



# Federal Emergency Management Agency

Washington, D.C. 20472

## CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT

COMMUNITY INFORMATION		PROPOSED PROJECT DESCRIPTION	BASIS OF CONDITIONAL REQUEST
COMMUNITY	Cass County (All Jurisdictions) and Richland County (Incorporated Areas), North Dakota	AQUADUCTS BRIDGE CHANNELIZATION CONTROL STRUCTURES DAM	BASE MAP CHANGES FLOODWAY HYDRAULIC ANALYSIS HYDROLOGIC ANALYSIS UPDATED TOPOGRAPHIC DATA
IDENTIFIER	FM Area Diversion Project	APPROXIMATE LATITUDE & LONGITUDE: 46.882, -96.791 SOURCE: USGS QUADRANGLE DATUM: NAD 83	
COMMUNITIES AFFECTED BY THIS CONDITIONAL REQUEST			
CID Number: 380639	Name: City of Argusville, ND	CID Number: 380655	Name: City of Prairie Rose, ND
CID Number: 380620	Name: Township of Berlin, ND	CID Number: 380261	Name: Township of Raymond, ND
CID Number: 380651	Name: City of Briarwood, ND	CID Number: 380257	Name: Township of Reed, ND
CID Number: 385364	Name: City of Fargo, ND	CID Number: 380324	Name: City of Reiles Acres, ND
CID Number: 380347	Name: City of Frontier, ND	CID Number: 380258	Name: Township of Stanley, ND
CID Number: 380266	Name: Township of Gardner, ND	CID Number: 380265	Name: Township of Warren, ND
CID Number: 380338	Name: City of Harwood, ND	CID Number: 380024	Name: City of West Fargo, ND
CID Number: 380259	Name: Township of Harwood, ND	CID Number: 380267	Name: Township of Wiser, ND
CID Number: 380022	Name: City of Horace, ND	CID Number: 380291	Name: City of Christine, ND
CID Number: 380262	Name: Township of Mapleton, ND	CID Number: 380688	Name: Township of Eagle, ND
CID Number: 380623	Name: City of North River, ND	CID Number: 380340	Name: Township of Walcott, ND
CID Number: 380681	Name: City of Oxbow, ND		
CID Number: 380263	Name: Township of Pleasant, ND		

\*FIRM-Flood Insurance Rate Map

### COMMENT

This document provides the Federal Emergency Management Agency's (FEMA's) comment regarding a request for a CLOMR for the project described above. This document is not a final determination; it only provides our comment on the proposed project in relation to the flood hazard information shown on the effective National Flood Insurance Program (NFIP) map. We reviewed the submitted data and the data used to prepare the effective flood hazard information for your community and determined that the proposed project meets the minimum floodplain management criteria of the NFIP. Your community is responsible for approving all floodplain development and for ensuring that all permits required by Federal or State/Commonwealth law have been received. State/Commonwealth, county, and community officials, based on their knowledge of local conditions and in the interest of safety, may set higher standards for construction in the Special Flood Hazard Area (SFHA), the area subject to inundation by the base flood. If the State/Commonwealth, county, or community has adopted more restrictive or comprehensive floodplain management criteria, these criteria take precedence over the minimum NFIP criteria.

This comment is based on the flood data presently available. If you have any questions about this document, please contact the FEMA Map Information eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on the FEMA website at <http://www.fema.gov/national-flood-insurance-program>.

Patrick "Rick" F. Sacbbit, P.E., Branch Chief  
Engineering Services Branch  
Federal Insurance and Mitigation Administration



## Federal Emergency Management

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### CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT (CONTINUED)

#### AFFECTED MAP PANELS (CONTINUED)

##### Cass County, ND (All Jurisdictions)

TYPE: FIRM*	NO.: 38017C0362G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0758G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0370G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0759G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0390G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0762G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0395G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0764G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0556G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0766G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0557G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0767G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0558G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0768G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0559G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0769G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0565G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0776G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0566G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0777G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0567G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0778G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0568G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0779G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0569G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0781G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0576G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0782G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0577G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0783G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0578G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0784G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0579G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0786G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0583G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0787G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0586G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0790G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0587G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0791G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0588G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0795G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0589G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0957G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0591G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0960G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0592G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0970G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0593G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0980G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0594G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0985G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0754G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0990G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0755G	DATE: January 16, 2015	TYPE: FIRM	NO.: 38017C0995G	DATE: January 16, 2015
TYPE: FIRM	NO.: 38017C0756G	DATE: January 16, 2015			
TYPE: FIRM	NO.: 38017C0757G	DATE: January 16, 2015			

\*FIRM-Flood Insurance Rate Map

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Engineering Services Branch  
Federal Insurance and Mitigation Administration

17-08-0008R

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### CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT (CONTINUED)

#### AFFECTED MAP PANELS (CONTINUED)

##### Richland County, ND (Incorporated Areas)

TYPE: FIRM*	NO.: 38077C0095D	DATE: December 18, 2009	TYPE: FIRM	NO.: 38077C0235D	DATE: December 18, 2009
TYPE: FIRM	NO.: 38077C0125D	DATE: December 18, 2009	TYPE: FIRM	NO.: 38077C0245D	DATE: December 18, 2009
TYPE: FIRM	NO.: 38077C0210D	DATE: December 18, 2009	TYPE: FIRM	NO.: 38077C0275D	DATE: December 18, 2009
TYPE: FIRM	NO.: 38077C0230D	DATE: December 18, 2009			

#### OTHER AFFECTED AREAS

This project also affects Clay and Wilkin Counties, MN (and Incorporated Areas). A separate CLOMR (Case No. 17-05-5074R) has been issued for those communities on the same date as this CLOMR. The flooding sources, project description, and summary of impacts listed in this document are inclusive of the entire area affected by the project and is the same for both CLOMR documents.

\*FIRM-Flood Insurance Rate Map

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**CONDITIONAL LETTER OF MAP REVISION  
COMMENT DOCUMENT (CONTINUED)**

**FLOODING SOURCES AND REACH DESCRIPTION**

Abandoned Lower Rush River - from the confluence with Sheyenne River to the split from FM Diversion Channel

Abandoned Rush River - from the confluence with Sheyenne River to the split from FM Diversion Channel

Comstock Coulee - from the confluence to approximately 23.6 miles upstream of the confluence with Red River of the North

County Ditch No. 20 (Lower) - from the confluence with Red River of the North to the split from County Ditch No. 20 (Upper)

County Ditch No. 20 (Upper) - from the confluence to approximately 7.9 miles upstream of the confluence with Red River of the North

County Drain 21 - from the confluence to split from Sheyenne River

County Drain 45 - from the confluence to approximately 6.7 miles upstream of the confluence with County Drain 40

Diversion Connecting Channel - from the confluence with Red River of the North to the inlet of FM Diversion Channel

Drain 10 Breakout - from the confluence to the split from Red River of the North

Drain 14 - from the confluence to approximately 13.2 miles upstream of the confluence of FM Diversion Channel

Drain 14 Abandoned - from the confluence of FM Diversion Channel to the split from Drain 14

Drain 14 Old - from the confluence with Maple River to the split from FM Diversion Channel

Drain 21C - from the confluence to approximately 940 feet upstream of the confluence of FM Diversion Channel

Drain 37 - from the confluence to approximately 4.7 miles upstream of the confluence with Wild Rice River

Drain 47 - from the confluence to approximately 1.4 miles upstream of the confluence of FM Diversion Channel

Drain 53 Watershed - from the confluence to approximately 1.8 miles upstream of the confluence of Rose Coulee, Drain 27

FM Diversion Channel - from the confluence with Red River of the North to the confluence with Diversion Connecting Channel

Maple River - from the confluence with Sheyenne River to the confluence of Maple Spillway

Maple Spillway - from the confluence to approximately 1,230 feet upstream of the confluence with Maple River

Red River of the North - from approximately 1.8 miles downstream of the confluence of Buffalo River to approximately 20.9 miles upstream of the confluence with Comstock Coulee (Wolverton Creek)

Rose Coulee, Drain 27 - from the confluence to approximately 6.8 miles upstream of the confluence with Red River of the North

Sheyenne Diversion - from the confluence to approximately 7.2 miles upstream of the confluence with Sheyenne River

Sheyenne River - from the confluence with Red River of the North to approximately 1,230 feet downstream of the confluence of FM Diversion Channel

Wild Rice River North Dakota - from the confluence with Red River of the North to approximately 5.7 miles upstream of the confluence of Drain 37

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### CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT (CONTINUED)

#### PROPOSED PROJECT DESCRIPTION

Flooding Source	Proposed Project	Location of Proposed Project
Diversion Connecting Channel	Channelization	From the confluence with Red River of the North to the inlet of the FM Diversion Channel
FM Diversion Channel	Channelization	From the confluence with Red River of the North to approximately 27 miles upstream to the split from Diversion Connecting Channel.
	New Dam	Limited service spillway approximately 1.8 miles upstream of Sheyenne River and extending approximately 4 miles to the south.
	New Bridge	At BNSF Railroad in Harwood Township
	New Bridge	At Hillsboro Subdivision Railroad in the Township of Harwood
	New Bridge	At BNSF Railroad near KO Subdivision Railroad Crossing in the City of West Fargo
	New Bridge	At BNSF Railroad in the Township of Raymond
	New Bridge	At County Road 16/17 in the City of Horace
	New Bridge	At County Road 20 in the Township of Raymond
	New Bridge	At County Road 22 in the Township of Raymond
	New Bridge	At County Road 31 in the Township of Hardwood and the Township of Wisner
	New Bridge	At County Road 32 in the Township of Hardwood
	New Bridge	At County Road 81 in the Township of Hardwood
	New Bridge	At 41st Street Southeast at border of the Cities of Fargo and West Fargo
	New Bridge	At 44th Street Southeast in the City of Fargo
	New Bridge	At 46th Street Southeast in the City of Fargo
	New Bridge	At Interstate 29 in the Township of Hardwood
	New Bridge	At Interstate 94 in the City of West Fargo
	New Bridge	At Red River Valley and Western Railroad in the City of West Fargo
	New Bridge	At 36th Street Southeast in the City of West Fargo
	New Bridge	At 38th Street West in the City of West Fargo
New Bridge	Approximately 760 feet downstream of County Road 17 in the City of Horace and the Township of Stanley	
Maple River	Control Structure - Three 50 foot wide gates with 150 foot spillway	On the New Dam at the entrance to FM Diversion Channel
	Aqueduct	At the crossing with Maple River and the FM Diversion Channel, to approximately 2.4 miles upstream of the confluence with Sheyenne River
Red River of the North	New Dam	Spans approximately 8 miles, beginning at the inlet to the FM Diversion Channel and extending east. Crosses the Red River of the North with a control structure immediately downstream of the confluence with Comstock Coulee
	Control Structure - Three 50 foot wide radial gates	On the New Dam, immediately downstream of the confluence with Comstock Coulee
Sheyenne River	Aqueduct	At the crossing of Sheyenne River and FM Diversion Channel, approximately 5,000 feet upstream of 46th Street SE.
Wild Rice River North Dakota	New Dam	Spans approximately 8 miles, beginning at the inlet to FM Diversion Channel and extending east. Crosses Wild Rice River with a control structure approximately 3,800 feet upstream of Interstate 29.
	Control Structure - Two 40 foot wide radial gates	On the New Dam, approximately 12.2 miles upstream of the confluence with Red River of the North

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### CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT (CONTINUED)

#### SUMMARY OF IMPACTS TO FLOOD HAZARD DATA

Flooding Source	Effective Flooding	Proposed Flooding	Increases	Decreases
Abandoned Lower Rush River	BFEs*	BFEs	None	Yes
	Zone AE	Zone AE	None	Yes
	Zone X (shaded)	Zone X (shaded)	None	Yes
Abandoned Rush River	BFEs	BFEs	None	Yes
	Zone AE	Zone AE	None	Yes
	Zone X (shaded)	Zone X (shaded)	None	Yes
Comstock Coulee	BFEs	BFEs	Yes	Yes
	Zone AE	Zone AE	Yes	Yes
	Zone X (shaded)	Zone X (shaded)	Yes	Yes
County Ditch No. 20 (Lower)	Floodway	Floodway	Yes	Yes
	BFEs	BFEs	None	Yes
	Zone AE	Zone AE	Yes	Yes
	Zone X (shaded)	Zone X (shaded)	Yes	Yes
County Ditch No. 20 (Lower)	Floodway	Floodway	Yes	Yes
	BFEs	BFEs	None	Yes
	Zone AE	Zone AE	Yes	Yes
	Zone X (shaded)	Zone X (shaded)	Yes	Yes
County Drain 21	Floodway	No Floodway	None	Yes
	BFEs	BFEs	None	Yes
	Zone AE	Zone AE	None	Yes
	Zone X (shaded)	Zone AE	None	Yes
County Drain 45	Floodway	No Floodway	None	Yes
	BFEs	BFEs	None	Yes
	Zone AE	Zone AE	None	Yes
	Zone X (shaded)	Zone X (shaded)	None	Yes
Diversion Connecting Channel	No Floodway	Floodway	Yes	None
	No BFEs	BFEs	Yes	None
	Zone AE	Zone AE	Yes	None
	Zone X (shaded)	Zone X (shaded)	Yes	None

\* BFEs - Base (1-percent-annual-chance) Flood Elevations

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**CONDITIONAL LETTER OF MAP REVISION  
COMMENT DOCUMENT (CONTINUED)**

**SUMMARY OF IMPACTS TO FLOOD HAZARD DATA (CONTINUED)**

<b>Flooding Source</b>	<b>Effective Flooding</b>	<b>Proposed Flooding</b>	<b>Increases</b>	<b>Decreases</b>
Drain 10 Breakout	Floodway	No Floodway	None	Yes
	BFES*	BFES	None	Yes
	Zone AE	Zone AE	None	Yes
	Zone X (shaded)	Zone X (shaded)	None	Yes
Drain 14	Zone A	Zone AE	None	Yes
	No BFES	BFES	Yes	None
Drain 14 Old	BFES	BFES	None	Yes
	Zone AE	Zone AE	None	Yes
	Zone X (shaded)	Zone X (shaded)	None	Yes
Drain 21C	Zone A	Zone AE	None	Yes
	No BFES	BFES	Yes	Yes
Drain 37	BFES	BFES	Yes	None
	Zone AE	Zone AE	Yes	None
	Zone X (shaded)	Zone X (shaded)	Yes	None
Drain 47	BFES	BFES	Yes	None
	Zone AE	Zone AE	Yes	None
	Zone X (shaded)	Zone X (shaded)	Yes	None
Drain 53 Watershed	BFES	BFES	None	Yes
	Zone AE	Zone AE	None	Yes
	Zone X (shaded)	Zone X (shaded)	None	Yes
FM Diversion Channel	No BFES	BFES	Yes	None
	Zone A	Zone AE	Yes	None
	Zone X (shaded)	Zone X (shaded)	Yes	None
Maple River	No Floodway	Floodway	Yes	None
	No BFES	BFES	Yes	Yes
	Zone A	Zone AE	Yes	Yes
	Zone X (unshaded)	Zone X (shaded)	Yes	None
Maple Spillway	Zone A	Zone AE	None	Yes
	No BFES	BFES	Yes	None

\* BFES - Base (1-percent-annual-chance) Flood Elevations

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### CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT (CONTINUED)

#### SUMMARY OF IMPACTS TO FLOOD HAZARD DATA (CONTINUED)

Flooding Source	Effective Flooding	Proposed Flooding	Increases	Decreases
Red River of the North	Floodway	Floodway	Yes	Yes
	BFEs*	BFEs	Yes	Yes
	Zone AE	Zone AE	Yes	Yes
	Zone X (shaded)	Zone X (shaded)	Yes	Yes
Rose Coulee, Drain 27	Zone AE	Zone AE	Yes	Yes
	Zone X (shaded)	Zone X (shaded)	Yes	Yes
Sheyenne Diversion	No BFEs	BFEs	Yes	Yes
	Zone AE	Zone AE	None	Yes
	Zone X (shaded)	Zone X (shaded)	None	Yes
Sheyenne River	Floodway	Floodway	Yes	Yes
	No Floodway	Floodway	Yes	None
	BFEs	BFEs	None	Yes
	Zone AE	Zone AE	None	Yes
Wild Rice River North Dakota	Zone X (shaded)	Zone X (shaded)	None	Yes
	Floodway	Floodway	Yes	Yes
	BFEs	BFEs	Yes	Yes
	Zone AE	Zone AE	Yes	Yes
	Zone X (shaded)	Zone X (shaded)	Yes	Yes

\* BFEs - Base (1-percent-annual-chance) Flood Elevations

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### CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT (CONTINUED)

#### COMMUNITY INFORMATION

To determine the changes in flood hazards that will be caused by the proposed project, we compared the hydraulic modeling reflecting the proposed project (referred to as the proposed conditions model) to the hydraulic modeling used to prepare the Flood Insurance Study (FIS) (referred to as the effective model). If the effective model does not provide enough detail to evaluate the effects of the proposed project, an existing conditions model must be developed to provide this detail. This existing conditions model is then compared to the effective model and the proposed conditions model to differentiate the increases or decreases in flood hazards caused by more detailed modeling from the increases or decreases in flood hazards that will be caused by the proposed project by more detailed modeling from the increases or decreases in flood hazards that will be caused by the proposed project.

For streams with no effective BFEs, the only comparison is between the existing and proposed elevations.

The table below shows the changes in the BFEs:

BFE Comparison Table

Flooding Source: Abandoned Lower Rush River		BFE Change (feet)	Location of maximum change
Existing vs. Effective	Maximum increase	None	N/A
	Maximum decrease	0.7	Approximately 290 feet upstream of the confluence with the Sheyenne River
Proposed vs. Existing	Maximum increase	None	N/A
	Maximum decrease	4.0	Approximately 290 feet upstream of the confluence with the Sheyenne River
Proposed vs. Effective	Maximum increase	None	
	Maximum decrease	4.7	Approximately 290 feet upstream of the confluence with the Sheyenne River
Flooding Source: Abandoned Rush River		BFE Change (feet)	Location of maximum change
Proposed vs. Existing	Maximum increase	None	N/A
	Maximum decrease	4.6	Approximately 12,100 feet upstream of the confluence with the Sheyenne River
Flooding Source: Comstock Coulee		BFE Change (feet)	Location of maximum change
Existing vs. Effective	Maximum increase	None	N/A
	Maximum decrease	2.2	Just downstream of 180th Avenue South
Proposed vs. Existing	Maximum increase	7.8	Just downstream of 130th Avenue South
	Maximum decrease	0.02	Approximately 140 feet upstream of 160th Avenue South
Proposed vs. Effective	Maximum increase	6.7	Approximately 540 feet downstream of U.S. Highway 75
	Maximum decrease	2.2	Just downstream of 180th Avenue South

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**CONDITIONAL LETTER OF MAP REVISION  
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**COMMUNITY INFORMATION**

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For streams with no effective BFEs, the only comparison is between the existing and proposed elevations.

The table below shows the changes in the BFEs:

BFE Comparison Table

Flooding Source: County Ditch No. 20 (Lower)		BFE Change (feet)	Location of maximum change
Existing vs. Effective	Maximum increase	1.3	Approximately 130 feet upstream of 100th Avenue Northwest
	Maximum decrease	1.9	Approximately 390 feet upstream of 15th Avenue Northwest
Proposed vs. Existing	Maximum increase	None	N/A
	Maximum decrease	3.7	Approximately 90 feet downstream of 10th Street Northwest
Proposed vs. Effective	Maximum increase	None	N/A
	Maximum decrease	3.0	Approximately 390 feet upstream of 15th Avenue Northwest
Flooding Source: County Ditch No. 20 (Upper)		BFE Change (feet)	Location of maximum change
Existing vs. Effective	Maximum increase	0.9	Approximately 1,870 feet upstream of 70th Avenue North
	Maximum decrease	None	N/A
Proposed vs. Existing	Maximum increase	None	N/A
	Maximum decrease	5.1	Approximately 1,870 feet upstream of 70th Avenue North
Proposed vs. Effective	Maximum increase	None	N/A
	Maximum decrease	4.2	Approximately 1,870 feet upstream of 70th Avenue North
Flooding Source: Drain 37		BFE Change (feet)	Location of maximum change
Existing vs. Effective	Maximum increase	0.5	Just downstream of 54th Street Southeast
	Maximum decrease	None	
Proposed vs. Existing	Maximum increase	0.5	Approximately 2,990 feet upstream of 53rd Street Southeast
	Maximum decrease	None	N/A
Proposed vs. Effective	Maximum increase	1.00	Just downstream of 54th Street Southeast
	Maximum decrease	None	
Flooding Source: Drain 53 Watershed		BFE Change (feet)	Location of maximum change
Existing vs. Effective	Maximum increase	None	N/A
	Maximum decrease	5.6	Approximately 290 feet upstream of 52nd Avenue South
Proposed vs. Existing	Maximum increase	5	Approximately 120 feet upstream of 64th Avenue South
	Maximum decrease	None	N/A
Proposed vs. Effective	Maximum increase	None	N/A
	Maximum decrease	0.7	Approximately 290 feet upstream of 52nd Avenue South

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Patrick "Rick" F. Sacibit, P.E., Branch Chief  
Engineering Services Branch  
Federal Insurance and Mitigation Administration



## Federal Emergency Management Agency

Washington, D.C. 20472

### CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT (CONTINUED)

#### COMMUNITY INFORMATION

To determine the changes in flood hazards that will be caused by the proposed project, we compared the hydraulic modeling reflecting the proposed project (referred to as the proposed conditions model) to the hydraulic modeling used to prepare the Flood Insurance Study (FIS) (referred to as the effective model). If the effective model does not provide enough detail to evaluate the effects of the proposed project, an existing conditions model must be developed to provide this detail. This existing conditions model is then compared to the effective model and the proposed conditions model to differentiate the increases or decreases in flood hazards caused by more detailed modeling from the increases or decreases in flood hazards that will be caused by the proposed project by more detailed modeling from the increases or decreases in flood hazards that will be caused by the proposed project.

For streams with no effective BFEs, the only comparison is between the existing and proposed elevations.

The table below shows the changes in the BFEs:

BFE Comparison Table

Flooding Source: Maple River		BFE Change (feet)	Location of maximum change
Proposed vs. Existing	Maximum increase	None	N/A
	Maximum decrease	5.4	Approximately 3,390 feet upstream of the confluence with Sheyenne River
Flooding Source: Red River of the North		BFE Change (feet)	Location of maximum change
Existing vs. Effective	Maximum increase	1.1	Approximately 15,080 feet upstream of Broadway North
	Maximum decrease	2.6	Approximately 51,190 feet upstream of 52nd Street Southeast
Proposed vs. Existing	Maximum increase	7.8	Just downstream of the confluence with Comstock Coulee
	Maximum decrease	5.4	Approximately 21,270 feet upstream of 52nd Avenue South
Proposed vs. Effective	Maximum increase	7.8	Approximately 1,220 feet upstream of the confluence with Comstock Coulee
	Maximum decrease	5.2	Approximately 800 feet downstream of 52nd Avenue South
Flooding Source: Rose Coulee, Drain 27		BFE Change (feet)	Location of maximum change
Existing vs. Effective	Maximum increase	None	N/A
	Maximum decrease	3.4	Approximately 110 feet downstream of 64th Avenue South
Proposed vs. Existing	Maximum increase	None	N/A
	Maximum decrease	5.0	Approximately 1,580 feet upstream of Interstate 29
Proposed vs. Effective	Maximum increase	None	N/A
	Maximum decrease	5.3	Approximately 1,920 feet above the confluence with Red River of the North

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**CONDITIONAL LETTER OF MAP REVISION  
COMMENT DOCUMENT (CONTINUED)**

**COMMUNITY INFORMATION**

To determine the changes in flood hazards that will be caused by the proposed project, we compared the hydraulic modeling reflecting the proposed project (referred to as the proposed conditions model) to the hydraulic modeling used to prepare the Flood Insurance Study (FIS) (referred to as the effective model). If the effective model does not provide enough detail to evaluate the effects of the proposed project, an existing conditions model must be developed to provide this detail. This existing conditions model is then compared to the effective model and the proposed conditions model to differentiate the increases or decreases in flood hazards caused by more detailed modeling from the increases or decreases in flood hazards that will be caused by the proposed project.

For streams with no effective BFEs, the only comparison is between the existing and proposed elevations.

The table below shows the changes in the BFEs:

BFE Comparison Table

Flooding Source: Sheyenne Diversion		BFE Change (feet)	Location of maximum change
Proposed vs. Existing	Maximum increase	None	N/A
	Maximum decrease	11.8	3,900 feet upstream of 32nd Avenue West
Flooding Source: Sheyenne River		BFE Change (feet)	Location of maximum change
Existing vs. Effective	Maximum increase	None	N/A
	Maximum decrease	1.9	Approximately 3,280 feet upstream of 52nd Avenue North
Proposed vs. Existing	Maximum increase	5.5	Approximately 1,830 feet upstream of Burlington Northern Santa Fe Railway
	Maximum decrease	4.4	Approximately 6,390 feet upstream of 52nd Avenue North
Proposed vs. Effective	Maximum increase	None	N/A
	Maximum decrease	6.1	Approximately 3,280 feet upstream of 52nd Avenue North
Flooding Source: Wild Rice River		BFE Change (feet)	Location of maximum change
Existing vs. Effective	Maximum increase	1.6	Approximately 14,240 feet upstream of 100 Avenue South
	Maximum decrease	0.9	Approximately 6,160 feet downstream of 54th Street Southeast
Proposed vs. Existing	Maximum increase	4.9	Approximately 1,860 feet downstream of 173rd Avenue Southeast
	Maximum decrease	5.2	Approximately 8,210 feet upstream of University Drive South
Proposed vs. Effective	Maximum increase	5.1	Approximately 1,860 feet downstream of 173rd Avenue Southeast
	Maximum decrease	4.3	Approximately 1,860 feet downstream of 173rd Avenue Southeast

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### CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT (CONTINUED)

#### COMMUNITY INFORMATION

To determine the changes in flood hazards that will be caused by the proposed project, we compared the hydraulic modeling reflecting the proposed project (referred to as the proposed conditions model) to the hydraulic modeling reflecting the existing conditions.

The table below shows the changes in the base flood water-surface elevations (WSELs).

Base Flood WSEL Comparison Table

Flooding Source: Drain 14		Base Flood WSEL Change (feet)	Location of maximum change
Proposed vs. Existing	Maximum increase	None	N/A
	Maximum decrease	2.5	Approximately 28,130 feet upstream of the confluence with Maple River
Flooding Source: Drain 21C		Base Flood WSEL Change (feet)	Location of maximum change
Proposed vs. Existing	Maximum increase	1.8	Approximately 19,830 feet upstream of confluence with Sheyenne Diversion
	Maximum decrease	3.1	Approximately 1,760 feet upstream of confluence with Sheyenne Diversion

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### CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT (CONTINUED)

#### COMMUNITY INFORMATION (CONTINUED)

NFIP regulations Subparagraph 60.3(b)(7) requires communities to ensure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained. This provision is incorporated into your community's existing floodplain management ordinances; therefore, responsibility for maintenance of the altered or relocated watercourse, including any related appurtenances such as bridges, culverts, and other drainage structures, rests with your community. We may request that your community or the Metro Flood Diversion Authority submit a description and schedule of maintenance activities necessary to ensure this requirement.

With this request, in accordance with the requirements of Paragraph 65.12(a)(5) of the NFIP regulations, FEMA has been provided with information demonstrating that all impacted structures will be mitigated as part of the proposed project. All proposed mitigation (e.g. floodproofing, demolition, relocation, acquisition, elevation, etc.) actions in the revision reach identified in the September 9, 2016, FM Area Division Project Mitigation Plan, and any subsequent approved revisions to this plan, must be completed for each structure prior to the construction of the project element that will adversely affect the structure.

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### CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT (CONTINUED)

#### COMMUNITY INFORMATION (CONTINUED)

##### DATA REQUIRED FOR FOLLOW-UP LOMR

Upon completion of the project, your community or the Metro Flood Diversion Authority must submit the data listed below and request that we make a final determination on revising the effective FIRM and FIS report. If the project is built as proposed and the data below are received, a revision to the FIRM and FIS report would be warranted.

- Detailed application and certification forms must be used for requesting final revisions to the maps. Therefore, when the map revision request for the area covered by this letter is submitted, Form 1, entitled "Overview and Concurrence Form," must be included. A copy of this form may be accessed at <https://www.fema.gov/mt-2-application-forms-and-instructions>.

- The detailed application and certification forms listed below may be required if as-built conditions differ from the proposed plans. If required, please submit new forms, which may be accessed at <https://www.fema.gov/mt-2-application-forms-and-instructions>, or annotated copies of the previously submitted forms showing the revised information.

Form 2, entitled "Riverine Hydrology and Hydraulics Form." Hydraulic analyses for as-built conditions of the base flood, the 10-percent, 2-percent, and 0.2-percent-annual-chance floods, and the regulatory floodway, must be submitted with Form 2.

Form 3, entitled "Riverine Structures Form."

- A certified topographic work map showing the revised and effective base and 0.2-percent-annual-chance floodplain and floodway boundaries. Please ensure that the revised information ties in with the current effective information at the downstream and upstream ends of the revised reach. Also, please ensure that the workmap is updated to match the hydraulic analysis representing as-built conditions, particularly with respect to the flowday widths and cross section reach lengths.

- An annotated copy of the FIRM, at the scale of the effective FIRM, that shows the revised base and 0.2-percent-annual-chance floodplain and floodway boundary delineations shown on the submitted work map and how they tie-in to the base and 0.2-percent-annual-chance floodplain and floodway boundary delineations shown on the current effective FIRM at the downstream and upstream ends of the revised reach.

- As-built plans, certified by a registered Professional Engineer, of all proposed project elements.

- A copy of the public notice distributed by your community or the Metro Flood Diversion Authority stating its intent to revise the regulatory floodway, or a signed statement by your community that it has notified all affected property owners and affected adjacent jurisdictions.

- Documentation of the individual legal notices sent to property owners who will be affected by any widening or shifting of the base floodplain and/or any BFE increases along Comstock Coulee, County Ditch No. 20 Lower, County Ditch No. 20 Upper, Diversion Connection Channel, Drain 14, Drain 21C, Drain 37, Drain 47, Drain 53 Watershed, FM Diversion Channel, Maple River, Maple River Spillway, Red River of the North, Rose Coulee Drain 27, Sheyenne Diversion, Sheyenne River, Wild Rice River North Dakota.

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### CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT (CONTINUED)

#### COMMUNITY INFORMATION (CONTINUED)

##### DATA REQUIRED FOR FOLLOW-UP LOMR (continued)

- An officially adopted maintenance and operation plan for the dams. This plan, which may be in the form of a written statement from the community Chief Executive Officer or a member of the Metro Flood Diversion Authority, an ordinance, or other legislation, must describe the nature of the maintenance activities, the frequency with which they will be performed, and the title of the local community official who will be responsible for ensuring that the maintenance activities are accomplished.
- Evidence that the Metro Flood Diversion Authority has, prior to construction of the proposed project, completed the mitigation measures for the impacted structures as outlined in the September 9, 2016, FM Area Division Project Mitigation Plan, and any subsequent approved revisions. This includes a site-by-site analysis for each structure where a mitigation action was required documented on either an Elevation Certificate (or other certified elevation information), and/or Floodproofing Certificate, if applicable.
- Documentation of the approval of the revised floodway by the appropriate State agency (for communities where the State has jurisdiction over the floodway or its adoption by communities participating in the NFIP).

After receiving appropriate documentation to show that the project has been completed, FEMA will initiate a revision to the FIRM and FIS report. Because the flood hazard information (i.e., base flood elevations, base flood depths, SFHAs, zone designations, and/or regulatory floodways) will change as a result of the project, a 90-day appeal period will be initiated for the revision, during which community officials and interested persons may appeal the revised flood hazard information based on scientific or technical data.

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## Federal Emergency Management

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### CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT (CONTINUED)

#### COMMUNITY INFORMATION (CONTINUED)

#### COMMUNITY REMINDERS

We have designated a Consultation Coordination Officer (CCO) to assist your community. The CCO will be the primary liaison between your community and FEMA. For information regarding your CCO, please contact:

Ms. Jeanine P. Petterson  
Director, Mitigation Division  
Federal Emergency Management Agency, Region VIII  
Denver Federal Center, Building 710  
P.O. Box 25267  
Denver, CO 80225-0267  
(303) 235-4830

A preliminary study is being conducted for Cass County. Preliminary copies of the revised FIRM and FIS report were submitted to your community for review on January 29, 2016, and may become effective before the revision request following this CLOMR is submitted. Please ensure that the data submitted for the revision ties-in to the data effective at the time of the submittal.

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