

BEFORE THE BOARD OF COUNTY COMMISSIONERS
OF LANCASTER COUNTY, NEBRASKA

IN THE MATTER OF ADOPTING)
COMPREHENSIVE PLAN AMENDMENT NO.)
09006, BY THE DIRECTOR OF PLANNING,)
AT THE REQUEST OF THE DIRECTOR OF)
THE PUBLIC WORKS & UTILITIES DEPARTMENT)
AND THE LOWER PLATTE SOUTH NATURAL)
RESOURCES DISTRICT TO AMEND THE)
2030 LINCOLN/LANCASTER COUNTY)
COMPREHENSIVE PLAN TO ADD THE)
LITTLE SALT CREEK WATERSHED MASTER)
PLAN TO THE LIST OF SUBAREA PLANS)
AND TO AMEND THE LINCOLN AREA AND)
LANCASTER COUNTY FUTURE LAND USE)
MAPS TO ENSURE THE AGRICULTURAL)
STREAM CORRIDOR, GREEN SPACE, AND)
ENVIRONMENTAL LAND USES ARE)
CONSISTENT WITH THE UPDATED)
FLOODPRONE AREA AND FLOODWAY,)
AS PROVIDED IN EXHIBIT "A")

RESOLUTION NO. R-09-0069

RECEIVED

SEP 10 2009

LANCASTER COUNTY
CLERK

WHEREAS, the Director of Planning, at the request of the Director of the Public Works & Utilities Department and the Lower Platte South Natural Resources District, wishes to amend the 2030 Lincoln/Lancaster County Comprehensive plan to add the Little Salt Creek Watershed Master Plan 2009 to the list of subarea plans; and to amend the Lincoln Area and Lancaster County future land use maps to ensure the Agricultural Stream Corridor, Green Space and Environmental Land Uses are consistent with the updated Floodprone Area and Floodway; and

WHEREAS, on August 12, 2009, after public hearing, the Lincoln-Lancaster Planning Commission recommended approval of said amendments as per staff recommendation; and

WHEREAS, on September 15, 2009, the Board of Commissioners of Lancaster County conducted a public hearing, regarding said amendments; and

WHEREAS, on September 15, 2009, the Board of Commissioners of Lancaster County voted to approve said amendments.

NOW, THEREFORE, BE IT RESOLVED, by the Board of Commissioners of Lancaster County, Nebraska that the 2030 Lincoln-Lancaster County Comprehensive Plan and the Future Land Use Maps for Lincoln Lancaster County be amended as provided in Exhibit "A", attached hereto and incorporated by this reference.

BE IT FURTHER RESOLVED, that any other references in said plan which may be affected by the above specified amendments be, and they hereby are, amended to conform to such specific amendment.

DATED this 15 day of September, 2009, at the County-City Building, Lincoln, Nebraska.

APPROVED AS TO FORM
this 15 day of
September, 2009.

for GARY E. LACEY
County Attorney

BY THE BOARD OF COUNTY
COMMISSIONERS OF LANCASTER
COUNTY, NEBRASKA







COUNTY BOARD FACTSHEET

TO : County Clerk
ATTENTION : Angela Zocholl
FROM : Marvin S. Krout, Director of Planning *M. Krout*
RE : **Comprehensive Plan Amendment No. 09006**
(Little Salt Creek Watershed Master Plan)
DATE : August 24, 2009

1. This Comprehensive Plan Amendment and the associated text amendments to the County Zoning Resolution (County Change of Zone No. 09017) and County Land Subdivision Resolution (County Miscellaneous No. 09006) were heard at the same time before the Planning Commission. The Public Works & Utilities, Watershed Management Division, will also be submitting a request for resolution approving the Little Salt Creek 100-year Floodprone Area and revised Floodway as the "best available information" for local flood regulation purposes.
2. Attached is the Planning staff report (p.2-5 and 8-25), the minutes of the Planning Commission (p.6-7) and all other additional information submitted on **Comprehensive Plan Amendment No. 09006**, by the Director of Public Works and Utilities and the General Manager of the Lower Platte South Natural Resources District, to amend the 2030 Lincoln-Lancaster County Comprehensive Plan to add the Little Salt Creek Watershed Master Plan to the list of subarea plans; and to amend the Lincoln Area and Lancaster County future land use maps to ensure the Agricultural Stream Corridor, Green Space and Environmental Land Uses are consistent with the updated Floodprone Area and Floodway.
3. The Executive Summary of the Little Salt Creek Watershed Master Plan is found on p.13-24 and the Board members have been provided with a CD of the entire Master Plan.
4. The staff recommendation of approval is based upon the "Analysis" as set forth on p.3, concluding that the proposed amendments to the Future Land Use Maps, Utilities section and Plan Realization section are in conformance with the goals of the 2030 Lincoln-Lancaster County Comprehensive Plan. The specific amendment language is found on p.4-5. The staff presentation is found on p.6.
5. The applicant's testimony is found on p.6-7; testimony in support from the Lower Platte South Natural Resources District is found on p.7; and the record consists of a letter in support from the Lower Platte South NRD Board of Directors (p.25).
6. There was no testimony in opposition.
7. On August 12, 2009, the Planning Commission agreed with the staff recommendation and voted 8-0 to recommend approval (Esseks, Taylor, Partington, Cornelius, Francis, Gaylor Baird, Larson and Sunderman voting 'yes').
8. This Comprehensive Plan Amendment will also have public hearing and action by the City Council after action by the County Board.

Please take the necessary steps to schedule this item on the County Board agenda. A hearing date of **Tuesday, September 15, 2009, 9:30 a.m.** is requested. The Commissioners have previously been briefed on this legislation.

If you need any further information, please let me know (441-6365).

cc: County Board
County Attorney
County Engineer
Kerry Eagan, County Commissioners
Gwen Thorpe, County Commissioners
Nicole Fleck-Tooze, Public Works & Utilities
Ed Kouma, Public Works & Utilities, Watershed Management
Glenn Johnson, Lower Platte South NRD

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LINCOLN /LANCASTER COUNTY PLANNING STAFF REPORT
for August 12, 2009 Planning Commission Meeting

PROJECT #: Comprehensive Plan Amendment #09006

PROPOSAL: Amend the 2030 Lincoln/Lancaster County Comprehensive Plan to amend language on Page 81 in the Utilities chapter, Page155 in the Plan Realization chapter and the Future Land Use Maps for Lincoln and Lancaster County to reflect the Little Salt Creek Watershed Master Plan.

CONCLUSION: The amendment to the Future Land Use Maps, Utilities section and Plan Realization section is in conformance with the goals of the 2030 Lincoln-Lancaster County Comprehensive Plan.

<u>RECOMMENDATION:</u>	Approval of the proposed amendment
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GENERAL INFORMATION:

COMPREHENSIVE PLAN SPECIFICATIONS: The 2030 Comprehensive Plan states the following (in part) about floodplains and watershed plans:

Riparian, Floodplains, and Stream Corridors – Streams and their adjoining corridors snake their way through much of Lancaster County. Throughout the region, surface water runoff flows into these stream corridors that typically consist of floodplains and riparian areas. These are instrumental in providing habitat and water infiltration benefits, along with serving as connectors to natural areas. Pg 54

Obtain reasonably constrained regulations – Maintaining a balance between the natural and human built environment is always a delicate one. Planning policy and regulatory approaches employed in achieving the Plan’s Vision and Greenprint Challenge should strive to be effective, tempered, pragmatic, circumscribed, and respectful of private property rights. Pg 56

Clean air, clean water, parks and open space, mature trees, signature habitats, and prime and productive farmlands are valuable assets. Conservation areas, floodplains, green spaces, and parks define, and help create linkages between, neighborhoods and surrounding population centers. The Comprehensive Plan takes into consideration the effects of natural events and characteristics not only upon localized development, but also upon the community as a whole, upon private ownership issues, and upon recreational opportunities. The Plan thus commits Lincoln and Lancaster County to preserve unique and sensitive habitats and endorses creative integration of natural systems into developments.

The following principles are based on this Environmental Stewardship statement and describe the desired end state:

- ◆ Natural and environmentally sensitive areas are preserved and thrive. Wetlands, native prairies and stream (riparian) corridors are preserved to ensure the ecological health of the community.

Environmental Resources: Land and water masses which are of particular importance for maintenance and preservation, such as saline wetlands, native prairie, and some floodway and riparian corridors. Such areas may be either publicly or privately owned.
Agricultural Stream Corridor: Land intended to remain in open space, predominately in agricultural use, but that may also include parks, recreation fields, or parking areas when near future commercial, industrial, or public uses. Such areas will be primarily privately owned, but may also include some public ownership or easements. These areas are mostly in the 100 year floodplain, outside of the existing Lincoln urban development. Pg 16

In April of 2003, the Mayor's Floodplain Task Force developed policy standards for floodplains that took into consideration the natural functions played by these areas. These policy recommendations have been incorporated into the watershed management strategies included in the Utilities section of the Comprehensive Plan. Many recommendations have also been incorporated into the zoning and subdivision codes.

Environmental Resources

Seek the routine use of "Best Management Practices" in implementing stormwater management policy so that the potential for sedimentation problems are minimized.

Further discussion of floodplain and stormwater management considerations and strategies is provided within the Utilities section. Pg 61

The City of Lincoln is in the process of developing an integrated watershed management program combining previously separate floodplain and stormwater management initiatives. This approach recognizes that floodplains, tributaries, and upland areas are all part of a comprehensive, integrated watershed system.

A comprehensive watershed management program will need to incorporate a range of strategies including land use planning, conservation efforts, appropriate standards for floodplains and stormwater, flood warning system development/expansion, stream stabilization, stormwater storage basins, and other structural flood control efforts.

Utilities

As part of the overall watershed management program, the City is also developing a Master Watershed Management Plan. This plan will provide information and computer models to aid in analyzing stormwater management alternatives. A Beal Slough Stormwater Master Plan has already been prepared and adopted by the City. Similar management plans for other basins will be created and implemented by the City. Such plans are formulated in cooperation with other local, state and federal agencies. Pg 78

ANALYSIS:

This proposal to amend the Comprehensive Plan is to reflect the Little Salt Creek Watershed Master Plan in the text and future Land Use Maps. The full report of the Little Salt Creek Watershed Master Plan can be found at www.lincoln.ne.gov (Key word watershed) under "Master Plans" or "Featured Sites".

SUMMARY:

The proposed amendment

1. Amends the City and County Future Land Use Maps to best reflect the new Floodprone Area and Floodway boundaries. Floodprone Areas are used as new FEMA floodplain maps will not be available for several years.
2. Updates the list of watershed master plans on page 81 in the Utility Chapter and
3. Updates the list of subarea plans on page 155, Plan Realization.

PROPOSED AMENDMENTS:

Amend the 2030 Lincoln-Lancaster County Comprehensive Plan as follows:

1. Future Land Use Maps

Amend the Lancaster County and Lincoln Area Future Land Use maps on pages 17 and 19 to ensure the Agricultural Stream Corridor, Green Space and Environmental Land Uses are consistent with the updated Floodprone area and Floodway boundaries as appropriate.

2. Utilities

STRATEGIES

The following watershed studies are adopted in order to provide guidance to watershed management activities within the basin.

- ◆ Stevens Creek Watershed Study and Flood Management Plan, 1998 (for rural watershed).
- ◆ Beal Slough Stormwater Master Plan, May 2000.
- ◆ Southeast Upper Salt Creek Watershed Master Plan, 2003.
- ◆ Stevens Creek Watershed Master Plan, 2005.
- ◆ Cardwell Branch Watershed Master Plan, 2007.
- ◆ Deadmans Run Watershed Master Plan, 2007
- ◆ Little Salt Creek Watershed Master Plan 2009 Pg 81

3. Plan Realization

ON-GOING COMPREHENSIVE PLAN ACTIVITIES

Subarea Planning – The Comprehensive Plan provides broad guidance for achieving the community's stated Vision. Putting details to the Plan takes additional effort. One means of doing this is through the preparation of subarea plans. Subarea plans offer greater details about the intended future of an area of the community — including land uses, infrastructure requirements, and development policies and standards. Many of these subarea plans are prepared by the City-County Planning Department, while some are prepared by other agencies and departments. Subarea plans from the previous (1994) Comprehensive Plan carried over as part of this Comprehensive Plan include:

- ◆ North 27th Street Corridor Plan, RDG Crose Gardner Shukert, April 1997.
- ◆ Antelope Valley Major Investment Study: Amended Draft Single Package, City of Lincoln; May 1998, Updated November 1998.
- ◆ Wilderness Park Subarea Plan; February, 2000
- ◆ Stonebridge Creek Development Area at 14th to 27th, north of the Interstate; March 27, 2000.
- ◆ Greater Arnold Heights Area Neighborhood Plan; September, 2000.
- ◆ Southeast Lincoln/Highway 2 Subarea Plan; March 26, 2001.
- ◆ City-County Solid Waste Management Plan, Public Works and Utilities Department and Lincoln Lancaster County Health Department; September, 1994.
- ◆ Ground Water Management Plan, Lower Platte South Natural Resources District; April, 1995.
- ◆ Consolidated Plan for HUD Entitlement Programs; FY 2000 Urban Development;
- ◆ Lincoln Water System Facilities Master Plan, Public Works and Utilities Department; April

2003.

- ◆ Lincoln Wastewater Facilities Master Plan, Public Works and Utilities Department; November 2007.
- ◆ Stevens Creek Watershed Study and Flood Management Plan, Lower Platte South Natural Resources District; March 1998.
- ◆ Beal Slough Stormwater Master Plan, Olsson Associates & Wright Water Engineers; May 2000.
- ◆ Southeast Upper Salt Creek Watershed Master Plan, 2003.
- ◆ Lincoln Public Schools 10 year Plan: which is based on the Comprehensive District Master Plan; May 2003 and Student Housing Task Force Report 2005
- ◆ North 48th Street/University Place Plan: Neighborhood Revitalization & Transportation Analysis, 2004
- ◆ Lincoln Airport F.A.R. Part 150 Noise Compatibility Study, 2003
- ◆ Airport West Subarea Plan, 2004
- ◆ Stevens Creek Watershed Master Plan, 2005
- ◆ Downtown Master Plan, 2005
- ◆ Cardwell Branch Watershed Master Plan, 2007
- ◆ Deadmans Run Watershed Master Plan, 2007
- ◆ Little Salt Creek Watershed Master Plan 2009

Page 81

Prepared by:

Mike DeKalb
441-6370, mdekalb@lincoln.ne.gov
Planner
July 29, 2009

APPLICANT: Greg MacLean, Director
Public Works and Utilities Dept, Watershed Management Div
555 S. 10th Street
Lincoln, NE 68508
and
Glenn Johnson, General Manager
Lower Platte South NRD

CONTACT: Ed Kouma
Public Works and Utilities Dept, Watershed Management Div
555 S. 10th Street
Lincoln, NE 68508
(402) 441-7018
ekouma@lincoln.ne.gov

**COMPREHENSIVE PLAN AMENDMENT NO. 09006,
LITTLE SALT CREEK WATERSHED MASTER PLAN,
COUNTY CHANGE OF ZONE NO. 09017 and
COUNTY MISCELLANEOUS NO. 09006**

PUBLIC HEARING BEFORE PLANNING COMMISSION:

August 12, 2009

Members present: Esseks, Taylor, Partington, Cornelius, Francis, Gaylor Baird, Larson and Sunderman.

Ex Parte Communications: None.

Staff recommendation: Approval.

Staff presentation: **Mike DeKalb of Planning staff** stated that the Comprehensive Plan Amendment amends three pieces of the Comprehensive Plan as well as updating the Land Use Maps. The two text amendments change the county zoning and subdivision regulations to incorporate "floodprone areas" so that the best available information can be applied in the regulations as the best available floodplain information.

Proponents

1. Ed Kouma, Public Works & Utilities, Watershed Division, stated that the Little Salt Creek Watershed Master Plan is the sixth in the series that have been done for the City. The purpose of the master plan is to create long term planning tools and improvement projects for water quality, flood management and stream stability to provide guidance for sustainable urban growth.

Floodplain mapping was done in the study and the floodprone areas were updated. The study shows the existing approved FEMA floodplain maps. Some of the areas, which are mostly at the extension of the tributaries, are now included as defined floodplains that were not previously defined. The items before the Planning Commission are to make the revisions to the county zoning and subdivision regulations to add provision for regulating locally adopted floodprone areas and floodways. This mirrors the regulations in the city jurisdiction.

Kouma went on to advise that the study identified problems throughout the basin. Eighteen stream stability projects were identified with recommendations as possible improvements to the basin to improve water quality and stream stability. The recommendations were for grade control at bridges and for silt-in basins. Other recommendations include stormwater BMP's and recommendations for future development which would include testing for dispersive soils. Approval of the study adopts floodprone areas as best available information.

There are other recommendations for bridges and culverts, natural resources, riparian corridor and water quality, but these were not recommended as projects.

Kouma suggested that the public process was key throughout the study. Two open houses were held, there were mailings and two committees were formed to assist the study team. The Web site has been maintained throughout the study – keyword “watershed”.

Adoption of the Master Plan is recommended. The request is to add the master plan to the list of approved subarea plans and watershed studies. The proposed future land use plan updates the agricultural stream corridor and environmental resources land uses to reflect the updated floodprone area and floodway information. This is consistent with updates that have been made in other watersheds.

Kouma pointed out that the majority of the watershed has agricultural land use designation. Two areas extend slightly into the industrial/commercial areas and urban residential land uses. Those areas are still zoned for agricultural use. The commercial area near Interstate 80 was already zoned so it was not updated with these changes.

2. Paul Zillig, Assistant Manager of the Lower Platte South NRD, testified in support, The NRD was a partner with the City in preparing this plan. The Board met in July and approved the plan and recommends the Planning Commission approval as well.

There was no testimony in opposition.

COMPREHENSIVE PLAN AMENDMENT NO. 09006
ACTION BY PLANNING COMMISSION:

August 12, 2009

Larson moved approval, seconded by Gaylor Baird.

Sunderman commented that this is not the first watershed study the Planning Commission has been through. The issues have come forward previously and the Commission is fairly familiar with them.

Motion for approval carried 8-0: Esseks, Taylor, Partington, Cornelius, Francis, Gaylor Baird, Larson and Sunderman voting ‘yes’. This is a recommendation to the Lancaster County Board and the Lincoln City Council.

COUNTY CHANGE OF ZONE NO. 09017
ACTION BY PLANNING COMMISSION:

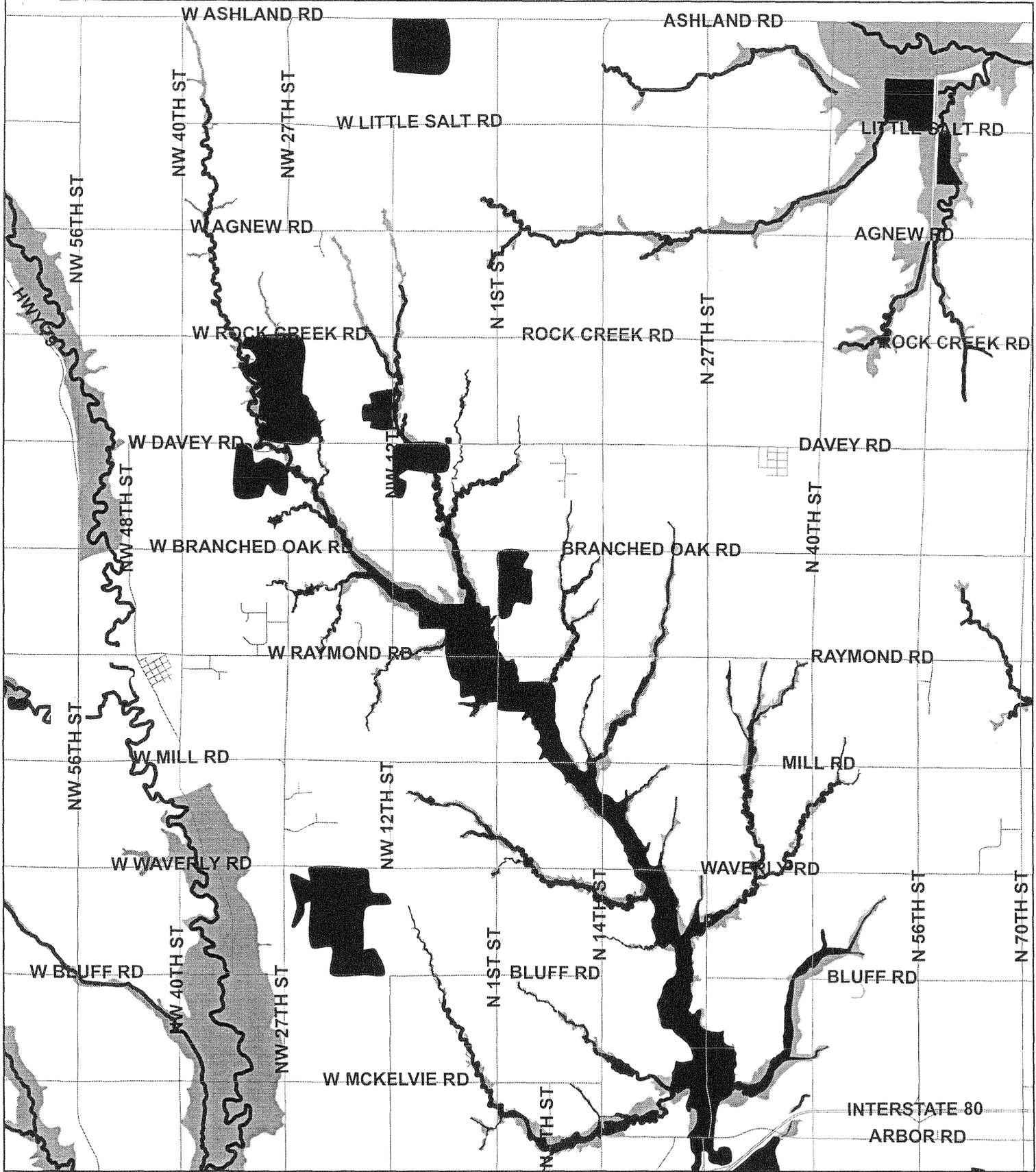
August 12, 2009

Francis moved approval, seconded by Cornelius and carried 8-0: Esseks, Taylor, Partington, Cornelius, Francis, Gaylor Baird, Larson and Sunderman voting ‘yes’. This is a recommendation to the Lancaster County Board.

COUNTY MISCELLANEOUS NO. 09006
ACTION BY PLANNING COMMISSION:

August 12, 2009

Cornelius moved approval, seconded by Francis and carried 8-0: Esseks, Taylor, Partington, Cornelius, Francis, Gaylor Baird, Larson and Sunderman voting ‘yes’. This is a recommendation to the Lancaster County Board.

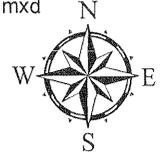


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CPA09006 (Map A)

Proposed Future Land Use Plan

Reflecting Little Salt Creek Floodprone Data

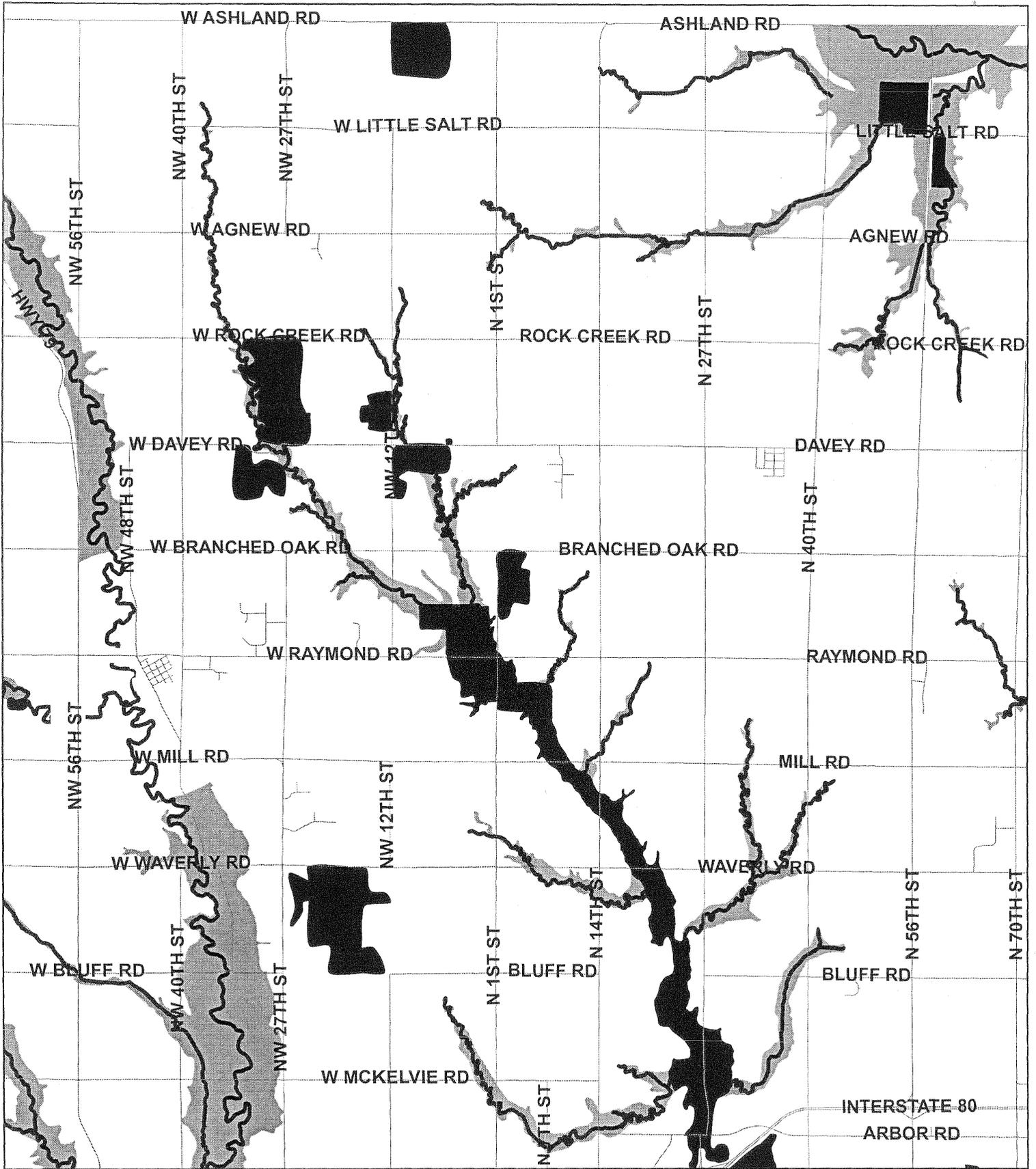


- Environmental Resources
- Ag Stream Corridor

008

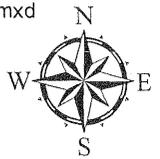


LINCOLN - LANCASTER COUNTY
PLANNING DEPARTMENT
 Information Technology Services
 555 South 10th Street
 Lincoln, Nebraska 68508
 Ph: 402.441.7491 Fax: 402.441.6377



CPA09006 (Map B)
Current Future Land Use Plan
As Approved In The 2030 Comprehensive Plan

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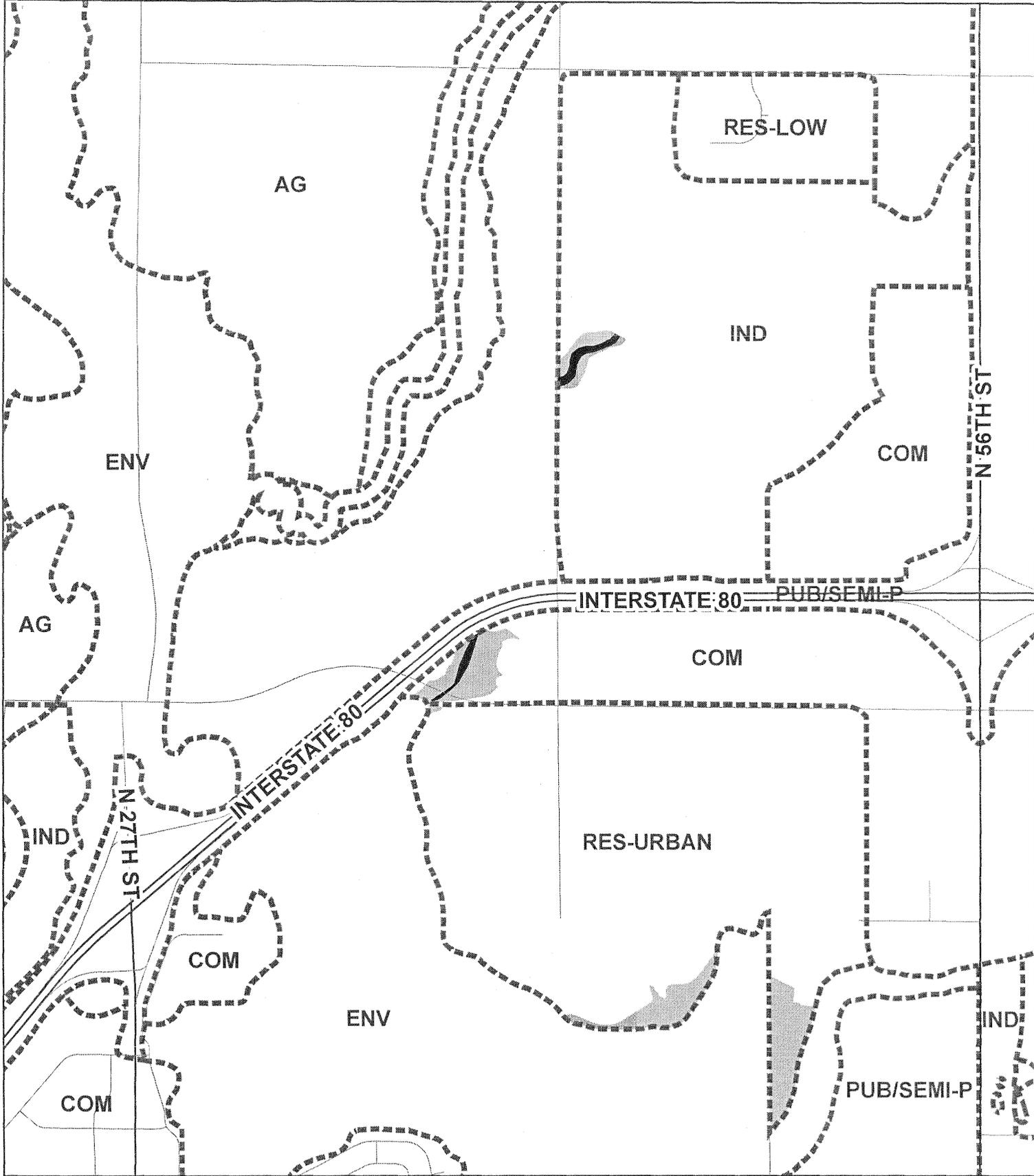


- Environmental Resources
- Ag Stream Corridor

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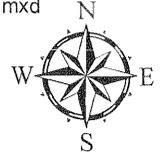


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CPA09006 (Map C)

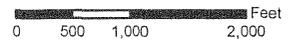
Proposed Future Land Use Plan

Specific (Non-Ag) Proposed Changes



- Change To Environmental Resources
- Change To Ag Stream Corridor

010



LINCOLN - LANCASTER COUNTY
PLANNING DEPARTMENT
 Information Technology Services
 555 South 10th Street
 Lincoln, Nebraska 68509
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**CITY OF LINCOLN
NEBRASKA**

MAYOR CHRIS BEUTLER

lincoln.ne.gov

Public Works and Utilities Department
Gregory S. MacLean, Director
555 South 10th Street
Suite 203
Lincoln, Nebraska 68508
402-441-7548
fax: 402-441-8609

July 14, 2009

Marvin Krout, Planning Director
Lincoln-Lancaster Co. Planning Dept.
555 S. 10th Street, Ste 213
Lincoln, NE 68508

Dear Marvin:

This is a request by the Public Works and Utilities Department and the Lower Platte South Natural Resources District (NRD) to place three items on the August 12, 2009 Planning Commission agenda:

1. An amendment to the Lincoln-Lancaster County Comprehensive Plan to add the Little Salt Watershed Master Plan to the list of sub-area plans in the Plan Implementation section and to the list of watershed studies in the Utilities section; and to amend the Lincoln Area and Lancaster County future land use maps to ensure the Agricultural Stream Corridor, Green Space, and Environmental Land Uses are consistent with the updated Floodprone Area and Floodway boundaries as appropriate.
2. At the direction of the County Board, proposed revisions to the County Zoning Regulations to add provisions for regulating locally-adopted Floodprone Areas and Floodways.
3. At the direction of the County Board, proposed revisions to the County Subdivision Regulations to add provisions for regulating locally-adopted Floodprone Areas and Floodways.

The Little Salt Creek Watershed Master Plan is a joint project of the City of Lincoln and NRD in cooperation with the County, and it represents the sixth master planning effort to date. Master Plans for Beal Slough, Cardwell Branch, Stevens Creek, Southeast Upper Salt Creek, and Deadmans Run have previously been adopted as subarea plans. The Little Salt Creek Watershed Master Plan was initiated in order to 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 Master Plan consists of four major elements: 1) Floodplain Management Tools, 2) Capital Improvement Projects, 3) Stormwater Best Management Practices, and 4) Other Improvement Recommendations.

The enclosed Plan represents an extensive and inclusive public process to solicit input from a broad range of stakeholder groups, which included the involvement

of a 16-member Citizen Advisory Committee and a 14-member Technical Advisory Committee, two open house public meetings, a series of five newsletters, and a project web site, all of which are detailed in the Master Plan.

The intent is to bring resolutions before the City Council and County Board in tandem with the above three items to adopt the Little Salt Creek Floodprone Area and Floodway as the best available information for local regulatory purposes. While the City has an ordinance in place as a basis for adopting updated Floodprone Area information, the County does not yet have regulatory provisions to recognize the updated information. Because such a large portion of the Little Salt Creek watershed is within the County's zoning jurisdiction, the County Board requested revisions to the County Zoning and Subdivision Regulations be brought before them for their consideration.

The entire Master Plan, together with information regarding the process for its development, can be found online at lincoln.ne.gov, keyword: "watershed."

Should you have any questions or need further information, please contact Ed Kouma in the Public Works and Utilities Department, ekouma@lincoln.ne.gov or 441-7018.

Sincerely,



Greg MacLean, Director
Public Works & Utilities Dept.



Glenn Johnson, General Manager
Lower Platte South NRD

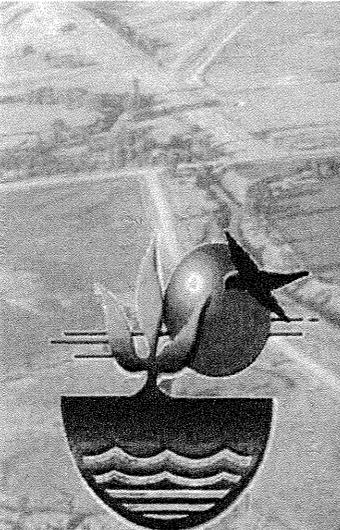
cc: Nicole Fleck-Tooze, Ben Higgins, Ed Kouma - PW/U Dept.
Mike DeKalb - Planning Dept.
Doug Pillard - Co. Engineering
Tom Fox - County Attorney's Office
Lynn Johnson, J.J. Yost, Terry Genrich - Parks Dept.
Paul Zillig - Lower Platte South NRD
Mark Meyer - Intuition & Logic
Milan Wall - Heartland Center for Leadership Development

Attachments: 1 bound copy of Watershed Master Plan with CD
12 copies of Executive Summary with CD of full Master Plan

Little Salt Creek Watershed Master Plan



CITY OF LINCOLN
NEBRASKA
MAYOR CHRIS BEUTLER



Lower Platte South
Natural Resources District

INTUITION
LOGIC

In Association With:
PBS&J
**Heartland Center for
Leadership Development**
University of Nebraska
Terracon
E&A Consulting



Executive Summary

Introduction

The City of Lincoln (City) and the Lower Platte South Natural Resources District (NRD) are in the process of developing a Comprehensive Watershed Management Plan for the City of Lincoln and its future growth areas. This comprehensive watershed plan is being developed basin by basin, through the completion of watershed master plans for individual basins. Watershed master plans are used as planning tools to be referenced in conjunction with proposed development and as a guide in the preparation of future capital improvement projects.

The City and NRD have previously adopted watershed master plans for the Beal Slough, Stevens Creek, Cardwell Branch, Deadman's Run and Southeast Upper Salt Creek basins. Figure ES-1 shows the basins in the Comprehensive Watershed Master Plan. The Little Salt Creek Watershed Master Plan (Master Plan) is the sixth master planning effort to date and is summarized in this report. The Master Plan for the Little Salt Creek Watershed has been prepared because some near-term growth within the basin is expected, as identified in the Lincoln-Lancaster County Comprehensive Plan.

The Little Salt Creek Watershed is located north of the City of Lincoln as illustrated in Figure ES-2. The watershed drains approximately 46 square miles from the headwaters north of West Ashland Road to the confluence with Salt Creek located southeast of I-80 at North 27th Street. The watershed is approximately 14 miles in length with a maximum width of about 5.5 miles. The purpose of the Master Plan is to outline 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 team was led by the City and NRD, in cooperation with Lancaster County (County). The City/NRD retained the consultant team of Intuition & Logic (I&L), in association with the Heartland Center for Leadership Development (HC), PBS&J, E&A Consulting Group, Inc. (E&A), University of Nebraska (UNL), and Terracon.

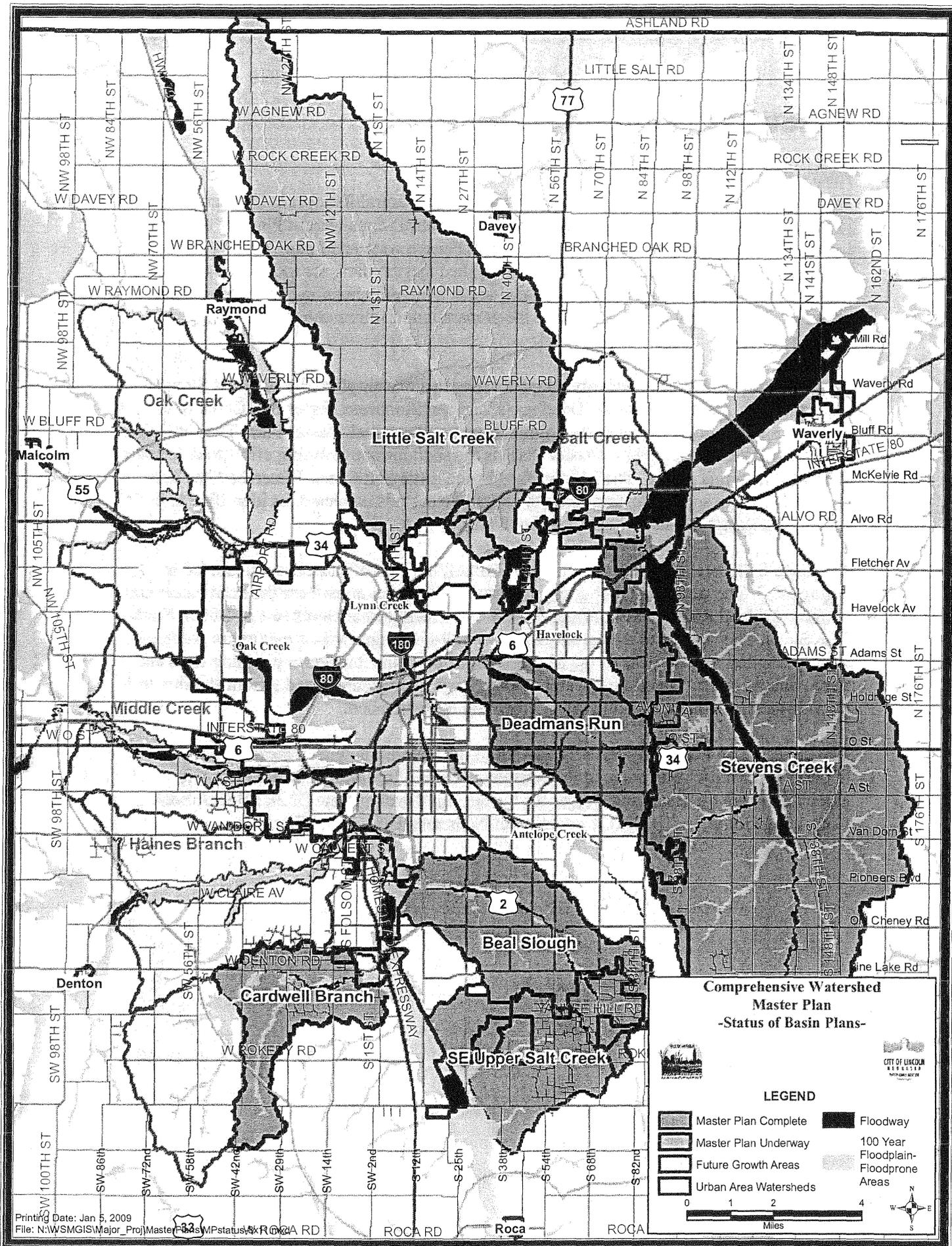
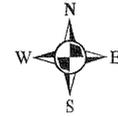


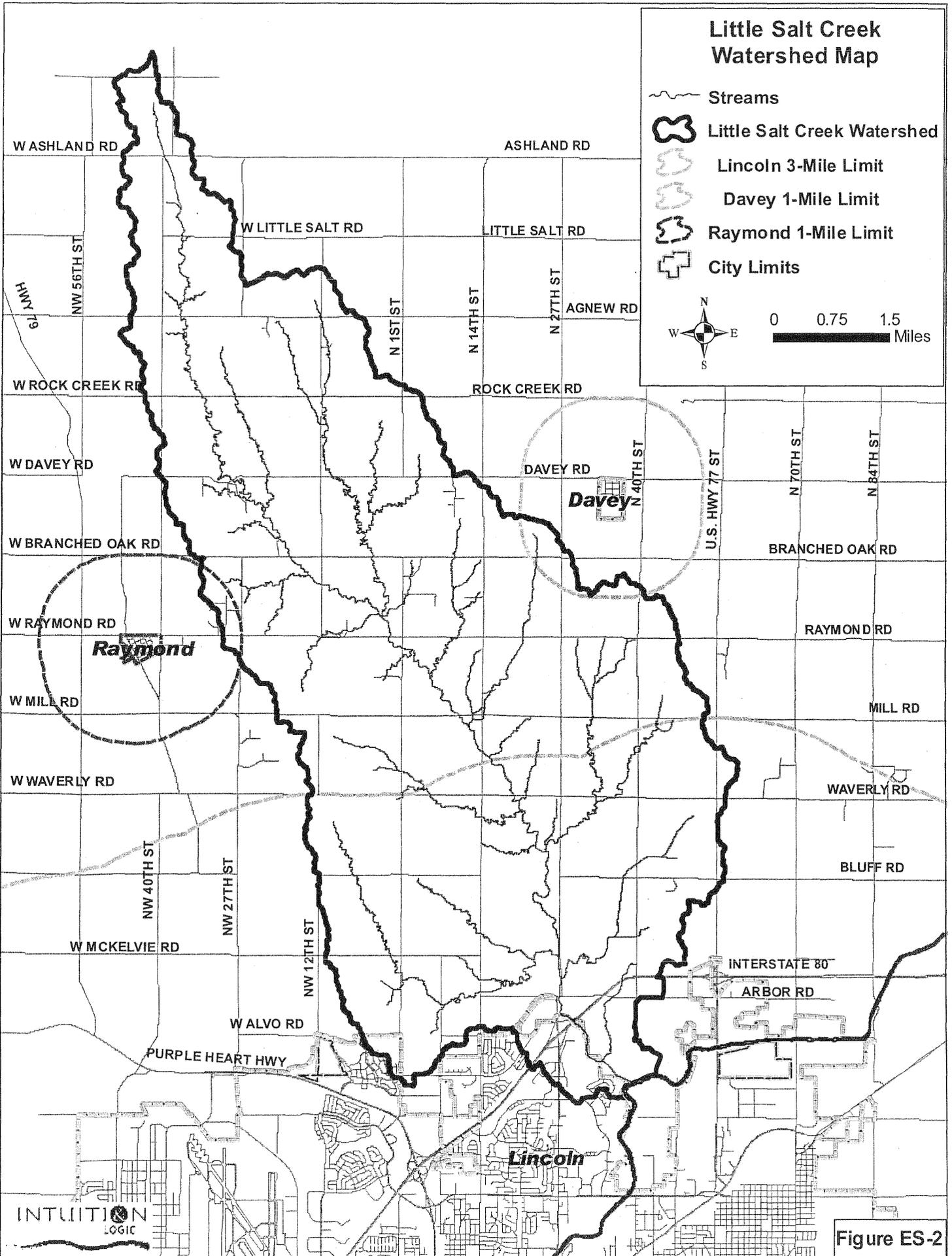
Figure ES-1

Little Salt Creek Watershed Map

-  Streams
-  Little Salt Creek Watershed
-  Lincoln 3-Mile Limit
-  Davey 1-Mile Limit
-  Raymond 1-Mile Limit
-  City Limits



0 0.75 1.5 Miles



INTUITION LOGIC

Figure ES-2

Public Participation

As part of the Master Plan development, a public participation process was used to solicit input from area residents and other interested parties. The public participation process included the following:

- Two open houses in July 2008 and February 2009
- Project updates and information on the City's website to post preliminary results and upcoming events
- A series of five newsletters and one postcard mailed to over 800 individuals and organizations
- Input from a 16-member Citizens Advisory Committee (CAC) that included three farmers, six landowners, three developer/business owners, a representative of the Nature Conservatory, and three elected officials representing the City of Lincoln, Lancaster County, and the Lower Platte South NRD. Three CAC meetings were held throughout the watershed master planning process.
- The involvement of a 14-member Technical Advisory Committee (TAC) that was selected based on technical knowledge of water resource issues as well as local, state and national standards and trends. Four TAC meetings were held throughout the watershed master planning process.

The public input and feedback received during this process was used by the project team to formulate and refine the master plan recommendations. Section 1 of the Master Plan provides further details regarding the public participation process.

Master Plan Elements

The Master Plan consists of four major elements: 1) Floodplain Management Tools, 2) Capital Improvement Projects, 3) Stormwater Best Management Practices, and 4) Other Improvement Recommendations. A brief summary of each major element follows:

Floodplain Management Tools

One of the major elements of the Little Salt Creek Master Plan is the incorporation of updated floodplain and floodway boundary maps. Accurate floodplain and floodway boundaries alert property owners to flood hazards as well as provide guidance for future growth and development within the watershed. Figure ES-3 illustrates the nearly 86 miles of streams and updated floodplain and floodway boundaries delineated as part of this Master Plan following the specifications and procedures set by the Federal Emergency Management Agency (FEMA).

This floodplain mapping update increased the accuracy of currently-mapped stream reaches and also identified flood hazards for upper stream reaches not previously mapped by FEMA. Consistent with other watershed master plans, the floodplain mapping limits included all streams draining 150 acres or more, as shown on Figure ES-3. The more detailed mapping identifies that approximately 3,560 acres are within the 100-year floodplain. This includes approximately 875 acres that were not previously known to be prone to flooding and were not identified on the FEMA maps. However, the mapping update also determined that approximately 475 acres shown to be in the floodplain on the FEMA maps are not within the

100-year floodplain as updated. Section 5 of this Master Plan includes further detail regarding the revised floodplain delineation.

The Little Salt Creek floodplain maps resulting from the present study are anticipated to be submitted to FEMA for preliminary review and comment when FEMA's MapRISK program begins in the Fall of 2009. However, the FEMA review process has the potential to take more than a year following the final submittal. In the meantime, the Master Plan recommends the adoption of this information for local regulatory purposes within the jurisdiction of both the City of Lincoln and Lancaster County.

Capital Improvement Projects

The results of the hydrologic, hydraulic, and geomorphic evaluations formed the foundation for identifying problem areas in the watershed. Potential improvement projects addressing each problem area were evaluated based on design considerations, economic feasibility, and overall efficiency.

The Master Plan includes 18 stream stability capital improvement projects. The general locations of the projects are shown in Figure ES-5 Capital Improvements Project Location Map. Projects 1 through 10 are grade controls along the main stem immediately downstream of bridge crossings. The main stem of the stream 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.

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 culvert will dissipate energy and protect the outfall.

The total cost for all 18 capital improvement projects is estimated to be approximately \$1.6 million using 2009 material and construction costs. Traditional funding options for the Capital Improvement Projects include City stormwater bonds, funding from the Lower Platte South Natural Resources District, and County funding for stream stability measures where appropriate in association with County road improvement projects. More discussion on funding is detailed further in Section 10 of this report.

The recommended projects were categorized using the prioritization categories from the Prioritization Methodology Report for Watershed Master Planning Projects, City of Lincoln, Nebraska, 2006. The prioritization methodology was developed for the City of Lincoln to set priorities and implement projects for watershed master planning each year. The prioritization system contains five major categories including flooding impacts, stream stability, water quality, safety factor, and miscellaneous factors. For each project, a ranking worksheet is used to assign points under each category, with the goal of developing an overall score. The projects with the highest point score are considered a higher priority. Table ES-1 lists the results of the estimated project cost and ranking scores for the 18 projects within the Little Salt Creek study area. Further detail on each project, including the problem description and recommendations are found in Section 9 of this Master Plan.

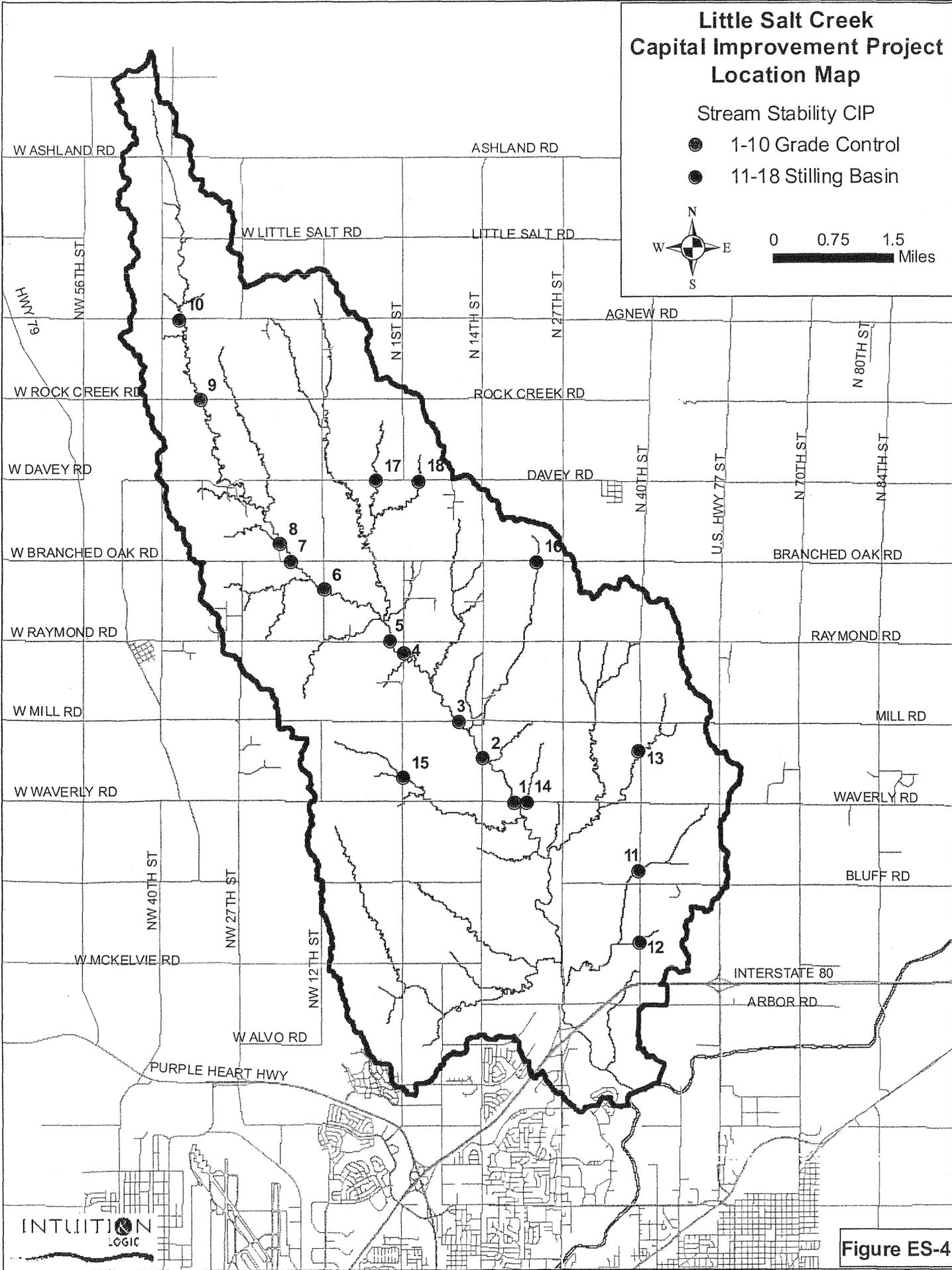
Little Salt Creek Capital Improvement Project Location Map

Stream Stability CIP

- 1-10 Grade Control
- 11-18 Stilling Basin



0 0.75 1.5
Miles



INTUITION
LOGIC

Figure ES-4

Table ES.1 Capital Improvement Project Summary Results

Project No.	Project Name	Classification	Priority Score	Project Ranking	Project Cost
1	Grade Control Main Stem, Waverly Road Bridge	Secondary	255	3	\$95,000
2	Grade Control Main Stem, North 14 th Street Bridge	Secondary	260	1	\$113,000
3	Grade Control Main Stem, Mill Road Bridge	Secondary	250	7	\$91,000
4	Grade Control Main Stem, North 1st Street Bridge	Secondary	255	4	\$110,000
5	Grade Control Main Stem, W Raymond Road Bridge	Secondary	260	2	\$115,000
6	Grade Control Main Stem, NW 12th Street Bridge	Secondary	240	8	\$91,000
7	Grade Control Main Stem, W Branched Oak Road Bridge	Secondary	255	5	\$71,000
8	Grade Control Main Stem, NW 19th Street Bridge	Secondary	240	9	\$84,000
9	Grade Control Main Stem, W Rock Creek Road Bridge	Secondary	240	10	\$78,000
10	Grade Control Main Stem, W Agnew Road Bridge	Secondary	255	6	\$69,000
11	Stilling Basin at N 40 th Street Culvert Outfall, Tributary 10	Secondary	105	11	\$78,000
12	Stilling Basin at N 40 th Street Culvert Outfall, Tributary 110	Secondary	95	14	\$77,000
13	Stilling Basin at N 40 th Street Culvert Outfall, Tributary 220	Secondary	100	13	\$67,000
14	Stilling Basin at Waverly Road Culvert Outfall, Tributary 35	Secondary	90	15	\$75,000
15	Stilling Basin at N 1 st Street Culvert Outfall, Tributary 30	Secondary	100	12	\$85,000
16	Stilling Basin at Branched Oak Road Culvert Outfall, Tributary 45	Secondary	85	16	\$95,000
17	Stilling Basin at W Davey Road Culvert Outfall, Tributary 1260	Secondary	80	17	\$113,000
18	Stilling Basin at Davey Road Culvert Outfall, Tributary 260	Secondary	80	18	\$85,000
Total =					\$1,591,000

Stormwater Best Management Practices (BMPs)

In the Little Salt Creek Watershed, the highly erodible nature of the soils cause the main channel and tributaries to be very susceptible to erosion resulting from changes in runoff volumes and rates for storms which are more frequent than the 2-year event. The key to preserving water quality, maintaining long-term stream stability, and providing flood control benefits is to install stormwater facilities that control the full range of hydrologic conditions, including the smaller rain events in addition to the 2-, 10-, and 100-year storm events. Site-specific structural best management practices (BMPs) are recommended to control the smaller rain events, with detention basins being used to control the larger rain events (2-, 10-, and 100-year design storms). Two approaches to manage both the larger storm events and smaller more frequent storm events are 1) Integrated Detention Facility, and 2) Alternative Site Design. This Master Plan recommends changing the City's current stormwater BMP program from a voluntary to a mandatory program for site-specific structural BMPs as outlined in the Stevens Creek Watershed Master Plan, to include options for both the integrated detention facility and the alternative site design approaches. Further discussion of these two approaches can be found in Section 7 of this Master Plan under subsection 7.2 Stormwater BMPs.

Other Improvement Recommendations

The City's Capital Improvement Program generally includes the design and construction of physical improvements with a minimum useful life of fifteen years. For Watershed Master Plans, the City's Capital Improvement Program has been used for stream stability, water quality, channel improvement, flood reduction and conservation projects. Some recommendations have measureable benefits but provide no substantial flood reduction, stream stability and water quality benefits. Others are improvements that are more appropriately made in conjunction with street improvements. Projects such as these are identified as recommended projects for the Watershed Capital Improvement Program, but are included in this Master Plan as other evaluated projects to be used as a reference. The three types of recommendations are 1) Bridge and Culvert Improvements, 2) Natural Resources, and 3) Riparian Corridor Enhancement. These types of recommendations are briefly summarized below.

The Bridge & Culvert Improvement recommendations address the problem of frequent roadway topping on paved roads. The recommended approach is to replace or enhance the hydraulic structure to convey a minimum of the 25-year storm event without topping the road or compromising channel geomorphic parameters. Although these recommendations provide measurable benefits, they are not included as projects in this Watershed Master Plan because they do not impact habitable structures and are not within an urbanized or otherwise artificially altered drainage system. These structural improvement projects are road projects and would come into effect when the bridge/culvert is replaced due to condition or capacity issues. Details on these recommendations are found in Appendix L of the Master Plan.

Natural Resources recommendations recognize that Saline Wetlands and the Salt Creek Tiger Beetle are major resources of the Little Salt Creek Watershed. Several issues and approaches were discussed during multiple Technical Advisory Committee meetings and in subsequent conversations throughout the Master Plan process. As a result, the impact of the Capital

Improvement Projects on Salt Creek Tiger Beetle habitat is addressed as part of this Master Plan. Currently, the University of Nebraska at Lincoln and other agencies are working to develop potential plans to restore and protect the natural resources within the Little Salt Creek watershed. It was determined that more research needs to be done before any specific projects can be developed. Discussions on Natural Resources issues are found in Section 9 of this Master Plan under subsection 9.3.1.2 Natural Resources and Water Quality Problem Identification and 9.3.2.2 Natural Resources Evaluation Approach.

The Riparian Corridor Enhancement Program is a watershed management program with the goal of re-establishing the corridor and reducing erosion and stream downcutting. A woody riparian buffer could be re-planted along Little Salt Creek and its tributaries along reaches where soil and saline content will support it. Over the past decades, the woody riparian corridor has been substantially depleted. This management measure will contribute to a more robust, self-managing stream system and provide abundant opportunity for habitat and improved water quality. There is over 68 miles of corridor that may qualify for this type of restoration. The Riparian Corridor Enhancement is a voluntary program for the landowners and developers and is not considered a Capital Improvement Project because it does not meet the funding requirements under the Capital Improvement Program. More details on the Riparian Corridor Enhancement can be found in Appendix L of this report.

Summary

The Little Salt Creek Watershed Master Plan provides the necessary planning tools and improvement projects to address water quality, flood management, and stream stability and provide guidance for sustainable urban growth in the watershed. This master plan is a reference for the implementation of improvement projects in the Watershed through the City and County Capital Improvement Programs and the NRD's Long Range Implementation Plan, and as a guide for future growth.

By using the detailed study information and applying the Master Plan elements described above, multiple goals will be achieved including:

- Protection of future homes and businesses from flood hazards
- Reduction of future impacts to water quality and stream stability due to urbanization
- Preservation of aquatic and riparian habitat
- Preservation of natural resources and endangered species
- Long-term stream stability that protects public infrastructure
- Development guidelines that address stormwater quantity and quality

**LOWER PLATTE SOUTH
NATURAL RESOURCES DISTRICT**



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August 13, 2009

Lancaster County Commissioners
City-County Building
555 South 10th Street, Room 110
Lincoln, Ne 68508

Dear Commissioners:

The Lower Platte South NRD Board of Directors reviewed and approved the Little Salt Creek Watershed Master Plan at their July Board of Directors meeting. In addition to approving the plan they also recommend approval by the Lancaster County Board.

Sincerely,

A handwritten signature in black ink, appearing to read 'Paul D. Zillig', written over a horizontal line.

Paul D. Zillig
Assistant Manager

PDZ/pdz

