little Salt Creek Master Plan. During the months that follow, scientists, engineers, City staff, property owners and residents will come together to analyze critical features of the watershed and potential impacts of future urbanization. A wealth of information related to the study process and recommendations will be made available on the project website. The project website is available at lincoln.ne.gov, keyword: watershed.

CITIZENS ADVISORY COMMITTEE MEETINGS

The first meeting will be held at the

**Lower Platte South
Natural Resources District**

3125 Portia Street

Lincoln, NE 68521

4:30 p.m.

April 15, 2008

WHAT ARE SALINE WETLANDS?

Eastern Saline Wetlands (saline wetlands)

Once estimated to be in excess of 20,000 acres, less than 4,000 acres remain and many of these are degraded. These wetlands form a regionally unique wetlands complex located in floodplain swales and depressions within the Salt Creek, Little Salt Creek, and Rock Creek drainages in Lancaster and southern Saunders counties, Nebraska.

The source of salinity for these wetlands is not fully understood, but it's postulated it is from groundwater inflow that passes through a rock formation containing salts deposited by an ancient sea that once covered Nebraska (USDA 1996). The seepage of groundwater over thousands of years from deeply buried saline aquifers has accumulated salts in the floodplain soils, allowing this unique wetland type to form.

The abundant mud flats of the saline wetlands are rich in invertebrate life and frequented by a variety of migratory shore birds, other bird species, and wildlife. Salt tolerant plants that are found nowhere else in Nebraska can be found here.



Little Salt fork Marsh owned by The Nature Conservancy; salt flat area in foreground.

HEARTLAND CENTER FOR LEADERSHIP DEVELOPMENT
650 "J" STREET, SUITE 305-C
LINCOLN, NE 68508

Non-Profit Org.
U.S. Postage
PAID
Lincoln, NE
Permit No. 825



CITY OF LINCOLN AND LOWER PLATTE SOUTH NATURAL RESOURCES DISTRICT



OPEN HOUSE

LITTLE SALT CREEK WATERSHED

Lincoln North Star High School

5801 N. 33rd Street

Tuesday, April 22, 2008

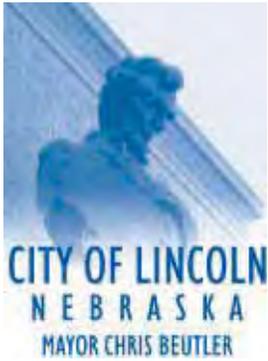
5:00-7:00 p.m.

Presentation at 5:30 p.m.

The first Little Salt Creek Watershed Open House will offer residents and others interested in the watershed a chance to learn about the project and offer comments.

Please join the staff from the City of Lincoln, the NRD and the project team for a presentation and a chance to discuss the watershed plan.

For more information contact the Heartland Center for Leadership Development
402-474-7667 or info@heartlandcenter.info



WATERSHED NEWS

JULY 2008

A Publication Sponsored by the
City of Lincoln and the Lower Platte South Natural Resources District (NRD)

LITTLE SALT CREEK WATERSHED PROGRESS SUMMARY

The objective of the Little Salt Creek Watershed Master Plan is to develop a watershed master plan that will allow the City and NRD staff, as well as other planning and design engineers, to proactively forecast, evaluate, and manage changes in the basin. This includes stormwater quantity and quality, channel stability, maintenance and operations, economic considerations and environmental issues occurring today or that may result from future development. The master plan will consider potential impacts to unique and sensitive environmental resources in the watershed, including rare saline wetlands, the state endangered saltwort plant (*Salicornia rubra*) and the Salt Creek Tiger Beetle. This project will also include hydraulic and hydrologic modeling and flood plain mapping, public involvement and consideration of the 2030 City-County Comprehensive Plan. It will provide information gathered for the master plan in a format compatible with the City of Lincoln's Geographic Information System (GIS) database.

The project study team is now in the data collection and analysis phase of the master plan. The team is compiling the large volume of existing data that is available for the watershed as well as generating new data from our hydrologic and hydraulic, geomorphic and soils samples, as well as from public involvement efforts. The following is an update on our progress:

(Continued on page 2)



Little Salt Creek Bridge at Mill Road

The key physical characteristics that affect geomorphic processes are the stream soil types, geology and vegetation, along with the steepness of the channel bottom. Streams with steep bottoms are susceptible to erosion because the water moves faster, while areas with flat bottoms are vulnerable to large deposits of sediment buildup. Large sediment buildup in streams can alter the ability of a stream to transport water and to maintain aquatic habitat. By understanding the geomorphology process, an engineer can implement preventative measures to ensure long-term stream stability and habitat.

For this project, river engineers performed field investigation of approximately 33 miles of stream, collecting and documenting the physical characteristics of the creek that will be used to assist the project team in master planning. A diverse set of geomorphic conditions were encountered during the field work. For example, some stream reaches contained scour on alternating sides of the creek, which illustrates how the forces of moving water form the familiar meandering pattern of natural streams.

(Continued on page 3)

GEOMORPHOLOGY

Geomorphology is the study of surface land forms and the processes that develop those forms. Geomorphic processes are the primary mechanisms that produce these land forms, including drainage patterns, streams, floodplains, and other watershed features. One of the basic functions of a stream is to carry water. Sediment is also conveyed with the water and may be deposited or eroded along the streambed depending on the severity of the rainstorm and the characteristics of the channel.



Meandering stream with bank scour along
Little Salt Creek

Progress Summary (cont.)

Watershed Inventory

We have completed compiling the bulk of available GIS information from the City, County, NRD and other available sources for use as the base in our data gathering effort.

Hydrology and Hydraulics

The watershed hydrology is complete. We evaluated stormwater runoff and stream flows throughout the watershed for the 2-, 10-, 50-, 100-, and 500-year storm events. The model was calibrated using existing stream gauge data.

The hydraulic model is prepared and awaiting hydraulic structure survey data from our team survey crew. Over 70 stream structures (bridges and culverts) were surveyed for use in the model. Once this data is entered, we will begin running the hydraulic model and updating the floodplain maps.

Water Quality

The water quality data collection is scheduled to begin in August/September 2008.

Geomorphology

The geomorphic field data collection, data reduction and diagnosis of how the streams are changing are complete.

Soils Assessment

Soil field sample collection and lab testing is scheduled for completion in July 2008.

Structures

Survey control is established for the watershed, and the hydraulic structure survey is scheduled for completion in July 2008.

Public Involvement and Participation

The first Technical Advisory Committee (TAC) and Citizen Advisory Committee (CAC) meetings are complete, as is the first open house. The second TAC meeting is scheduled for July 2008 and the second CAC meeting is scheduled for the end of summer/early fall 2008. The first newsletter was mailed in April 2008 and this is the second.

Deliverables

The final report appendix section for the aerial photo analysis has been submitted and reviewed. Website data for to-date progress and TAC, CAC, and open house information and notes were submitted and are available on the city website at lincoln.ne.gov (keyword: watershed).

The draft geomorphology section and draft hydrology section are scheduled for July 2008.

CITIZEN ADVISORY COMMITTEE (CAC)

The Little Salt Creek Citizen Advisory Committee represents interests from the Salt Creek watershed and the community as a whole and serves as a resource for the project team in development of a master plan for watershed management. The committee serves on behalf of the citizens who live or work in the watershed or who may be impacted by the findings of this study.

Citizen Advisory Committee Members are:

Doug Emery	Don Linscott
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Susan Kuck	Mark Whitehead

The committee will provide input regarding recommendations developed by the team. They will be asked to review project study findings, raise questions and make recommendations and share information among themselves, the public they represent and the project team.

TECHNICAL ADVISORY COMMITTEE (TAC)

The mission of the Technical Advisory Committee is to provide technical advice and expertise to the project study team. The TAC will review project elements, findings and recommendations as provided by the project team at four meetings during the course of the study. TAC members will be expected to provide comments at the formal meetings and through informal communications between meetings.

Members of the Technical Advisory Committee are:

John Bender	Nebraska Dept. of Environmental Quality
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John Moeschen	U.S. Army Corps of Engineers
Doug Pillard	Lancaster County Engineering
Dennis Schroeder	Natural Resource Conservation Service
Dan Schulz	Lower Platte South NRD
Ed Ubben	Lower Platte South NRD

MEET THE TEAM

MARK MEYER
INTUITION & LOGIC



What is your role in the project?

I am the consultant team project manager. My role is to coordinate all the activities of the consultants to ensure that we provide a complete and accurate final product that meets the project scope, goals and objectives. I am the conduit for information between the City and NRD and the consultant team, and I frequently meet with the City, NRD and County to present, review and discuss project components and status.

How did you get interested in the field of water resources engineering?

As a young engineer-in-training, I met Robert Prager, PE, while working on a stream project in Maryland Heights, Missouri. Robert was another consultant on the project and he introduced me to the science of fluvial geomorphology and how it influences civil engineering in urban streams. I was fascinated with the implications and possibilities! I knew within days of meeting Robert that this was the direction I wanted to take my career.

Why does working on the Little Salt Creek Project interest you?

This is a very unique watershed with extraordinary characteristics, a proud heritage and residents that are passionate about protecting the resources they enjoy. I am excited to lead the team that has been charged with developing the plan to best meet the needs of residents, the City, County and NRD.

What are your day-to-day duties for the Little Salt Creek project?

I am responsible for daily coordination of data and resources to keep this project on scope and schedule. For example, today I completed this interview for the newsletter, incorporated review comments received from the NRD into draft report sections and revised the floodplain modeling schedule to reflect PBS&J's (our floodplain modeling consultant) comments. There are 13 major components to this project and tens of thousands of individual tasks that need to be completed accurately and timely for success.

What are your other daily activities?

I am the owner and president of Intuition & Logic's St. Louis office. In this role I am in charge of finance, operations, administration, marketing, accounting and all things business related. I am also the principal civil engineer and lead designer on many Intuition & Logic projects.

I am also the father of four children ages 8, 10, 12 and 13 and I try to spend every possible moment with them! My mornings, evenings, weekends and all other free time are packed with sports, homework, piano, and keeping our home running smoothly (...as much as possible with four kids).

What do you see as the most important part of your job?

It's difficult to pin it down to one thing. I believe that everything is important, from the smallest project details to big picture strategic planning. I think we are all incredibly lucky to have these great careers and so many opportunities to effect positive change in our communities. It may sound corny, but I believe the most important part of my job is to strive continuously to do my personal best and try to influence those around me to do the same.

Geomorphology (cont.)



Scour that has the potential to undermine the box culvert

Other stream reaches showed incision which is the lowering of the stream bottom. This process can potentially cause problems with the stability of our roadway stream crossings (culverts and bridges) and the stability of our stream banks. As the channel gets deeper, the banks get higher until they reach a critical bank height and begin to slough or slide into the creek.



Stable Reach of Little Salt Creek

And lastly, several stream sections were in stable condition providing home to wildlife and serving as an attractive amenity for people as well.

THE PROJECT TEAM

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The consulting team is comprised of Intuition and Logic in association with PBS&J, A&E, Terracon, the University of Nebraska-Lincoln, A&E and Heartland Center for Leadership Development. For more information, contact:

Ed Kouma

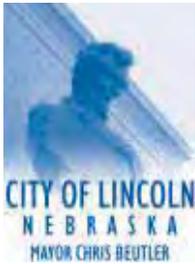
Lincoln Public Works Department
Phone: (402) 441-7018 Fax: (402) 441-8609
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Paul Zillig

Lower Platte South Natural Resources District
Phone: (402) 476-2729 Fax: (402) 476-6454
E-mail: pzillig@lpsnrd.org

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CITY OF LINCOLN AND LOWER PLATTE SOUTH NATURAL RESOURCES DISTRICT



LITTLE SALT CREEK WATERSHED MASTER PLAN OPEN HOUSE

The Little Salt Watershed Master Plan involves a wide range of public participation opportunities that are designed to gather input on this project. Besides this newsletter and the formation of the Citizen Advisory Committee, two open houses provide an additional opportunity to bring citizens together in a public forum. The first open house was held April 22, 2008 at Lincoln North Star High School. Thirty-five watershed residents and other interested people, plus LPSNRD Board members and project staff attended. This open house focused on the project scope, goals of the project and the project timeline. Following a formal presentation, participants were encouraged to visit the five available information stations covering various plan elements. In addition, participants were encouraged to fill out comment cards regarding the project scope. The second and final open house will provide an update on the study's findings and present final recommendations from the study team. This open house will be held in the spring of 2009.

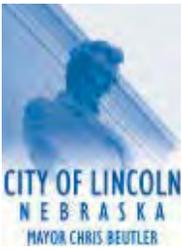
The open house presentation materials as well as other project information can be accessed on the City of Lincoln's web site:

lincoln.ne.gov (keyword "watershed")



First Open House for Little Salt Creek

For more information contact the Heartland Center for Leadership Development
402-474-7667 or info@heartlandcenter.info



Watershed Master Planning Little Salt Creek Progress Summary



We appreciate your interest in the Little Salt Creek Watershed Master Planning process. Most of the field work is finished and the first draft of the plan is nearing completion. Here is an update on the status and timeline for presenting this information to the public. Please feel free to contact us if you have any questions.

PROJECT PROGRESS

- Water quality and biology data collection has begun and results are expected in January 2009.
- Watershed rainfall analysis and streamflow calculation is complete for the 2-, 10-, 50-, 100- and 500-year storm events.
- The bridge and culvert surveying is finished and the streamflow model has been completed.
- Soil sampling and analysis are complete.

UPCOMING MEETINGS

- The next meetings of the Citizen Advisory Committee and the Technical Advisory Committee will be scheduled for early 2009.
- The next public Open House will be held in early 2009.

UPDATED MAPS

- The updated floodplain maps and draft report are planned to be completed in early 2009, when they will be presented to the committees and posted on the project website.
- Project website address: lincoln.ne.gov keyword: *watershed*

For more information,
contact:

Ed Kouma

City of Lincoln

402-441-4955

ekouma@lincoln.ne.gov

- or -

Paul Zillig

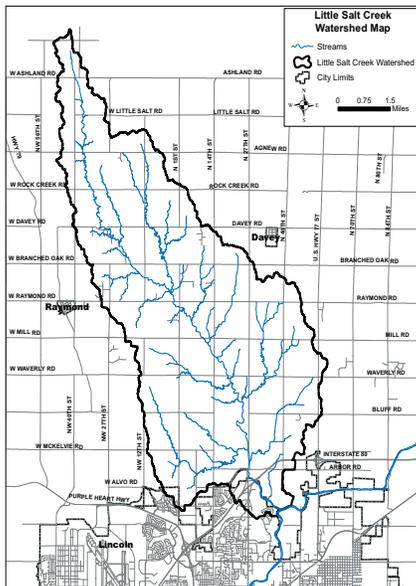
Lower Platte South NRD

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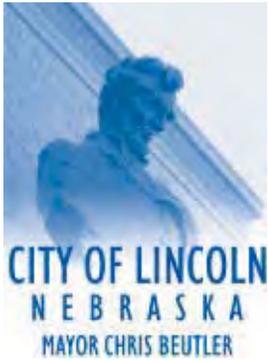
Heartland Center for Leadership Development
650 J Street, Suite 305-C
Lincoln, NE 68508

Little Salt Creek Watershed Progress Summary



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WATERSHED NEWS

FEBRUARY 2009

A Publication Sponsored by the
City of Lincoln and the Lower Platte South Natural Resources District (NRD)

LITTLE SALT CREEK WATERSHED PROGRESS SUMMARY

HYDROLOGY AND HYDRAULICS

One of the components of the Little Salt Creek Watershed Master Plan is determining the location of the 100-year floodplain boundary and base flood elevations utilizing the most current information available. This information is necessary for future planning of the basin to protect future homes and businesses from flood hazards, and to provide guidance for sustainable urban growth in the watershed.

The source of the current floodplain boundary is the Flood Insurance Rate Map (FIRM) provided by the Federal Emergency Management Agency (FEMA) through the National Flood Insurance Program. The current floodplain information is from the late 1970s and is now out of date. Through the City's Cooperating Technical Partnership program with FEMA, the process required to update the FIRM has been incorporated into this watershed study so that the technical information for this study will be developed in a format ready to submit to FEMA.

This component of the study reflects strategies in the City-County Comprehensive Plan to continue to develop a comprehensive, watershed approach to floodplain mapping and to continue to improve its accuracy. The study uses the latest technology and data available in order to keep the floodplain maps as accurate and reliable as possible. The FEMA floodplain maps show the 100-year floodplain, or a flood that has a 1% chance of being equaled or exceeded in any given year. Preliminary 100-year floodplain limits have been prepared and are in the process of being refined by the project team.

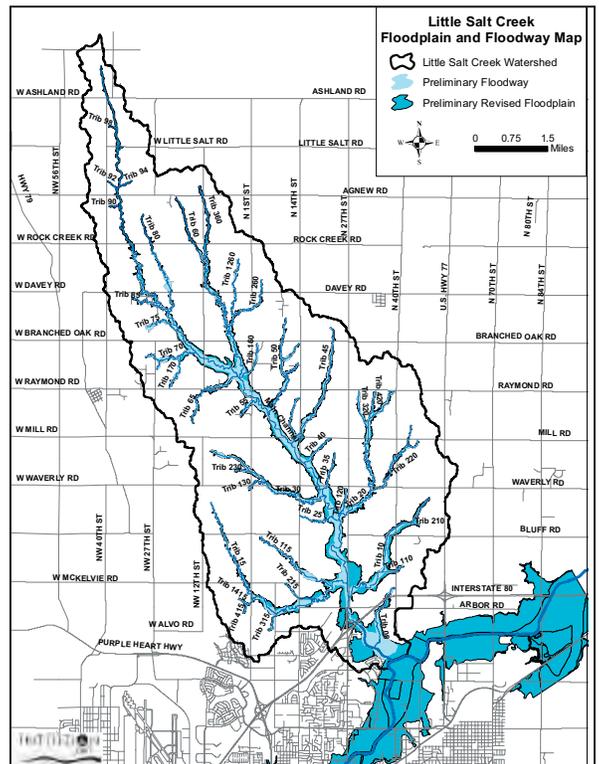
The city anticipates utilizing the detailed study for the purposes of regulating the floodprone areas at such time as the study information is completed. However, the official FEMA flood status of areas within the Little Salt Creek Watershed will not be modified until the maps have been reviewed, accepted, and published by FEMA. This process could take a year or two following final submittal to FEMA. The process will include a public comment period and a public meeting before the maps become official.

Preliminary floodplain map exhibits will be available for review at the next public open house scheduled for Tuesday, February 24, 2009, at the Lower Platte South Natural Resources District office, 3125 Portia Street in Lincoln.

PRELIMINARY WATERSHED RECOMMENDATIONS

The project team has identified 18 stream stability Capital Improvement Projects (CIPs). The general locations of the projects are shown on the Capital Improvements Project Location Map. Projects 1 through 10 are grade controls along the main stem immediately downstream of bridge crossings. The main stem is incising, and continued incision will cause erosion that could compromise bridge footings and stability. Sediment released from incision and subsequent bank failures could threaten property and natural resources along the channel. These grade controls will hold the profile grade of the channel, reducing the erosion and sediment released.

(Continued on page 2)

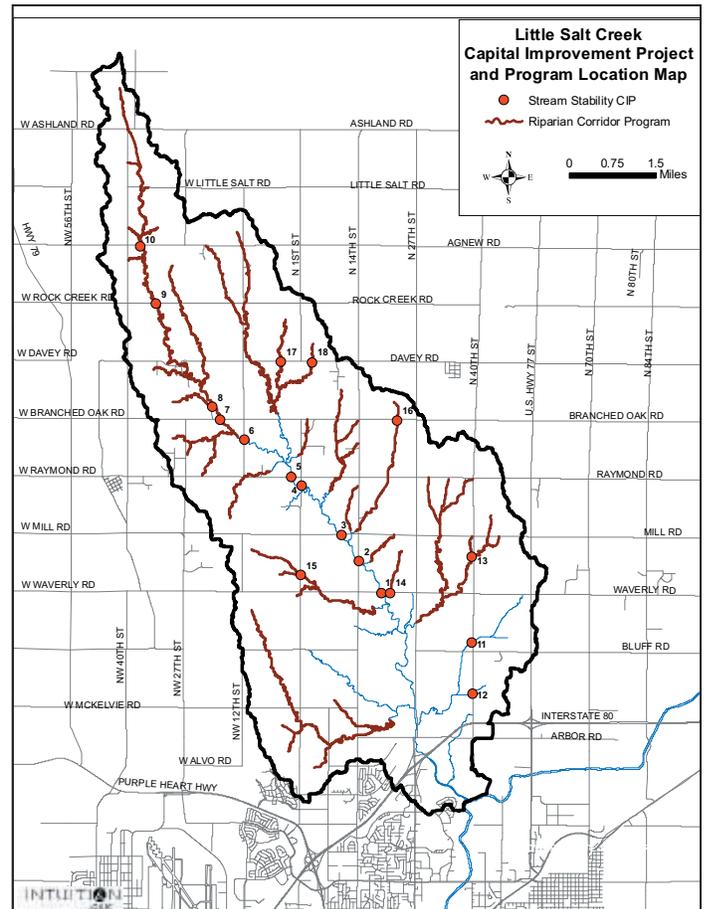


Progress Summary (cont.)

Projects 11 through 18 are stilling basins at the outfall of existing culverts. Channel erosion and incision have caused eight existing culvert outfalls to be perched from one to three feet above the channel, thereby threatening the stability of the culverts. The stilling basin at the downstream end of the culvert will dissipate energy and protect the outfall.

The watershed Master Plan also recommends implementing a riparian corridor program in the watershed to protect and help prevent erosion of the channel bed and bank. The riparian corridor restoration program could be implemented using one of the existing volunteer tree planting programs available to landowners through the NRD or USDA.

Six Structural Improvement Projects are also recommended as part of the Master Plan study. These projects include existing bridges or culverts at major paved roads with inadequate capacities that cause water to flow over the road during a 10-year storm event. The recommended improvements include removing the existing bridge and replacing it with a new bridge capable of passing a 25-year storm event without topping the roadway. Typically these projects would come into effect when the bridge or culvert is replaced due to the structural condition or due to a new road project. Some Natural Resource Projects are also recommended as part of the Master Plan study.



MEET THE TEAM

PAUL ZILLIG

ASSISTANT MANAGER

LOWER PLATTE SOUTH

NATURAL RESOURCES DISTRICT



Q. What is your role in the project?

The Lower Platte South NRD and City of Lincoln jointly fund a number of natural resource studies and projects. My role is to be the NRD's representative to make sure the study addresses the NRD's concerns, provide input on all phases of the process and provide some historical perspective that will help us jointly develop a successful study for the public.

Q. What got you interested in conservation and resource management?

Growing up, I enjoyed outdoor activities such as hiking with my family, hunting and fishing. I also worked for area farmers walking beans, putting up hay and about everything else, so I learned the importance of conservation and resource management. That interest led me to other conservation related part-time jobs, on to college to study natural resources and then working for the NRD.

Q. What are your day-to-day duties with LPSNRD?

I spend a lot of time working on projects and programs that the NRD Board of Directors has established to assist with conservation efforts and resource management. These projects, programs and responsibilities bring me in touch with a lot of landowners, agencies and the general public. The NRD has a wide variety of responsibilities so it seems like there's always something new going on.

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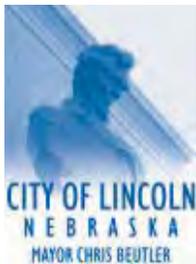
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CITY OF LINCOLN AND LOWER PLATTE SOUTH NATURAL RESOURCES DISTRICT



**OPEN HOUSE
LITTLE SALT CREEK
WATERSHED MASTER PLAN**

**TUESDAY,
FEBRUARY 24, 2009**

**5:00 PM – 7:00 PM
PRESENTATION AT 5:30 PM**

**LOWER PLATTE SOUTH NRD
CONFERENCE ROOM
3125 PORTIA STREET
LINCOLN, NE 68501**

THE PROJECT TEAM

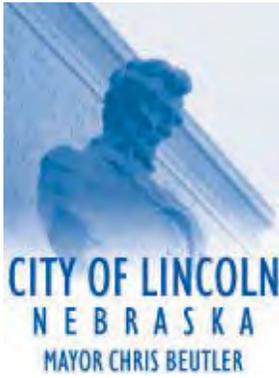
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Lincoln Public Works Department
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E-mail: ekouma@lincoln.ne.gov

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Lower Platte South Natural Resources District
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E-mail: pzillig@lpsnrd.org

For more information go to the project website at: lincoln.ne.gov keyword: watershed



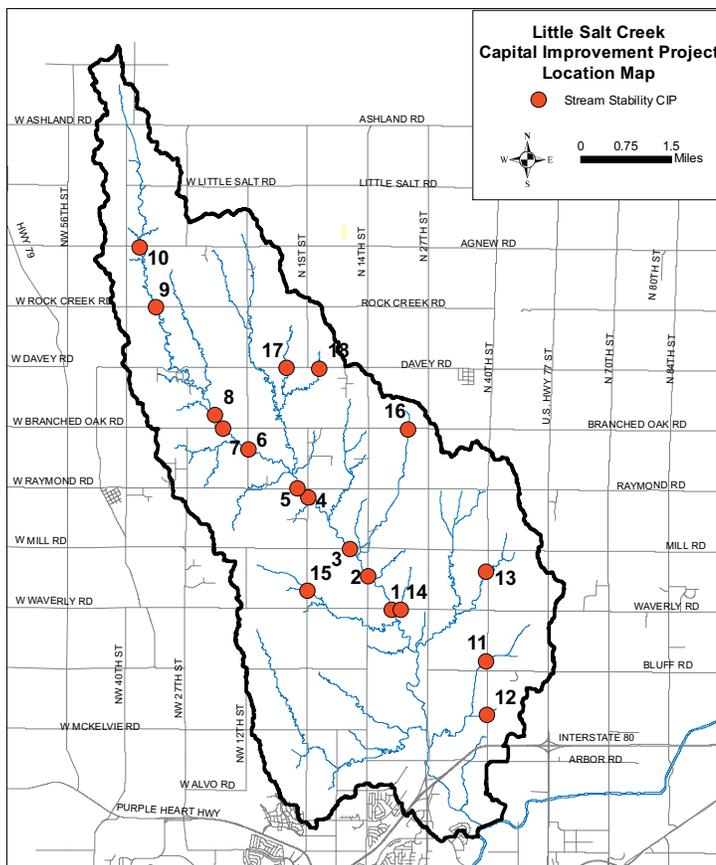
WATERSHED NEWS

APRIL 2009

A publication sponsored by the City of Lincoln and the Lower Platte South Natural Resources District (NRD)

LITTLE SALT CREEK WATERSHED PROGRESS SUMMARY

STREAM STABILITY CAPITAL IMPROVEMENT PROJECTS



The project team has identified 18 stream stability Capital Improvement Projects (CIP), and their general locations are shown in the Capital Improvement Project Location Map. The main cause of stream channel instability in the Little Salt Creek Watershed is incision. Incision is the downcutting of the channel bottom as the stream attempts to reduce its slope and decrease its energy. The main stem is incising and this process will cause erosion that could threaten bridge footings and streambank stability. Sediment released from incision and subsequent bank failures will degrade water quality and natural resources along the main stem channel, as well. Projects 1 through 10 are grade controls along the main stem immediately downstream of the bridge crossings. These grade controls will hold the profile grade, keeping the channel from downcutting, in turn reducing the erosion and sediment released.

Along eight of the tributaries in the Little Salt Creek Watershed, incision and erosion have caused the existing culvert outfalls to be perched one to three feet above the channel bottom, thereby threatening the stability of the culverts. Projects 11 through 18, identified on the Capital Improvement Project Location Map, are stilling basins at the downstream end of these existing culverts. The stilling basins will dissipate energy and protect the culvert outfall.

LITTLE SALT CREEK WATERSHED FAQ

Q: What is the purpose of this study?

A: The purpose of the study is to conduct a comprehensive drainage evaluation of the Little Salt Creek Watershed to develop a watershed master plan. The master plan will be used as a planning tool to be referenced in conjunction with proposed development and as a guide in the preparation of future Capital Improvement Projects. Another major component of the study is to update the floodplain map to more accurately depict the floodplain and floodway boundaries to reflect flood hazards in the watershed.

Q: How will this study impact my property?

A: One of the major components is the recommendation of Capital Improvement Projects, such as stream stability projects adjacent to some bridges and culverts. When these are constructed, it may be necessary to obtain temporary or permanent easements for these structures.

(Continued on page 2)

FAQ (cont.)

Q: What are dispersive soils?

A: Dispersive soils are highly erodible clay soils; the individual grains of soil do not stick together when coming in contact with water. Dispersive soils are common in the Salmo soils group found in the lower part of the watershed, along the main stem.

Q: How are the Capital Improvement Projects prioritized?

A: The prioritization methodology was developed by the City of Lincoln and the Lower Platte South NRD to prioritize projects in the Capital Improvement Program. The prioritization takes into account such items as flooding impacts, water quality, stream stability, safety and other factors. CIPs from all master plans are prioritized together.



Lower part of the watershed, on the main channel west of the intersection of N. 27th Street and Bluff Road.

Q: How are the Capital Improvement Projects funded?

A: Capital Improvement Projects are funded by City of Lincoln stormwater general obligation bonds, the Lower Platte South NRD, and in some cases state or federal funding sources. Lancaster County may assist with those CIP projects in conjunction with county improvements.

Q: What is the difference between recommended Capital Improvement Projects and other improvement recommendations?

A: The recommended Capital Improvement Projects are comprised of 18 stream stability projects including grade controls and culvert outfall protections to minimize erosion that could compromise bridge and culvert stability. These projects will also reduce sedimentation that could threaten property and natural resources along the stream channel. Other improvement recommendations include information for potential future projects that would be completed independent from the implementation of the master plan. These include 1) bridge and culvert improvements that are more appropriately made in conjunction with street improvements, 2) natural resources recommendations that might be used by other agencies in the future and 3) riparian corridor enhancement, which would be a voluntary program proposed to help protect the stream by planting trees and shrubs along the corridor.

Q: How did the Salt Creek Tiger Beetle and its habitat influence the master plan?

A: The primary focus of the master plan is on water resources. However, the impact to the Salt Creek Tiger Beetle and its habitat was taken into consideration on each of the Capital Improvement Projects where applicable. For example, stream stability improvement projects were not recommended for areas of existing known Salt Creek Tiger Beetle habitat in order to avoid adverse impacts.

Currently, the University of Nebraska-Lincoln and other agencies are working toward methods to restore and protect the saline wetlands and their ecosystems within the Little Salt Creek Watershed. At the present time, no specific natural resource enhancement projects are included in the watershed master plan.

Q: When will work start on the recommended projects?

A: All Little Salt Creek projects will be prioritized in relation to improvements identified in other watersheds using the method described above. It is anticipated that the stream stability projects at bridges and culverts will be constructed as road improvements or bridge replacements are scheduled by the county. Work on other projects may begin as early as 2010, depending on availability of funding and their overall priority in relation to projects in other watersheds.

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Fax: (402) 476-6454
E-mail: pzillig@lpsnrd.org

MEET THE TEAM
MILAN WALL
Heartland Center for
Leadership Development



Q. What is your role in this project?

As co-director of the Heartland Center, I am responsible for all aspects of public participation in the project. We make sure that accurate and up-to-date information gets to the public and that feedback gets reported to the project team. And we help the project team determine how to interpret highly technical information in a way that the public can understand.

Q. How does public involvement work in a project like this one?

Public involvement in this project is multi-faceted. In addition to the Watershed News, we facilitate open houses to present information on the project and solicit input. We also facilitate meetings of two advisory committees, help present project information to elected officials, and advise the team on public involvement tactics and strategies. We also facilitate information meetings for landowners who may be affected directly when new floodplain maps are drawn.

Q. What do you like best about public facilitation?

Watching people experience a situation where they grasp that their views are really welcome and that they can make a difference is very satisfying. Citizens may come to public meetings with a sense that all the decisions have already been made and nothing they say will have an impact. When they discover that the opposite is true, everyone benefits.

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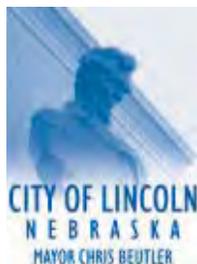
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CITY OF LINCOLN AND LOWER PLATTE SOUTH NATURAL RESOURCES DISTRICT



PUBLIC MEETING RECAP

The second of two public meetings was held on February 24, 2009 at the Lower Platte South NRD conference room. The meeting was advertised in an issue of Watershed News sent to approximately 1100 property owners in the Little Salt Creek Watershed as well as in an article in the Lincoln Journal Star. The open house was scheduled from 5:00 p.m. to 7:00 p.m. with a presentation at 5:30 p.m. Approximately 60 people attended the meeting. Comment cards were provided to the attendees, and they were encouraged to write their comments and/or concerns and leave the card with one of the project team members or mail it to the Heartland Center.

Milan Wall from the Heartland Center opened the meeting by reviewing the agenda and discussing the information stations. Milan introduced Paul Zillig from the Lower Platte South NRD. Paul discussed the partnership between the City of Lincoln and the Lower Platte South NRD and reviewed the goals and objectives of the study. Paul introduced Mark Meyer from Intuition & Logic who completed the presentation with updates on each of the study components including public involvement, watershed inventory, floodplain mapping, stream stability, natural resources, seep elevation survey, water quality, soil assessment, and watershed master plan recommendations.

After the presentation, the attendees were invited to visit information stations that included water quality and bio-assessment, public involvement, floodplain mapping, capital improvement projects and interactive watershed mapping. One of the popular stations was the floodplain mapping station. Updated floodplain maps were displayed in digital format allowing the participants to see how the updated floodplain limits had changed on their property. Participants could see detailed mapping of their individual property, including photos, observed seeps, saline wetlands and updated floodplain limits with an aerial photo background.



TAC members provide advice to project team.

**For more information visit the project website: lincoln.ne.gov (keyword: watershed)
click on "Master Plans" then "Little Salt Creek"**

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