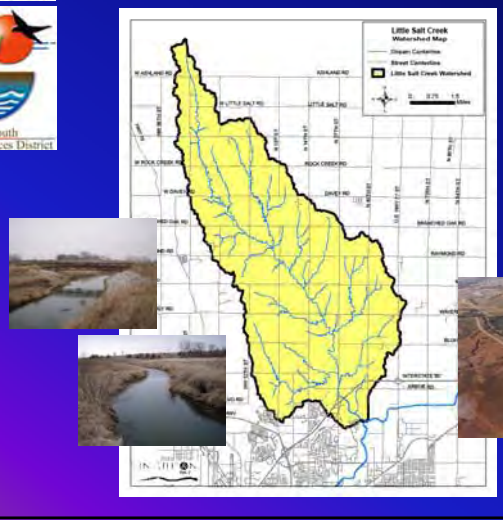
Little Salt Creek Watershed Master Plan



Open House

February 24, 2009

Open House

This meeting is subject to the provisions of the Nebraska Open Meeting Act

Open House

- Second of two open houses.
- First open house was held on April 22, 2008.
  - Lincoln North Star High School

Open House Format

- Formal Presentation (15 minutes)
- Informal Stations Following Formal Presentation
  - Visit with Project Team Staff
  - Ask Specific Questions

Tonight's Agenda

- Introduction
- Purpose of Watershed Master Plan
- Study Goals and Objectives
- Information Stations

Lincoln Watershed Management/ NRD Partnership

- Minimize Flood Damage
- Control Erosion & Sedimentation
- Preserve Watershed Resources
  - Water Quality
  - Stream Stability
  - Riparian Habitat
- Encourage Sustainable Growth

CITY OF LINCOLN
NEBRASKA

Lower Platte South
Natural Resources District

…Ensuring Quality of Life for Future Generations

Watershed Master Planning

- City/NRD Planning Effort
- Watershed Master Plans Completed
  - Beal Slough
  - SE Upper Salt Creek
  - Stevens Creek
  - Cardwell Branch
  - Deadmans Run
- Overall Goals
  - Unified Master Plan
  - Integrate Public Input

Little Salt Creek Watershed Master Plan
Goals & Objectives

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

Project Team

Team Leaders

CITY OF LINCOLN NEBRASKA

Lower Platte South Natural Resources District

Engineering Consulting Team

Terracon

Heartland Center for Leadership Development

INTUITION LOGIC

PBS&J

e·a

Other Agency Team Members

Lincoln & Lancaster County Planning Department

Little Salt Creek Watershed Master Plan

Major Study Components

Public Involvement

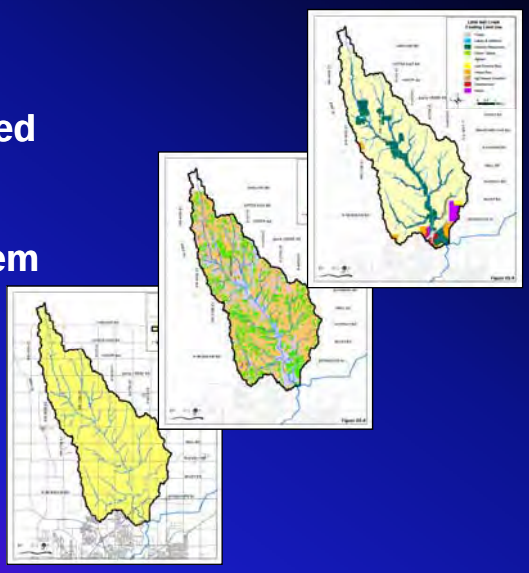
- Open Houses
- Newsletters
- Website
  - www.lincoln.ne.gov
  - Keyword “watershed”
- Citizens Advisory Committee (CAC)

Citizens Advisory Committee

- David Grimes
- Gary Hellerich
- Don Helmuth
- Chris Helzer
- Larry Hudkins
- Merle Jahde
- Susan Kuck
- Jack Nagel
- Harold Roper
- Gene Petersen
- David Potter
- Harold Roper
- Dave Sands
- John Schleich
- Vicky Wheeler
- Mark Whitehead
- Doug Emery
- Don Linscott

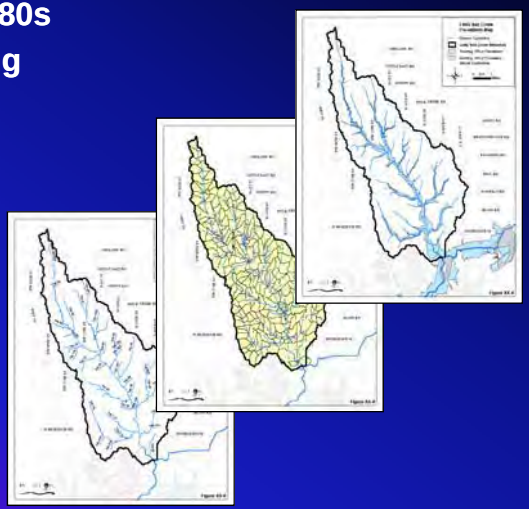
Watershed Inventory

- Collect, Compile and Evaluate Existing Watershed Data
- Geographic Information System Format (GIS)
- Study Data Collected in GIS Format



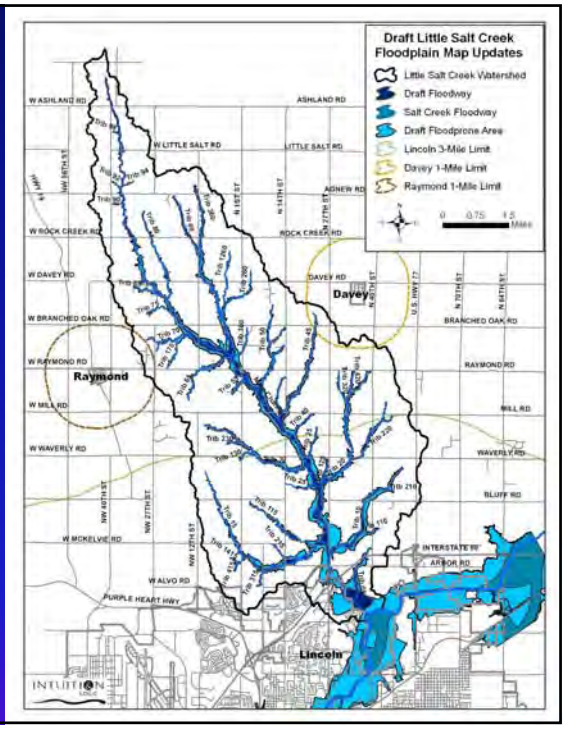
Floodplain Mapping

- Mapped in Early 1980s
- Develop Maps Using Latest Technology
  - Computer Models
  - GIS Format Output



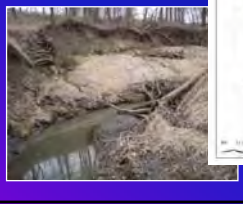
Floodplain Mapping

- Floodprone Area Updated
- Floodway Delineated
- Adopt Floodprone Area and Floodway as Best Available Information



Stream Stability

- Geomorphic Data Collection
- Stream Characteristics
- Identify Potential Future Stream Characteristics

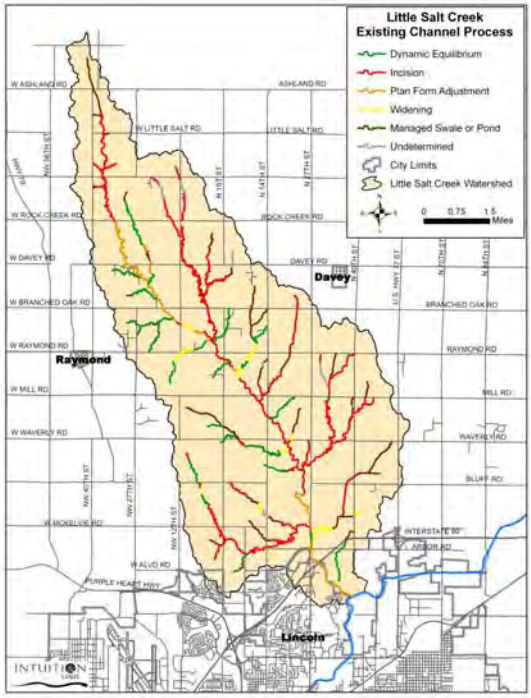


Stream Stability

Dominant Process

Five Dominant Processes

1. Dynamic Equilibrium
2. Incision
3. Widening
4. Plan Form Adjustment
5. Managed Swale and Pond

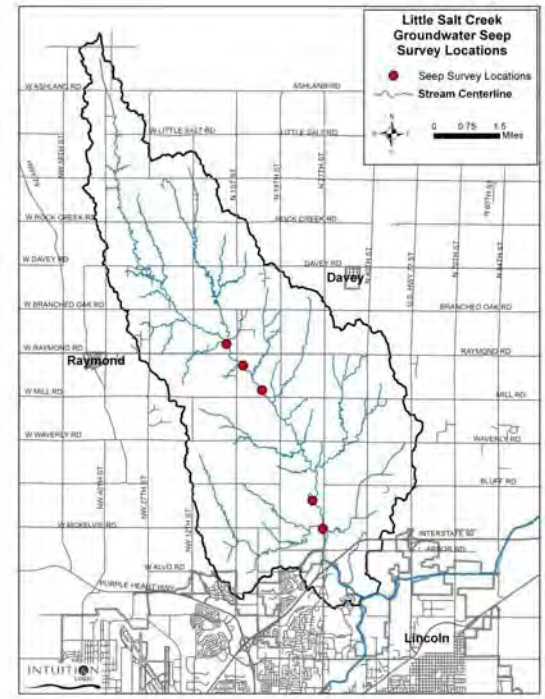


Natural Resources

- **Agriculture**
  - **Cropland**
  - **Pasture**
  - **Native Prairie**
- **Environmental**
  - **Saline Wetlands**
  - **Saltwort**
  - **Tiger Beetle**
- **Streams/Waterways**

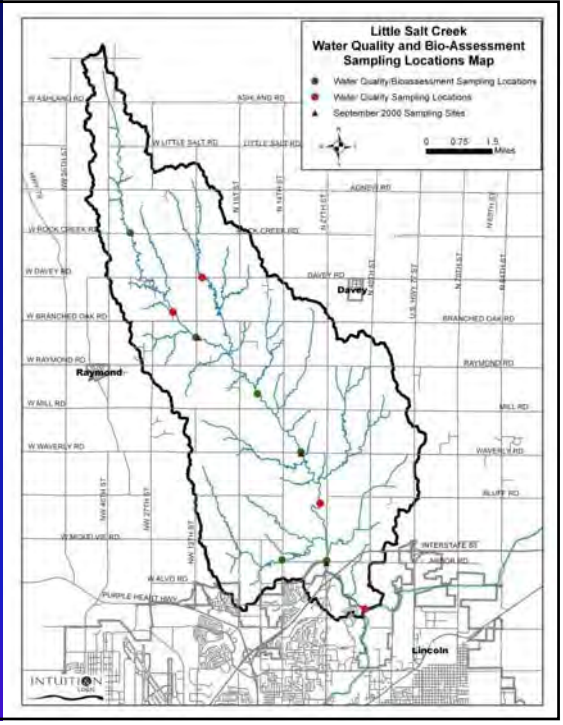
Seep Elevation Survey

- 5 Survey Sites
- Data Collected
  - Seep elevation
  - Top of bank
  - Toe of slope
  - Water surface
  - Lowest point is channel



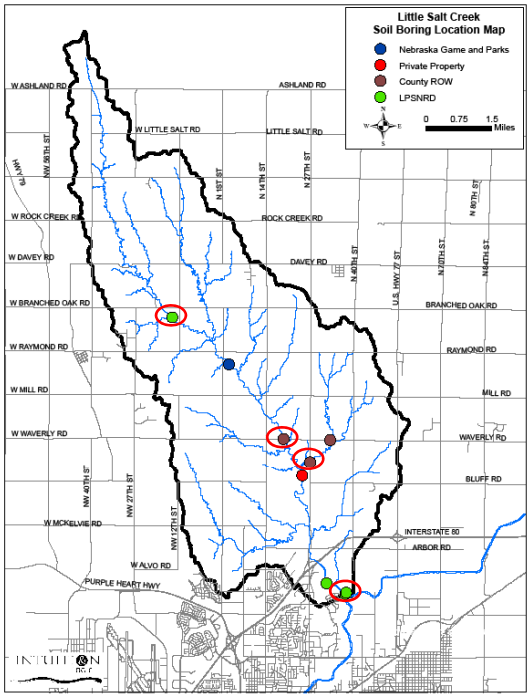
Water Quality

- Water Quality Sampling
  - 10 sites
- Bio-Assessment Sampling
  - 6 sites
- Previous Water Quality Sampling



Soil Assessment

- Field Sample
- Laboratory Testing Results
  - Slightly Dispersive



Watershed Characteristics

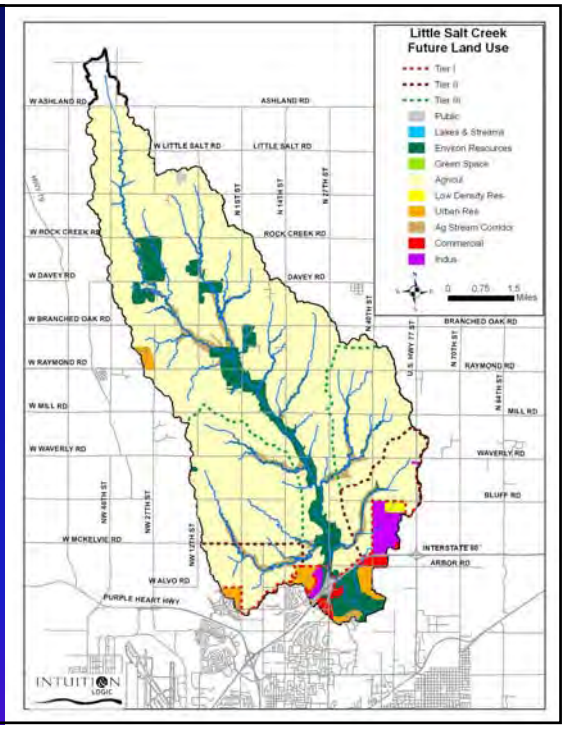
- Incising streams
- Poor water quality
- Dispersive and highly erosive soils
- Saline wetlands and seeps
- Salt Creek Tiger Beetle habitat

Incising stream

Observed seep

Watershed Characteristics

- Rural watershed, primarily agricultural
- Approximately 1200 acres in Lincoln's future service limit (Tier I).

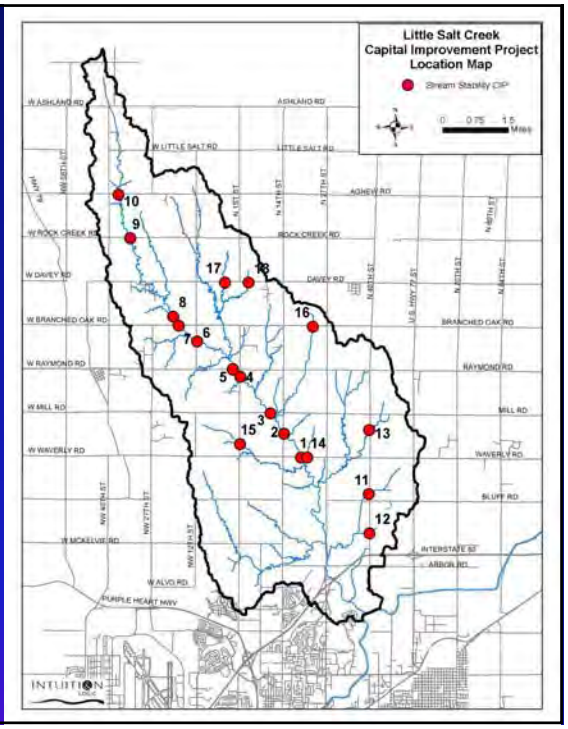


Watershed Master Plan Recommendations

- Capital Improvement Projects (CIPs)
- Bridge & Culvert Projects
- Riparian Corridor Enhancement
- Natural Resource Opportunities

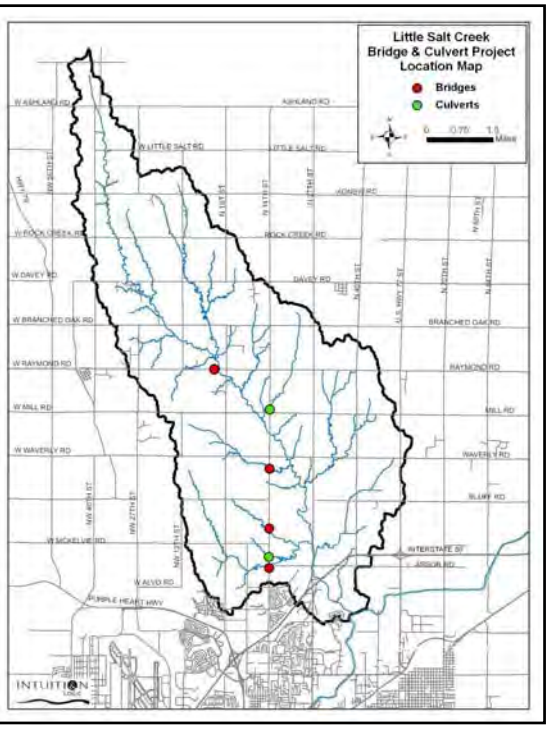
Capital Improvement Projects

- 18 Stream Stability Capital Improvement Projects
  - 10 Grade Controls
  - 8 Stilling Basins



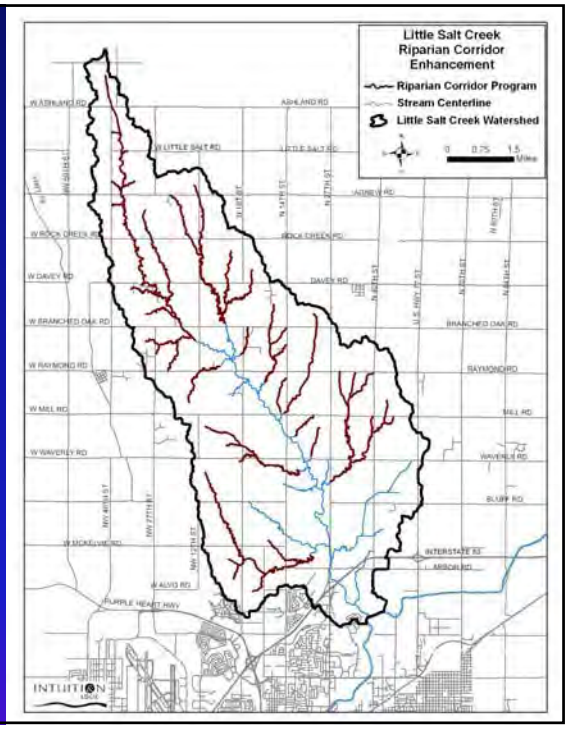
Bridge & Culvert Projects

- 6 Bridge & Culvert Projects
  - 4 Bridge Replacements
  - 2 Culvert Replacements



Riparian Corridor Enhancement

- Watershed Management Program
- Implemented using existing programs



Natural Resource Opportunities

- Natural Resource Opportunities
  - Wetland Enhancement
  - Wetland Creation
  - Habitat Enhancement

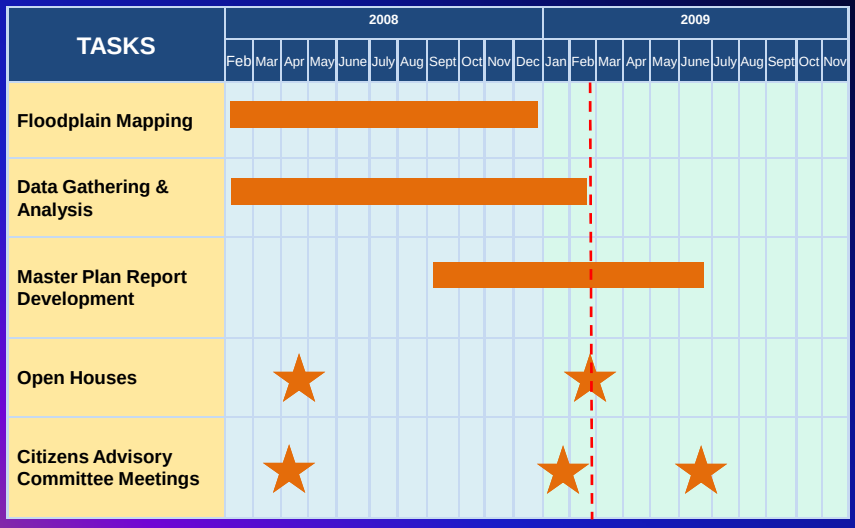
Drainage Criteria and Ordinance Review

- Water Quality BMPs
- Dispersive Soils Testing
- Conservation Culverts
- Adopt Floodprone Area and Floodway as Best Available Information


Water Quality BMP


Conservation Culvert

Little Salt Creek Watershed Master Plan
Project Timeline



Information Stations

- Five Information Stations
  1. Floodplain Mapping
  2. Capital Improvement Projects (CIP)
  3. Water Quality & Bio-Assessment
  4. Public Involvement
  5. Interactive Watershed Mapping Station
- Visit with Project Team Staff
- Ask Questions
- Comment Cards