

Discovery Report

Lower Big Blue Watershed, HUC 10270205

Jefferson, Gage, and Pawnee Counties, Nebraska

&

Marshall, Washington, Pottawatomie, Riley, and Nemaha Counties, Kansas

Report Number 01

1/18/2012



FEMA

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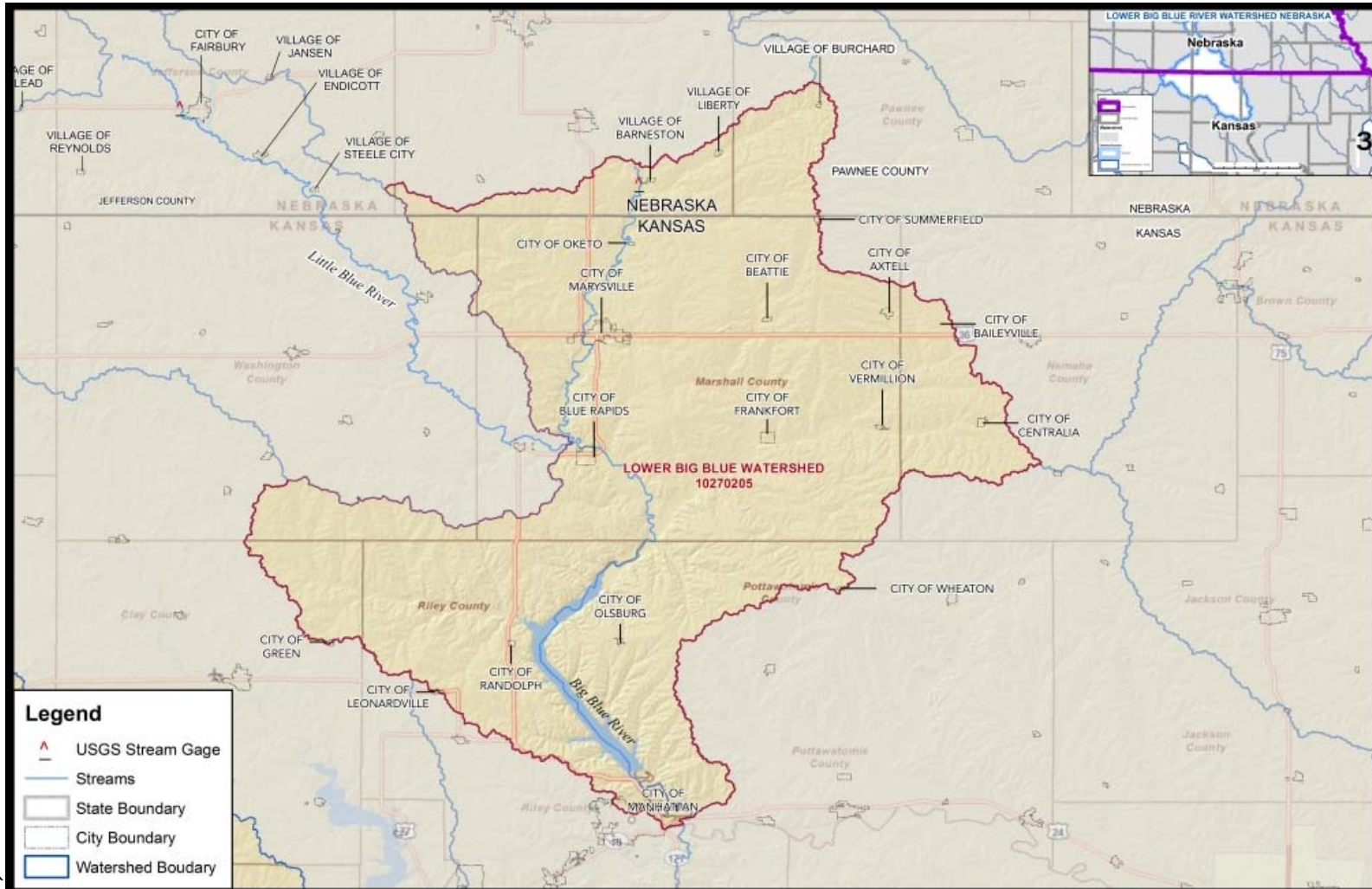
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I. General Information

The Lower Big Blue Watershed is located in Southeast Nebraska and Northeast Kansas and is the lower portion of the Big Blue River Basin, which includes parts of Jefferson, Gage and Pawnee counties in Nebraska, and Clay, Marshall, Nemaha, Saline, Pottawatomie, Riley and Washington counties in Kansas. It contains the Big Blue River, which originates in Nebraska, in addition to the Black Vermillion River and Fancy Creek. Tuttle Creek Lake is an important lake in the watershed, providing recreation and flood control. In addition, Centralia Lake and Pottawatomie County State Fishing Lake are located in the watershed.

The drainage area is approximately 9,628 square miles. Crop production is the predominant land usage for the watershed. Grass land is the second largest land usage. Woodland, water and urban areas constitute the remaining land cover.

Figure 1 – Little Big Blue Watershed Project Area Map (Map 1)



II. Watershed Stakeholder Coordination

An important phase of the Region VII Discovery effort was to review the collected data with community officials through phone interviews, and to request additional information. The interview included giving community officials information about the Discovery Process and a review of the data shown on the Fact Sheets and Interview Reference Maps. Communities were asked to identify “Areas of Concern” which could be addressed during the Discovery Meetings (mapping needs, desired mitigation projects, repetitive loss locations, etc.) The Areas of Concern were added to the Discovery Geodatabase.

The project team worked with FEMA Region VII and the State National Flood Insurance Program (NFIP) Coordinator and State Hazard Mitigation Officer (SHMO) to compile the stakeholder list for the Lower Big Blue Watershed. A list of the contacts made during this effort is included below. Phone logs, notes from interviews, and other pertinent information are included in the Appendix to this document.

Table II-1. Nebraska Stakeholders

	NAME	AGENCY	ROLE
1	John McKee	Jefferson County	Zoning & Floodplain administrator
2	Marvin Yost	Jefferson County	County Board Chairperson
3	Paul Bachle	Jefferson County	Board Chairperson
4	Laura Bedlan	Jefferson County	Zoning Administrator
5	Joseph Parker	Jefferson County	City Administrator
6	Mike Hammer	Jefferson County	Board Chairperson
7	Larry Lange	Jefferson County	Board Chairperson
8	Margo Angelo	Jefferson County	Floodplain Administrator
9	William Scheele	Jefferson County	Board Chairperson
10	Marlin Kliever	Gage County	Floodplain Administrator
11	Rex Adams	Gage County	County Board Chairperson
12	William Paul	Gage County	Board Chairperson
13	Darrell Thomas	Gage County	Board Chairperson
14	Jonathan Bailey	Pawnee County	Pawnee County Assessor
15	Kay Laun	Pawnee County	County Board Chairperson
16	George Lambert	Pawnee County	Board Chairperson
17	David Clabaugh	Lower Big Blue NRD	General Manager
18	John Mckee	Jefferson County	Emergency Management Director
19	Mark Meints	Gage County	Emergency Management Director
20	Michael Wilcox	Pawnee County	Emergency Management Director
21	Rex Goodnight	USACE-Kansas City District	Levee Safety Officer
22	Scott Vollink	USACE-Kansas City District	Levee Safety Project Manager
23	Doug Crum	USACE-Kansas City District	Dam Safety Program Manager
24	John Grothaus	USACE-Kansas City District	Flood Risk Management Program Mngr.
25	Brian Rast	USACE-Kansas City District	Silver Jacket Lead
26	Don Meier	USACE-Kansas City District	Floodplain Management Services
27	Leon Carl	USGS	Regional Executive, Mid West (NE, IA)
28	Robert Swanson	USGS	Water Science Center Director-Nebraska

Table II-1 (cont'd)

	NAME	AGENCY	ROLE
29	Jim Langtry	USGS	State Geospatial Liason-Nebraska
30	Wendy Pearson	NWS	
31	Kris Lander	NWS	

Table II-2. Kansas Stakeholders

	NAME	AGENCY	ROLE
1	Brenda Elliott	City of Centralia	Mayor
2	John Nowak	City of Blue Rapids	Mayor
3	Sharon Owen	City of Frankfort	Mayor
4	Jim Nelson	City of Olsburg	Mayor
5	Pat Collins	Riley County	Emergency Manager
6	Bruce Snead	City of Manhattan	Mayor
7	Carl Friedrich	City of Randolph	Mayor
8	Dave Jermark	City of Green	Mayor
9	Terry Force	City of Wheaton	Mayor
10	Chad Bunger	City of Manhattan	FPM
11	Karen McCulloh	Riley County	Board Chairperson
12	William Schwindamann Jr.	Marshall County	Emergency Manager
13	Bruce Mitchell	City of Summerfield	Mayor
14	Melvern Holle	City of Oketo	Mayor
15	Mike Johnson	City of Leonardville	Mayor
16	Steve Higgins	Riley County	FPM
17	Michael Keating	Marshall County	Board Chairperson
18	Bernie Krug	City of Marysville	Mayor
19	Wynn Buessing	City of Axtell	Mayor
20	Ferrell Meritt	City of Vermillion	Mayor
21	Michael Craig	Marshall County	Public Works Director
22	Kevin O'Neil	City of Beattie	Mayor
23	Stan Hartwich	Pottawatomie County	Board Chairperson
24	Chris Trudo	Pottawatomie County	Emergency Manager
25	Todd Swart	Nemaha County	Emergency Manager

III. Data Analysis

Data Analysis is divided between two sections: one section listing the data that can be used for Risk MAP products (regulatory and non-regulatory) and, one section listing the other data and information that helped the project team to form a more holistic understanding of this watershed.

i. Data that can be used for Flood Risk Products

Topographic and Stream Gauge Data

Light Detection and Ranging (LiDAR) data is currently available for Jefferson County in Nebraska and Marshall, Washington, and Riley counties in Kansas. 2002 USGS raster-based orthophoto is available for base-mapping. USGS gauge data is available along the Little Blue River near the Village of Barneston, NE and near the Cities of Marysville, Blue Rapids and Manhattan, KS. A stream gauge is located along the Black Vermillion River downstream of Frankfort, KS.

ii. Other Data and Information

Mitigation Plans/Status, Mitigation Projects

An All-Hazards Mitigation Plan for the Lower Big Blue Natural Resources District and the Little Blue Natural Resources District (FEMA-1674-DR-NE-0026) was prepared by Olsson Associates in December 2010. A total of 27 communities with a population of 37,885 (U.S. Census 2000) and a total area of 1,054,000 acres are within the Lower Big Blue Natural Resources District (LBBNRD). The purpose of the All-Hazards Mitigation Plan is to ensure that each participating community is eligible to obtain federal funding under the Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program and the Flood Mitigation Assistance Program. Through this plan, LBBNRD has been able to determine the hazards affecting the area, the risks these hazards present to the respective communities, develop mitigation goals, and identify feasible mitigation activities for the participating entities. The table included below lists mitigation projects identified within the LBBNRD.

Table III-1. LBBNRD Hazard Mitigation Plan Projects

PRIORITY	MITIGATION ACTION/PROJECT	HAZARD ADDRESSED	PROJECT ADMINISTRATOR
3	Construction of Lower Turkey Creek Site 9	FLOOD	Lower Big Blue NRD
4	Stream Augmentation	FLOOD	Lower Big Blue NRD

PRIORITY	MITIGATION ACTION/PROJECT	HAZARD ADDRESSED	PROJECT ADMINISTRATOR
5	River Flow Gages	FLOOD	Lower Big Blue NRD
2	Remove Flow Constrictions	FLOOD	Fillmore County
6	Blue River Stabilization Project	FLOOD	Lower Big Blue NRD
7	Wilber Flood Control Structure	FLOOD	Lower Big Blue NRD
8	Floodplain mapping	FLOOD	Lower Big Blue NRD
9	Dewitt Flood Mitigation Project	FLOOD	Lower Big Blue NRD
10	Flood Control Rehabilitation	FLOOD	Lower Big Blue NRD
11	Dam Rehabilitation of Aging Structures	FLOOD	Lower Big Blue NRD
12	Blue ridge Flood Control Project	FLOOD	Lower Big Blue NRD

The table below lists mitigation projects identified within Marshall, Riley and Pottawatomie County Hazard Mitigation Plans applicable to this Risk MAP effort.

Table III-2. Kansas Counties Hazard Mitigation Plan Applicable Projects

PRIORITY	MITIGATION ACTION/PROJECT	HAZARD ADDRESSED	PROJECT ADMINISTRATOR
High	Application for participation in NFIP	FLOOD	Blue Rapids
High	Assess & recommend flood reduction measures	FLOOD	Frankfort
High	Assess & recommend flood reduction measures	FLOOD	Vermillion

PRIORITY	MITIGATION ACTION/PROJECT	HAZARD ADDRESSED	PROJECT ADMINISTRATOR
High	Assess & recommend flood reduction measures	FLOOD	Marysville
High	Acquire & preserve land parcels subject to repetitive flooding	FLOOD	Marshall County (Uninc.)
High	Contact/inform owners of FEMA assistance	FLOOD	Marshall County (Uninc.)
High	Operate & maintain levee system	DAM/LEVEE	Marysville
High	Identify flash-flood prone areas for flood reduction measures	DAM/LEVEE	Marshall County (Uninc.)
Moderate	Research & consider purchase of pumping system to aid in dewatering	DAM/LEVEE	Marysville
High	Research & design stream buffer ordinance	FLOOD	Marshall County (Uninc.)
High	Regularly document open space property to reduce flood insurance	FLOOD	Marshall County (Uninc.)
High	Develop annex to LEOP for dam failure response & evacuation	DAM/LEVEE	Marshall County (Uninc.)
Moderate	Maintain watershed-related structures	DAM/LEVEE	Marshall County (Uninc.)
Moderate	Construct, operate, maintain water detention dams/related structures (WSD #69)	DAM/LEVEE	Marshall County (Uninc.)
Moderate	Construct, operate, maintain water detention dams/related structures (WSD #110)	DAM/LEVEE	Marshall County (Uninc.)
Moderate	Construct, operate, maintain water detention dams/related structures (WSD #70)	DAM/LEVEE	Marshall County (Uninc.)
Moderate	Construct, operate, maintain detention structures (WSD #37)	DAM/LEVEE	Marshall County (Uninc.)

PRIORITY	MITIGATION ACTION/PROJECT	HAZARD ADDRESSED	PROJECT ADMINISTRATOR
Moderate	Construct, operate, maintain water detention dams/related structures (WSD #80)	DAM/LEVEE	Marshall County (Uninc.)
Moderate	Construct, operate, maintain water detention dams/related structures (WSD #80)	DAM/LEVEE	Marshall County (Uninc.)
High	Participation & compliance with NFIP	FLOOD	Manhattan
High	Participation & compliance with NFIP	FLOOD	Riley (Uninc.)
High	Acquire & preserve land subject to flooding	FLOOD	Manhattan
Low	Acquire & preserve land subject to flooding	FLOOD	Riley (Uninc.)
High	Contact/inform owners of FMA assistance	FLOOD	Riley (Uninc.)
Moderate	Identify & map flash-flood areas, recommend flood reduction measures	FLOOD	Manhattan
High	Advertise & promote the availability of flood insurance	FLOOD	Riley (Uninc.)
High	Regularly document open space property to reduce flood insurance	FLOOD	Riley (Uninc.)
High	PM 43 certification of city levee according	DAM/LEVEE	Manhattan
Moderate	Identify & map flash-flood areas, recommend flood reduction measures	FLOOD	Riley (Uninc.)
High	Research & design stream buffer ordinance	FLOOD	Riley (Uninc.)
Moderate	Educate residents about dam safety & response procedures	DAM/LEVEE	Riley (Uninc.)

PRIORITY	MITIGATION ACTION/PROJECT	HAZARD ADDRESSED	PROJECT ADMINISTRATOR
High	Provide/Update Emergency Action Plans	DAM/LEVEE	Riley (Uninc.)
Low	Acquire & preserve land subject to flooding	FLOOD	Pottawatomie (Uninc.)
High	Research & design stream buffer ordinance	FLOOD	Pottawatomie (Uninc.)
High	Contact/inform owners of FMA assistance	FLOOD	MultiJurisdictional
High	Advertise & promote the availability of flood insurance	FLOOD	MultiJurisdictional
High	Develop annex to LEOP for dam failure response & evacuation plans	DAM/LEVEE	MultiJurisdictional

CNMS and NFIP Study Needs

New approximate and detailed studies are required since a limited number of communities in the Lower Big Blue watershed have existing Flood Insurance Studies. Those areas are:

- City of Marysville, KS
- City of Leonardville, KS
- City of Manhattan, KS
- City of Randolph, KS
- Riley County, KS
- Pottawatomie County, KS
- Village of Barneston, NE
- Village of Liberty, NE
- Gage County, NE

Studies identified for detailed methods are listed in the table below.

Table III-3. Future Detailed Study Areas

FLOODING SOURCE	STUDY LENGTH (miles)	STUDY LIMITS	STUDY TYPE
Black Vermillion River	2.2	Along existing levee extents at Frankfort, KS	New/Revised Detail

Socio-Economic Analysis

The communities in the Lower Big Blue River Watershed are small, with the largest city being the City of Marysville, KS at approximately 3,300 residents (2000 Census Data). The median age in the watershed is in the early 40's.

Community Rating System (CRS)

As of October, 2011 Riley County unincorporated area was the only community within the Lower Big Blue Watershed listed as participating in FEMA's CRS.

Levees

Four known levees that provide flood protection are present in the Lower Big Blue watershed. They are identified on the Discovery Map, located at the following communities:

- City of Blue Rapids, KS
- City of Frankfort, KS
- City of Marysville, KS
- City of Manhattan, KS

Dams

There are numerous dams within this watershed. Many of the dams have been modified since original mapping of the communities in this watershed. The revised locations, additions and deletions have been updated on the Discovery Map based on community feedback.

Special Watershed Districts

Five watershed districts are located within the Lower Little Blue watershed in KS that manage water quantity and quality issues. These districts are identified in the Discovery Map and listed below:

- Horseshoe Creek Watershed District No. 110
- Spring Creek Watershed District No. 80
- Vermillion Creek Watershed District No. 70
- Snipe Creek Watershed District No. 69
- Upper Black Vermillion Watershed District No. 37

Floodplain Management/CAVs

The Lower Big Blue Watershed in Nebraska and Kansas includes communities with an existing hazard mitigation plan. These plans were reviewed and all communities were contacted by telephone, mail and email to provide their input. This input has been incorporated in this report under appropriate sections.

Regulatory Mapping

Most Lower Big Blue Watershed communities have either not had recent map updates or have not been previously mapped. The following communities in the watershed were found to have effective FIS's:

- City of Marysville, KS
- City of Leonardville, KS
- City of Manhattan, KS
- City of Randolph, KS
- Riley County, KS
- Pottawatomie County, KS
- Village of Barneston, NE
- Village of Liberty, NE
- Gage County, NE

Risk MAP Project in this Watershed

This Risk MAP Project has been introduced to this watershed starting with Discovery. Currently, detailed studies and mapping are being prepared for the City of Frankfort, KS along the levee. Additional community Outreach in the form of Flood Risk Review and Resilience meetings are proposed in FY 11 for this watershed.

Other Support Requested

During the Discovery process, no additional support was requested by the communities within the Lower Big Blue Watershed. The communities were notified that assistance could be available, and that grant programs may exist to benefit them.

IV. Discovery Meetings

NEBRASKA

One watershed-wide Discovery meeting was held on 03/28/11 to facilitate discussion about common vision for the watershed, mitigation capabilities, impact of FEMA’s determination of the potential flood risk hazard and needs within watershed. Community leaders, Emergency Managers, GIS specialists, local planners and others with a vested interest were present and participated in discussion. The flood risk concerns were discussed and identified. The information related to flooding history, community outreach and development plans were discussed. The current activities were also discussed to mitigate flood risk. Draft discovery map was reviewed to share data with FEMA. The meeting emphasized the need for mitigation planning and communication strategy.

Sign in sheets, meeting notes, and other documentation of the Discovery Meeting is located in the Appendix of this document (on a CD).

The Lower Big Blue Watershed Discovery effort involved an analysis of the data and information collected and discussed at the meeting, and recommendations as to the future relationship and activities between FEMA and the watershed communities. The Final Discovery Map indicates desired study areas and mitigation project locations, and the Discovery Report pulls together the information collected and provides recommendations.

Table IV-1. Nebraska Discovery Meeting Areas of Concern/Interest

COMMUNITY	COUNTY	ISSUE OF CONCERN/INTEREST
Village of Burchard	Pawnee	LOMR-F
Village of Liberty	Gage	Structures
Gage County	Gage	Snow melt whole lower county
Gage County	Gage	New Bridge county, Highway 8
Gage County	Gage	Upstream sediment control
City of Blue Springs	Gage	Upstream dam breach at Blue Springs
City of Blue Springs	Gage	Upstream sediment control; Upstream dam breach at Blue Springs and Wymore

KANSAS

A watershed-wide Discovery Meeting was held on March 28, 2011, to inform attendees about the Risk MAP goals and procedures, to facilitate discussion about study needs, mitigation project needs, desired compliance support and local flood risk awareness efforts. Attendees, including affected communities and selected other stakeholders, cooperatively identified Areas of Concern. Planned projects in the watershed were discussed and included recommendations of floodplain studies, mitigation projects, code and compliance issues, and ideas on how to improve the local flood risk communications program.

Sign in sheets, meeting notes, and other documentation of the Discovery Meetings are located in the Appendix of this document.

The Lower Big Blue Watershed Discovery effort involved an analysis of the data and information collected and discussed at the meeting, and recommendations as to the future relationship and activities between FEMA and the watershed communities. The Final Discovery Map indicates areas of interest based on the results of the Discovery Meeting and Data Collection process. A brief description of these areas is provided below:

Table IV-2. Kansas Discovery Meeting Areas of Concern/Interest

COMMUNITY	COUNTY	POINT OF CONCERN/INTEREST
City of Blue Rapids, KS	Marshall	<ul style="list-style-type: none"> Blue Rapids- new K-77 bridge (KDOT project)
City of Manhattan, KS	Riley	<ul style="list-style-type: none"> Manhattan- levee study by USACE COE modeling of Tuttle Creek Reservoir
City of Marysville, KS	Marshall	<ul style="list-style-type: none"> LOMR for Marysville's levee Flooding problems identified in downtown area, near city pool
Multiple	Multiple	<ul style="list-style-type: none"> 3 known watershed districts within HUC; OA, KDA to verify

V. Appendix and Tables

Map 1 – Lower Big Blue Watershed Discovery Meeting Map

Map 2 – Lower Big Blue Watershed Final Discovery Map

Table II-1. Nebraska Stakeholders

Table II-2. Kansas Stakeholders

Table III-1. LBBNRD Hazard Mitigation Plan Projects

Table III-2. Kansas Counties Hazard Mitigation Plan Applicable Projects

Table III-3. Future Detailed Study Areas

Table IV-1. Nebraska Discovery Meeting Areas of Concern/Interest

Table IV-2. Kansas Discovery Meeting Areas of Concern/Interest

Discovery Meeting Notes and Sign-in Sheet (KS)

Fact Sheets / Brochures

Data Sets Included by Reference:

Data Set 1 – Spatial Database for Lower Little Blue Watershed

Data Set 2 – Tabular Data for Lower Little Blue Watershed

**Lower Big Blue Watershed
Discovery Meeting Report
Date: 3/28/2011**

DATE OF MEETING	Monday, March 28,2011
TIME	2:00 P.M.
LOCATION	Marysville City Hall, 209 N 8th St., Marysville, KS 66508
COMMUNITY ATTENDEES	Marshall County, Marysville, Manhattan, Pottawatomie County
MINUTES	<ul style="list-style-type: none"> • T.Morey: National Flood Insurance Program overview and Community Rating System explanation • T. Stanton: Risk MAP Overview and goals, Discovery Overview, Watershed Vision open discussion • P.Woodward: Mapping Project Overview/ Schedule, Digital Flood Insurance Rate Map data sources/ final products and files for communities • P.Woodward: Mitigation discussion; risk/solutions, Hazard Mitigation Plans • P. Woodward: Mapping analysis and areas, Levees: no levees in Washington County • T.Stanton and P.Woodward: Next Steps: share data, contact info. Future meetings
COMMENTS	<ul style="list-style-type: none"> • Flooding Issues • Mitigation Planning • Other recommended invitees • Local Projects: <ul style="list-style-type: none"> ○ Blue Rapids- new K-77 bridge (KDOT project) ○ Manhattan- levee study by USACE • Data <ul style="list-style-type: none"> ○ David: 2006 Imagery- 6" in city, ? unincorporated ○ Marysville City Manager- corporate boundaries from CES engineering ○ LOMR for Marysville's levee ○ 3 known watershed districts within HUC; OA, KDA to verify ○ COE modeling of Tuttle Creek Reservoir ○ County appraiser's office has parcel data and valuations
ENCLOSURES	<ol style="list-style-type: none"> 1. Attendance Record 2. Presentation 3. Discovery Map

LOWER BIG BLUE DISCOVERY MEETING

Location: Marysville City Hall, 209 N 8th St., Marysville, KS 66508

Date: March 28, 2011

Please Print

Name	Agency/Title	Phone number	E-mail
Alicia Benson	KDA	785 296 7769	alicia.benson@kda.ks.gov
Chris Trudo	Pott Co EMT	785 457-3358	ctrudo@pottcountyr.org
Wm Schwida	Marshall Co E	785-562-4550	m.sco911ep@bluevalley.net
Gregg Webster	Pott. Co. Zoning	785 457-3551	gwebster@pottcounty.org
Michelle Wolfe	FEMA	816 288 7036	Michelle.wolfe@dks.gov
DAVID A. RICHARDSON	MARYVILLE	785-562-5596	dariche@bluevalley.net
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Shane Swape	" "	785-587-4533	Swape@ci.manhattan.ks.us
Erika Stanley	KDA	785-296-2513	erika.stanley@kda.ks.gov
Paul Woodward	OA	938-2470	pwoodward@coaccounting.com
Rick Shavin	CITY OF MARYVILLE	785 522 5331	cityadm@bluevalley.net
Tony Stanton	OA		
Tom Morey	KDA		

APPENDIX – Lower Big Blue Watershed Stakeholder Contacts, Discovery Meeting Invitees

<p>BRENDA ELLIOTT MAYOR, CITY OF CENTRALIA 517 4TH, PO BOX 247 CENTRALIA, KS 66415</p>	<p>DOROTHY WHITE CITY CLERK, CITY OF CENTRALIA 517 4TH, PO BOX 247 CENTRALIA, KS 66415</p>	<p>BRUCE MITCHELL MAYOR, CITY OF SUMMERFIELD PO BOX 100 SUMMERFIELD, KS 66541</p>
<p>JOHN NOWAK MAYOR, CITY OF BLUE RAPIDS 04 PUBLIC SQ BLUE RAPIDS, KS 66411</p>	<p>SUSAN HASS CITY CLERK, CITY OF BLUE RAPIDS 04 PUBLIC SQ BLUE RAPIDS, KS 66411</p>	<p>SHERY ROHMEYER CITY CLERK, CITY OF SUMMERFIELD PO BOX 100 SUMMERFIELD, KS 66541</p>
<p>MELODY TOMMER CITY CLERK, CITY OF FRANKFORT 109 N KANSAS FRANKFORT, KS 66427</p>	<p>SHARON OWEN MAYOR, CITY OF FRANKFORT 109 N KANSAS FRANKFORT, KS 66427</p>	<p>DIANE HERRMANN CITY CLERK, CITY OF OKETO 106 CENTER, PO BOX 87 OKETO, KS 66518</p>
<p>JIM NELSON MAYOR, CITY OF OLSBURG 317 2ND ST, PO BOX 127 OLSBURG, KS 66520</p>	<p>DAVE JERMARK MAYOR, CITY OF GREEN 106 DIXON, PO BOX 25 GREEN, KS 67447</p>	<p>MELVERN HOLLE MAYOR, CITY OF OKETO 106 CENTER, PO BOX 87 OKETO, KS 66518</p>
<p>JACKIE CASSEL CITY CLERK, CITY OF OLSBURG 317 2ND ST, PO BOX 127 OLSBURG, KS 66520</p>	<p>CARLA WIEDMER CITY CLERK, CITY OF GREEN 106 DIXON, PO BOX 25 GREEN, KS 67447</p>	<p>DEANDRA ANDERSON CITY CLERK, CITY OF LEONARDVILLE 118 N ERPELDING AVE PO BOX 189 LEONARDVILLE, KS 66449</p>
<p>SALLIE FORCE CITY CLERK, CITY OF WHEATON 342 MAIN ST WHEATON, KS 66521</p>	<p>TERRY FORCE MAYOR, CITY OF WHEATON 342 MAIN ST WHEATON, KS 66521</p>	<p>MIKE JOHNSON MAYOR, CITY OF LEONARDVILLE 118 N ERPELDING AVE, PO BOX 189 LEONARDVILLE, KS 66449</p>
<p>PAT COLLINS EMERGENCY MANAGER, RILEY COUNTY 115 N 4TH ST MANHATTAN, KS 66502</p>	<p>CHAD BUNGER FPM, CITY OF MANHATTAN 1101 POYNTZ AVE MANHATTAN, KS 66502</p>	<p>STEVE HIGGINS FPM, RILEY COUNTY 110 COURTHOUSE PLAZA MANHATTAN, KS 66502</p>
<p>BRUCE SNEAD MAYOR, CITY OF MANHATTAN 1101 POYNTZ AVE MANHATTAN, KS 66502</p>	<p>KAREN MCCULLOH CHAIRMAN, RILEY COUNTY 115 N 4TH ST MANHATTAN, KS 66502</p>	<p>MICHAEL KEATING CHAIRMAN, MARSHALL COUNTY 1201 BROADWAY MARYSVILLE, KS 66508</p>
<p>CARL FRIEDRICH MAYOR, CITY OF RANDOLPH 108 W RANDOLPH, PO BOX 2 RANDOLPH, KS 66554</p>	<p>WILLIAM SCHWINDAMANN JR. EMERGENCY MANAGER, MARSHALL COUNTY 1201 BROADWAY MARYSVILLE, KS 66508</p>	<p>BERNIE KRUG MAYOR, CITY OF MARYSVILLE 209 N 8TH MARYSVILLE, KS 66508</p>

APPENDIX – Lower Big Blue Watershed Stakeholder Contacts, Discovery Meeting Invitees

<p>PATRICIA BOOTH CITY CLERK, CITY OF RANDOLPH 108 W RANDOLPH, PO BOX 2 RANDOLPH, KS 66554</p>	<p>FERRELL MERITT MAYOR, CITY OF VERMILLION 102 MAIN ST, PO BOX 127 VERMILLION, KS 66544</p>	<p>MICHAEL CRAIG PUBLIC WORKS DIRECTOR, MARSHALL COUNTY 1201 BROADWAY ROOM B1 MARYSVILLE, KS 66508</p>
<p>SHANE WOODSIDE CITY CLERK, CITY OF VERMILLION 102 MAIN ST, PO BOX 127 VERMILLION, KS 66544</p>	<p>JAN STUDER CITY CLERK, CITY OF BEATTIE CITY HALL BEATTIE, KS 66406</p>	<p>KEVIN ONEIL MAYOR, CITY OF BEATTIE CITY HALL BEATTIE, KS 66406</p>
<p>WYNN BUESSING MAYOR, CITY OF AXTELL 306 MAPLE, PO BOX A AXTELL, KS 66403</p>	<p>JANE BUESSING CITY CLERK, CITY OF AXTELL 306 MAPLE, PO BOX A AXTELL, KS 66403</p>	<p>DAVID A RICHARDSON CITY CLERK, CITY OF MARYSVILLE 209 N 8TH MARYSVILLE, KS 66508</p>
<p>STAN HARTWICH CHAIRMAN, POTTAWATOMIE COUNTY 207 N 1ST PO BOX 187 WESTMORELAND, KS 66549</p>	<p>CHRIS TRUDO EMERGENCY MANAGER, POTTAWATOMIE COUNTY 207 N 1ST PO BOX 187</p>	<p>TODD SWART FPM AND EMERGENCY MANAGER, NEMAHA COUNTY 1400 COMMUNITY DRIVE SENECA, KS 66538</p>
<p>GREGG WEBSTER FPM, POTTAWATOMIE COUNTY 207 N 1ST PO BOX 187 WESTMORELAND, KS 66549</p>		

Discover project partners

- Community and Tribal officials, including leaders, floodplain administrators, planners, emergency managers, GIS specialists
- Federal, State, and regional, non-profit organizations involved with flooding or land use
- Other locally-identified stakeholders

Discover flood risk

- Review CAVs, mitigation and comprehensive plans, identify LOMA clusters
- Consider the local and watershed vision for reducing flood risk
- Document known areas of flooding and locate available study data
- Contribute to the Discovery Meeting

Discover ways to protect your community

- Using new tools and training to communicate risk clearly
- Through mitigation projects, flood studies and maps
- Through coordination with watershed organizations and other local communities

FEMA's new Risk Mapping, Assessment, and Planning (Risk MAP) program provides communities with flood information and tools that can be used to enhance mitigation plans and better protect citizens. Through more accurate flood maps including Digital Flood Insurance Rate Maps (DFIRMs), risk assessment tools, and outreach support, Risk MAP strengthens local ability to make informed decisions about reducing risk.

***Discovery IS ...
the process of data mining, collection, and analysis
with the goal of initiating
a flood risk or mitigation project or risk
discussions
within a watershed***

Discovery initiates open lines of communication and relies on local involvement for productive discussions about flood risk. It provides a forum for a watershed-wide effort to understand how your community's flood risk is related to flood risk throughout the watershed. In Risk MAP, DFIRMs will be developed on a watershed basis, so Discovery Meetings will involve stakeholders from throughout your watershed on local, regional, State, and Federal levels.

Discovery is cooperative. Communities know their watershed and flood risks... and local knowledge of flooding and mitigation projects is essential to identifying needed projects and mapping. FEMA will bring statistical data, but local officials and regional organizations will be relied on to provide the working knowledge of local flooding.

Discovery is data. Locally and regionally developed data is important! Locally-contributed data will be combined with risk statistics on a Discovery Map to stimulate holistic discussions about watershed-wide flood risk, mapping needs, and mitigation actions. There is no limit to the types and formats of data and information, so while some data types are listed on the sidebar, contact your FEMA Regional Office with ideas about relevant data that you can contribute.

Discovery Meeting discussions will focus on identifying flood risk and the location of study needs for a potential project. Supporting conversations will cover project requirements and flexibility, data and cost-share, communications and outreach, current and potential actions to reduce flood risk. The meeting is not just all flood hazards and mapping needs, it includes mitigation plans and projects, community changes and local issues that need FEMA support. Following Discovery, FEMA will select watershed projects for funding.

Discovery is a call to action. Join FEMA in reducing flood risk for your community through education, awareness, contribution and cooperation.

Discover the data

- Geospatial data (GIS) whenever possible!
- Boundary, hydrography, and transportation layers
- Elevation data with 2' contours or better
- Historical flooding and disaster data
- Flood study needs
- Mitigation activities and other grant projects ongoing or planned
- Local development and floodplain management plans
- Regional watershed plans
- Infrastructure information, especially for levees and new bridges, dams, culverts, and road improvements
- Building footprints or parcel data
- Current flood risk communication process

***Customize Discovery:
Send your community's
data to your FEMA
Regional Office now!***



Discover the process

FEMA Planning and Budgeting...

On a national level, FEMA identifies watersheds for potential project funding

Discovery Initiated...

- On a regional level, FEMA invites watershed stakeholders to contribute local and regional data and knowledge
- Discovery Meeting scheduled

Data Collection and Coordination...

- Local officials internally discuss existing and needed floodplain projects
- Communities and regional organizations contribute data for the Discovery Map

Discovery Meeting...

- Watershed-wide stakeholders present working knowledge of flood risk to FEMA representatives
- Discovery Map, showing statistical flood risk data and contributed data, is discussed
- High flood risk areas and mapping needs are identified

Final Project Selection...

FEMA selects from Discovery projects a few watershed projects for current fiscal year funding

RELATED FEMA PROGRAMS
National Flood Insurance Program
Flood Mitigation Assistance Program
National Dam Safety Program
Pre-Disaster Mitigation Program
Repetitive Flood Claims Program
Severe Repetitive Loss Program
Community Rating System

DOCUMENTS TO REVIEW
Mitigation Plans
Letters of Map Amendment
Letters of Map Revision
Levee Certification Documentation
Flood Studies
Comprehensive Plans
Business Case Plans

ISSUES TO DISCUSS LOCALLY
Communications Strategy
Flood Risk Education Program
Flood-Related Issues and Map Needs
Available Topographic Data
Cost-Share Potential
Current Risk Reduction Strategy
Ongoing or Needed Mitigation Actions

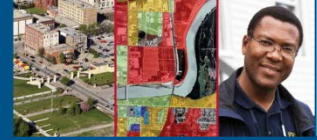
Contact your
FEMA Regional Office
for details

www.fema.gov/plan/prevent/fhm/rm_main.shtm

1-877-FEMA MAP

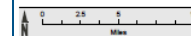
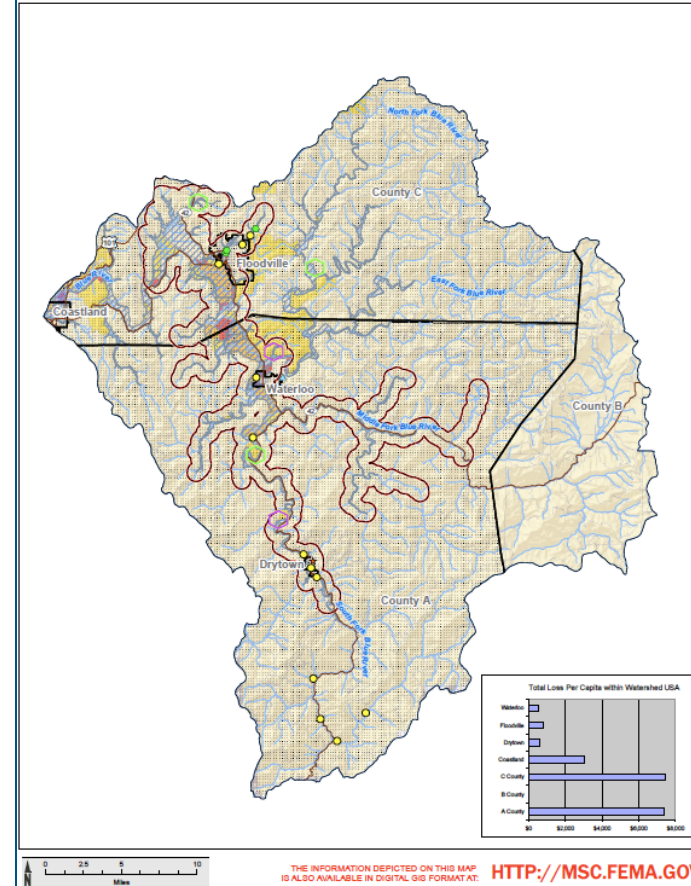


RiskMAP
Increasing Resilience Together



DISCOVERY

Watershed Discovery Map: Watershed USA



THE INFORMATION DEPICTED ON THIS MAP IS ALSO AVAILABLE IN DIGITAL GIS FORMAT AT: [HTTP://MSC.FEMA.GOV](http://MSC.FEMA.GOV)



FEMA

RiskMAP
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