

Agenda Item: 6.

Memorandum

To: Programs, Projects and Operations Subcommittee
From: Lori Ann Laster, Stormwater Management Engineer
Date: July 2, 2012
Re: Review and Recommendation on Interlocal Agreement with City of Fort Calhoun for Letter of Map Revision Project

In 2001, the City of Fort Calhoun (City) completed a flood mitigation plan to reduce flooding problems within the city. The plan was funded by Federal Emergency Management Agency (FEMA) Flood Mitigation Assistance funds. As part of the plan, a new flood study was completed for a stream in Fort Calhoun identified as Missouri River Tributary 2.1. This flood study determined that due to natural channelization of the stream, the 100-year floodplain was contained within the channel.

In 2009, District began updating FEMA's Flood Insurance Rate Maps (FIRM) for Washington County as a Cooperating Technical Partner with FEMA. The scope of the map updates was to bring them into digital format utilizing the data from the previous maps, with the exception of the Missouri River.

The study from the flood mitigation plan was not incorporated into the updated FIRMs, which became effective January 6, 2012.

The City wishes to have the flood study incorporated into the Washington County FIRM. As the maps became effective in January 2012, the way to accomplish this is through a Letter of Map Revision (LOMR). A LOMR officially revises a FIRM based on updated hydrologic or hydraulic studies or topographic surveys.

The City is requesting that the District cost share on the LOMR. The attached interlocal agreement outlines the project. The hydraulic modeling and survey completed for the flood mitigation study need to be updated and formatted prior to submission to FEMA. The City will select a consultant to complete the updates and prepare the LOMR application. The District will reimburse the City 50% of the costs to complete the project up to a maximum of \$20,000.

Management recommends that the General Manager be authorized to execute the interlocal agreement with the City of Fort Calhoun to cost share fifty percent on the Letter of Map Revision project up to a maximum of \$20,000 subject to changes deemed necessary by the General Manager and approved as to form by the District legal counsel.

up is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local sources of small size. The community map repository should be updated for possible updated or additional flood hazard information.

in more detailed information in areas where Base Flood Elevations have not yet been determined, users are encouraged to consult the Profiling and Mapping Division (PMD) report that contains information from the Flood Insurance Study (FIS) report and associated data. Users should be aware that BFEs shown on the FIRMs represent 1% ARI whole-tail elevations. These BFEs are intended for flood insurance only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be in conjunction with the FIRM for purposes of construction and/or floodplain management.

ries of the floodways were computed at cross sections and interpolated to the centerline. The computations on hydraulic considerations were done in accordance with the National Flood Insurance Program and its requirements of the National Flood Insurance Act. Floodway and other pertinent floodway data are provided in the Flood Insurance report for this jurisdiction.

Vertical elevation of the map was from State Plane Albers UTM Zone 18N, NAD 83 datum. The horizontal datum was NAD 83, GRS1980 datum. Differences in datum, spheroid or projection used in the production of FIRMs for adjacent jurisdictions may result in small differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Information Services
N/NO512
I. Geodetic Survey
I. #9202
1st West Highway
Pring, Maryland 20910-3282
3-3242

in current elevation, description, and/or location information for bench shown on this map, please contact the Information Services Branch of the
Geologic Survey at (301) 713-3242, or visit its website at www.dnr.state.md.us

Map information was derived from multiple sources. Digital topography data from the FIRM is provided by Chesapeake and Potomac States Planning Agency. These maps were originally produced by the Maryland and Annapolis Area, in 2007 with a 1:62,500 scale, and projected to the NAD83 datum. The maps were produced by the Maryland Department of Transportation, Planning and Construction Division, and the Maryland Department of Transportation, Planning and Construction Division. The maps have been used as a mosaic to provide seamless coverage. Road boundaries published by the National Highway Traffic Safety Administration (NHTSA) were used for the Maryland Department of Roads and political boundaries filed

are provided by the Nebraska Department of Natural Resources. Stream
ies were downloaded from the National Hydrography Dataset provided by
. Geological Survey. Users of this FIRM should be aware that minor
erits may have been made to specific base map features.

[illegible]

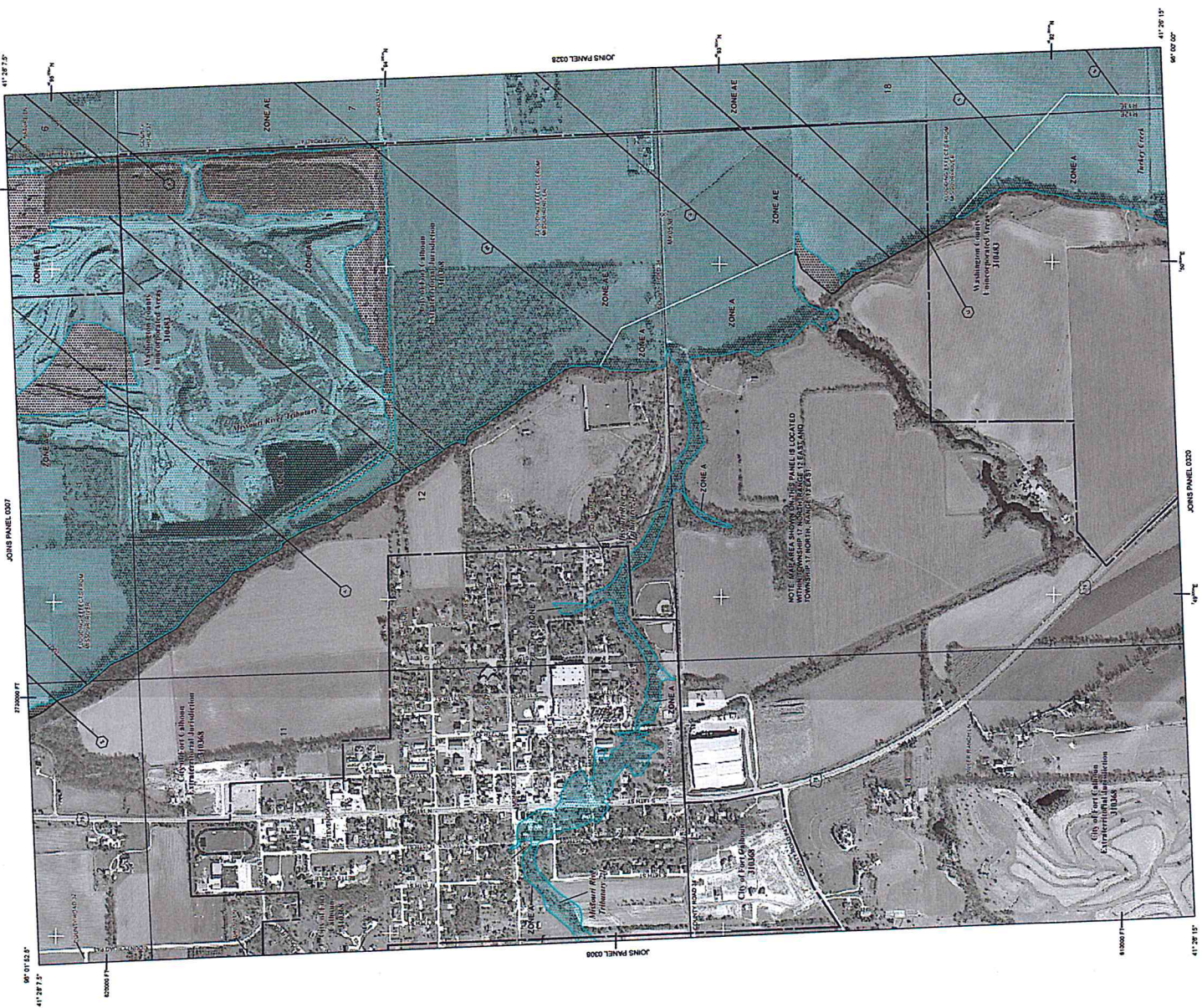
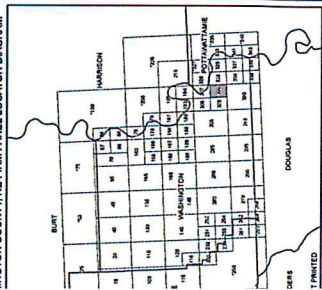
Site limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may occur after this map was published, map users should contact appropriate city officials to verify current corporate limit locations.

refer to the separately printed Map Index for an overview map of the showing the layout of map panels; community map repository addresses; listing of Communities table containing National Flood Insurance Program and each community as well as a listing of the panels on which each is located.

Information on available products associated with this FIRM via the Map Center (MSC) website at hmc.fema.gov. Available products may previously issued Letters of Map Change, a Flood Insurance Study Report, digital versions of this map. Many of these products can be ordered or

For more information, visit www.fema.gov. Have any questions about this map, how to order products, or the National Insurance Program in general, please call the FEMA Map Information Service (FIMIS) at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/info>.

WILMINGTON COUNTY, NE FIRM PANEL LOCATOR DIAGRAM



SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION DUE TO THE AVERAGE CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flow having a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Insurance Program requires that areas subject to the 1% annual chance flood be identified by FEMA. Areas of Special Flood Hazard include Zone A, AE, AH, AO, AR, VE, V, and XE. The Base Flood Elevation (BFE) is the water-surface elevation of the 1% annual chance flood.

ZONE-AE No Base Flood Elevations Determined.
ZONE-AE Base Flood Elevations Determined.

ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponds); Base Flood Elevation determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); Average velocity and direction determined. For areas of shallow fan flooding, velocities are determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood. Flood content herein that was subsequently determined to be less than the 1% annual chance flood.

	the former flood control system is being retained to provide protection at 1% annual chance or greater flood.
ZONE A33	Area to be protected from 1% annual chance flood by a Federal flood pay system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevation determined.

ZONE VE
Coastal flood zone with velocity hazard (wave action); Base Flood Elevation determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

Areas of 0.2% annual chance flood; areas of 1% annual chance flood with a 1% chance of encroachment to limit the 1% annual chance flood can be carried without future encroachments in flood heights.

OTHER AREAS

Areas determined to be outside the 0.2% annual chance floodplain.



ZONE D

Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
Floodway boundary
Zone D boundary

 Boundary dividing Special Flood Hazard Areas of different Base Elevations, flood depths, or flood velocities.
 CMS and CMA boundary
 International, State, or County boundary
 Corporate, Extrajurisdictional, or 1/4-section boundary

————— 513 —————
 (E.L. 987)
 Area Not Included boundary
 Military Reservation, Native American Land boundary
 Base Flood Elevation line and value; elevation in feet*
 Base Flood Elevation value where uniform within zoning elevation
 * Referenced to the North American Vertical Datum of 1988



Cross section line
 Transect line
 Geographic coordinates referenced to the North American Dat
 1983 (NAD 83)
 17°07'45", 32°22'30"

2000-meter Universal Transverse Mercator grid values, zone 14
 5000-foot grid UTM: Nebraska State Plane coordinate system
 26000, Lambert Conformal Conic projection
 Bench mark (see explanation in Notes to Users section of the
 parcel)

• M15
 River Mile
 Aqueduct, Culvert, Tunnel, Penstock, or Storm Sewer
 Road or Railroad Bridge

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

**EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP**

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in *Disaster Community*, contact your insurance agent or the National Flood Insurance Program at 1-800-635-6620.

MAP SCALE 1" = 660'

The graphic scale consists of two horizontal bars. The top bar is labeled 'FEET' and has markings at 0, 500, and 1000. The bottom bar is labeled 'METERS' and has markings at 0, 150, and 300. Both bars are divided into smaller segments for more precise measurements.

NFIP PANEL 0309D

FIRM
FLOOD INSURANCE RATE MA

WASHINGTON COUNTY
NEBRASKA

AND INCORPORATED AREA
PANEL 309 OF 345

CONTAINS	NUMBER	PANEL
COMMUNITY	370648	0009
FORT CALHOUN CITY OF	370649	0009
VASHINGTON COUNTY	370650	0009

DD INS

Reduce to One: The Zip Number must now show only one digit only. The Community Number also should be used in insurance applications for the subject case.

MAP NUM
31177C0:

**EFFECTIVE 1
JANUARY 6,
Federal Emergency Management Agency**

1000

**AGREEMENT
BETWEEN
PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT
AND
THE CITY OF FORT CALHOUN, NEBRASKA**

FLOOD MITIGATION PLANNING AND MAPPING ASSISTANCE

THIS AGREEMENT is made and entered into by and between the PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT, a subdivision of the State of Nebraska (hereinafter referred to as the "NRD"), and the CITY OF FORT CALHOUN, NEBRASKA, a municipal corporation of the State of Nebraska (hereinafter referred to as the "CITY").

RECITALS:

WHEREAS, the NRD has established a Flood Mitigation Planning and Mapping Assistance Program (hereinafter referred to as "the PROGRAM"), to provide technical and financial assistance to governmental entities within the NRD and to help identify flood-prone areas and plan projects to reduce flood risk and damage; and,

WHEREAS, assistance under the PROGRAM requires sponsorship by a city, town, village, county, municipality or other unit of local government having the authority and capability to carry out the Flood Mitigation Plan and/or adopt any new or revised National Flood Insurance Program (NFIP) Flood Hazard Studies and Maps found necessary. The sponsor must participate in the NFIP and be in "good-standing" status; and , flood mitigation planning and floodplain mapping assisted under the PROGRAM must conform to all federal, state and local standards or guidelines; and,

WHEREAS, the CITY desires to receive NRD cost-sharing assistance for a project to revise the CITY's flood insurance study and map (hereinafter referred to as "the PROJECT"), as more particularly described in the scope of work for the PROJECT (hereinafter referred to as "the SCOPE OF WORK"), as approved by the NRD and attached hereto as Exhibit "A," and incorporated herein by reference; and,

WHEREAS, the CITY agrees to equally share with the NRD the local (non-federal or non-state) cost of the PROJECT.

NOW, THEREFORE, for and in consideration of the foregoing recitals and their mutual covenants hereinafter expressed, and subject to the NRD funding limitation hereinafter provided, the parties agree as follows:

1. The NRD will attempt to obtain federal and/or state cost sharing to assist in the implementation of the PROJECT and if is successful in obtaining such funds, the CITY and the NRD will equally share the non-federal and non-statecosts of the PROJECT.

2. The CITY will retain consultants and other personnel, approved by the NRD, as may be needed to perform the PROJECT.
3. Through such consultants and other personnel, the CITY shall perform the PROJECT in accordance with the SCOPE OF WORK.
4. The NRD shall reimburse the CITY in the amount of 50% of the non federal and non-state portions of the cost of the PROJECT, provided, however, the NRD share of such costs shall not in any event exceed the sum of \$20,000,
5. Any NRD suggestions for amendments to the SCOPE OF WORK, and any NRD reviews of PROJECT plans, reports, maps, specifications and implementation schedules, shall be performed by the NRD without unnecessary delay, and any NRD approvals thereof shall not be unreasonably delayed or withheld.
6. Upon completion of the PROJECT, the CITY shall promptly implement or adopt the Flood Mitigation Plan and any new or revised NFIP Flood Hazard Studies and Maps that result from the PROJECT.
7. This agreement shall have permanent duration, commencing upon the signatures of both parties being affixed hereto.

IN WITNESS WHEREOF, the parties have executed this agreement on the dates hereinafter indicated pursuant to authorizing resolution duly adopted at regularly-called meetings of their governing bodies.

Executed by the CITY OF FORT CALHOUN , NEBRASKA , on this _____ day of _____, 2012.

CITY OF FORT CALHOUN, NEBRASKA

By _____

Title _____

Attest:

CITY CLERK

Executed by the PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT on this
_____ day of _____, 2012.

PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT

By _____
General Manager

EXHIBIT A

CITY OF FORT CALHOUN MISSOURI RIVER TRIBUTARY 2.1 LETTER OF MAP REVISION PROJECT

BACKGROUND

In 2001, the City of Fort Calhoun (City) completed a flood mitigation plan to reduce flooding problems within the city. The plan was funded by Federal Emergency Management Agency (FEMA) Flood Mitigation Assistance funds. As part of the plan, a new flood study was completed for a stream in Fort Calhoun identified as Missouri River Tributary 2.1. This flood study determined that due to natural channelization of the stream, the 100-year floodplain was contained within the channel.

In 2009, the Papio-Missouri River Natural Resources District (District) began updating FEMA's Flood Insurance Rate Maps for Washington County as a Cooperating Technical Partner with FEMA. The scope of the map updates was to bring them into digital format utilizing the data from the previous maps, with the exception of the Missouri River.

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SCOPE OF WORK

The City will be responsible for retaining a consultant to complete the project. The consultant will be responsible for preparing the data available from the 2001 flood mitigation study for submission to FEMA. This may include updating survey information and hydrologic and hydraulic models to ensure the data meets FEMA mapping standards. The consultant chosen by the City will also be responsible for addressing any comments or issues after the data is reviewed by FEMA.

The District will be responsible for providing technical assistance to the City in reviewing all work performed by the consultant and assisting the consultant in addressing FEMA comments or issues. The District will reimburse the City 50% of project expenses up to a maximum of \$20,000.