



Highway Department

Jason Benson, P.E.
County Engineer

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Superintendent

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MEMORANDUM

TO: Cass County Commission

FROM: Jason Benson, County Engineer *JBS*

DATE: February 10, 2014

SUBJECT: Agenda topic for February 18, 2014 Commission Meeting:
Request for Additional Flood Home Acquisitions with
FEMA Hazard Mitigation Grant Program (HMGP) Funding

Additional funding in response to the 2011 North Dakota Presidential Disaster Declaration DR-1981 is available. We are proposing to apply for funding through the HMGP from FEMA for continuation of our acquisition flood mitigation program. This acquisition includes properties east of Cass 81 and in West Chrisan. These areas are flood prone and have had past HMGP acquisitions. The purchase of these properties would also allow for long term, certifiable flood protection to be built on the west side of Cass 81. Using HMGP funding will allow for the best long term solution and certifiable protection at the least cost to local governments.

The properties we will be acquiring also fall into the new 100-year floodplain. With significant increases in flood insurance costs, these acquisitions fall into FEMA's guidance; talk with local officials about community-wide mitigation steps and consider rebuilding.

During the first week of February I met with FEMA representatives regarding these new acquisitions. They concurred with our proposed acquisitions. They reiterated the improved process for approving properties. Structures under \$237,000 and within the 100-year floodplain will be allowed to use a streamline process that eliminates the need for a Benefit/Cost analysis.

When we met with FEMA they also emphasized that this funding would only be available one time, with a short timeline to complete our application paperwork. The following is the condensed timeline:

- Immediately: Begin preparing HMGP application paperwork.
- February 28th: Deadline for Homeowner Request for Application
- March 14th: Complete Application/Submit to NDDDES and FEMA.
- June: Expected date for FEMA approval and funding.
- June: Begin appraisals.
- July-September: Complete acquisitions.

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The cost of these acquisitions would be a total of \$8.6 million, of which the HMGP would pay for 85% or \$7.3 million, and the local costs would be 15% or \$1.3 million. The local costs would be paid by Cass County. In addition, extending our current contract with Lake Agassiz Regional Council will be required.

Long range flood protection plans for the City of Fargo include tying existing and proposed levees to provide continuous certifiable protection. In 2014 there will be construction of a new levee on the west side of Cass 81 from 64th Ave S to 70th Ave S. The ability to tie permanent flood protection into this new levee will enhance the flood protection and reduce the need for temporary protection. There are three options for permanent protection in the 70th Ave S to 76th Ave S area:

1. Option 1 – Chrisan Blvd
FEMA Cost: \$0
Local Cost = \$6.6 million
Total Cost = \$6.6 million
2. Option 2 – East Ditch of C81
FEMA Cost: \$3.1 million
Local Cost = \$6.2 million
Total Cost = \$9.3 million
3. Option 3 – West Ditch of C81
FEMA Cost: \$5.2 million
Local Cost = \$1.9 million
Total Cost = \$7.2 million

When comparing all three options, the west side alignment, Option 3, is the preferred alignment for permanent flood protection. While the overall cost of the west alignment is slightly higher than Option 1, it has a significantly cheaper local cost. Options 1 and 2 both require a costly \$3.7 million floodwall that will have long term maintenance costs and the potential for future riverbank slumping. Building protection on the east side with Options 1 and 2 would also require having expensive removable floodwall connections with future west side protection. When looking at past discussion of east options, they were often for real protection, but not necessarily certifiable protection. Recent changes in the NFIP and increased flood insurance costs now make certifiable protection more necessary. For these reasons, the west side alignment should be selected as the County's preferred alignment for permanent flood protection.

SUGGESTED MOTION:

Resolve to apply for Hazard Mitigation Grant Program funds to the Federal Emergency Management Agency through the North Dakota Division of Emergency Services for the acquisition of homes identified by the County Engineer and County Administrator.

SUGGESTED MOTION:

Resolve to select the west side alignment as the County's preferred alignment for permanent flood protection.

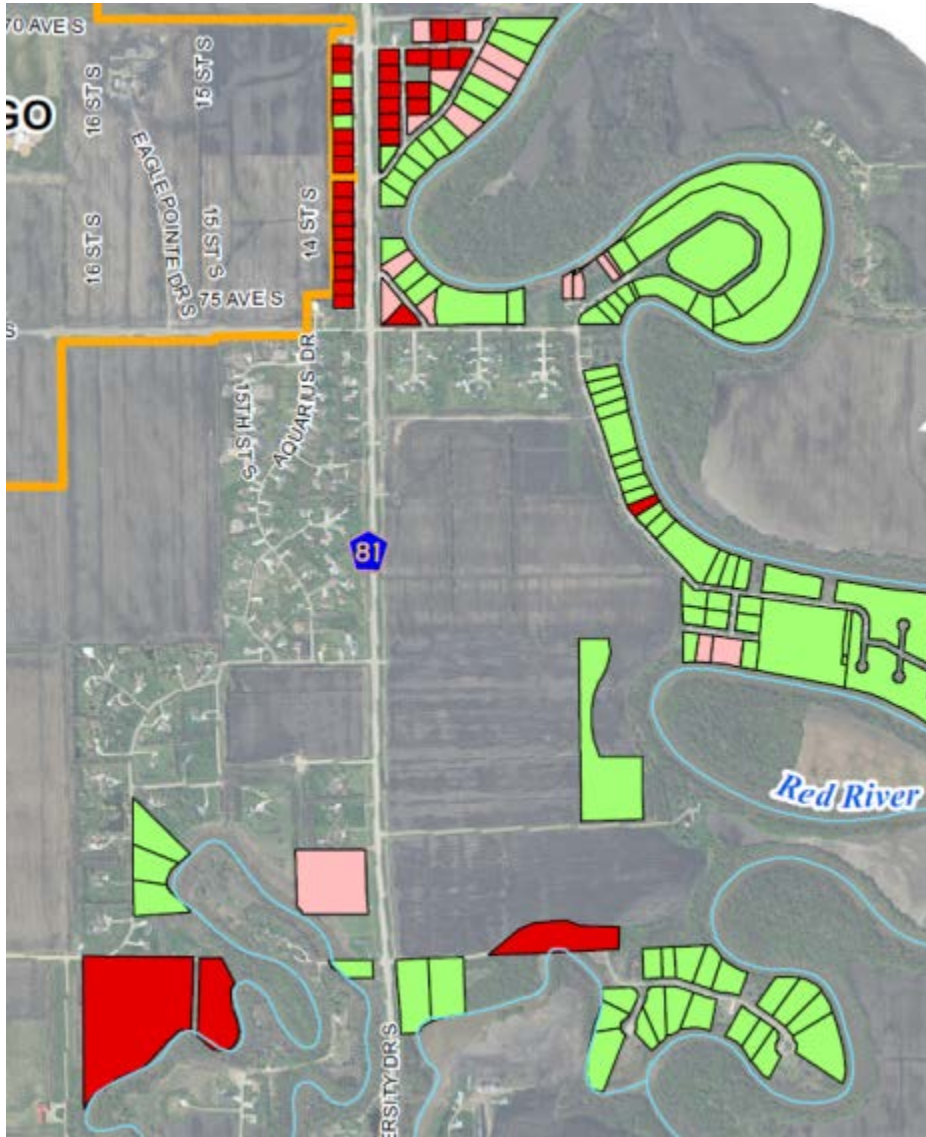
Cass County
Commission Meeting
Flood Acquisitions
February 18, 2014



Agenda

- Acquisition Map
- National Flood Insurance Program Changes
- FEMA HMGP Process
- Temporary Levee Costs
- Fargo Permanent Protection Plan

Potential Acquisitions





Changes to the NFIP

- Biggert-Waters Flood Insurance Reform Act of 2012:
 - Phase-out of subsidized rates to reflect true flood risks. This will result in rate increases.
 - Owners of subsidized policies on property that experienced repeated flooding will see 25 percent rate increase annually until rates reflect true risk.
 - When a community that adopts a new Flood Insurance Rate Map, new rates increase by 20% per year for five years.
 - Owners mapped into the new 100-year floodplain will be automatically increased to the higher insurance rate.
- FEMA new Flood Insurance Rate Map will be adopted in the Fall of 2014.



New 100-Year Floodplain Map

Proposed to be adopted
in August 2014





Streamline FEMA Process

- Structure under \$237,000 and within the 100-year floodplain will be allowed to use a streamline process that eliminates the need for a Benefit/Cost analysis.
- Homes that meet these two standards will automatically be considered for acquisition.
- 41 of the 47 homes are less than \$237,000.
- Nearly all homes are within the 100-year floodplain.
- Homes more than \$237,000 and outside of the 100-year floodplain will be considered, but use the Benefit/Cost analysis to determine eligibility.

Cost of Temporary Levees

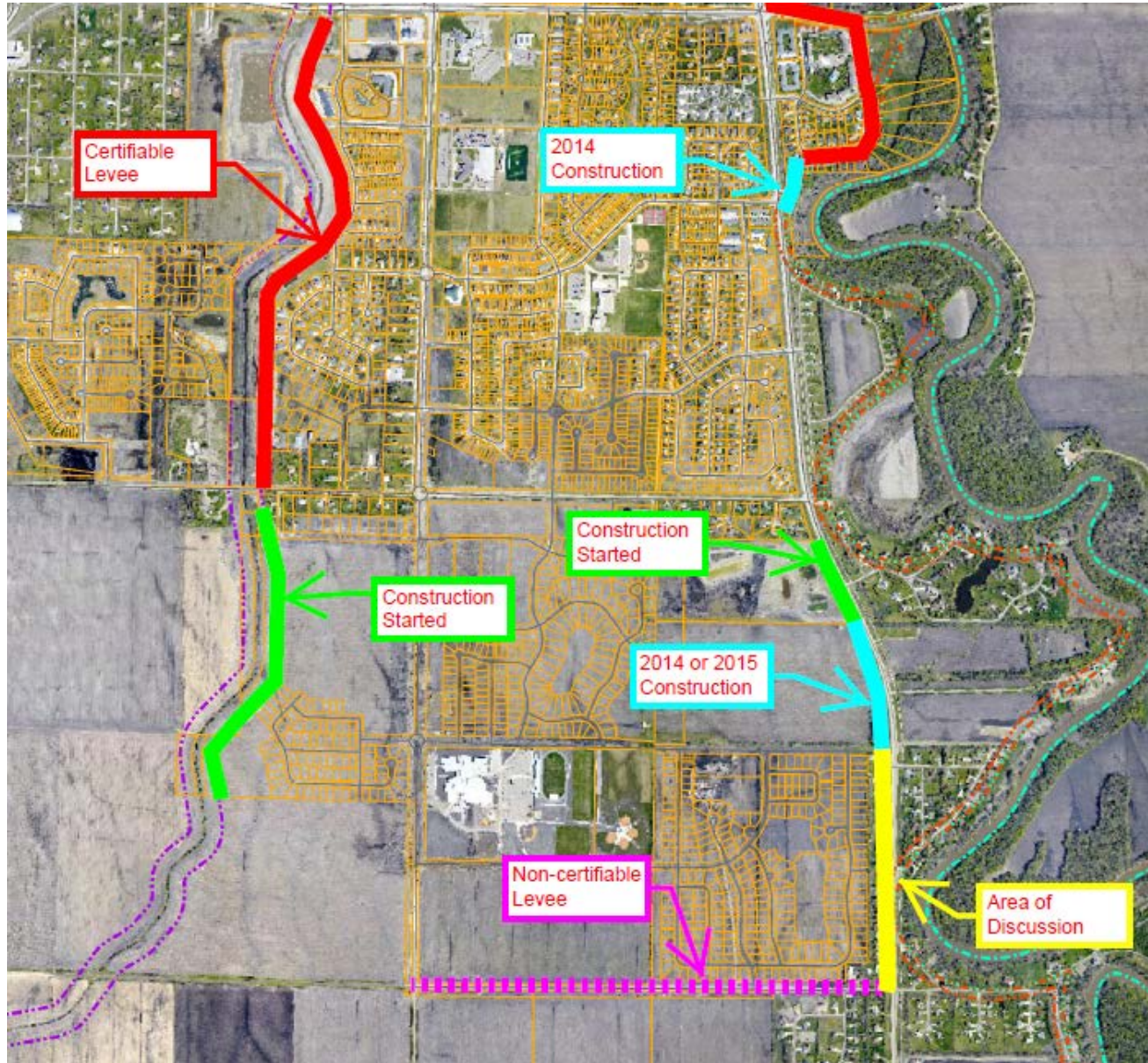
- Temporary clay levees have significant cost in the Chrisan area.
- Total Chrisan-Maple Prairie costs:
 - 2011: \$518k
 - 2013: \$115k
- Previously used 64th Ave S clay borrow pit, we can no longer use this pit.
- No other adjacent clay sources are available, costs will increase significantly with longer hauls and longer time to construct.



Permanent Protection

- Real Protection vs. Certified Protection
- Fargo Plan
- Levee Options:
 1. East of Cass 81 along Chrisan Blvd, includes floodwall
 2. Cass 81 in east ditch, includes floodwall
 3. West ditch of Cass 81, no floodwall needed
- Levees would tie into new Fargo levees on the west side of Cass 81, north of 70th Ave S.

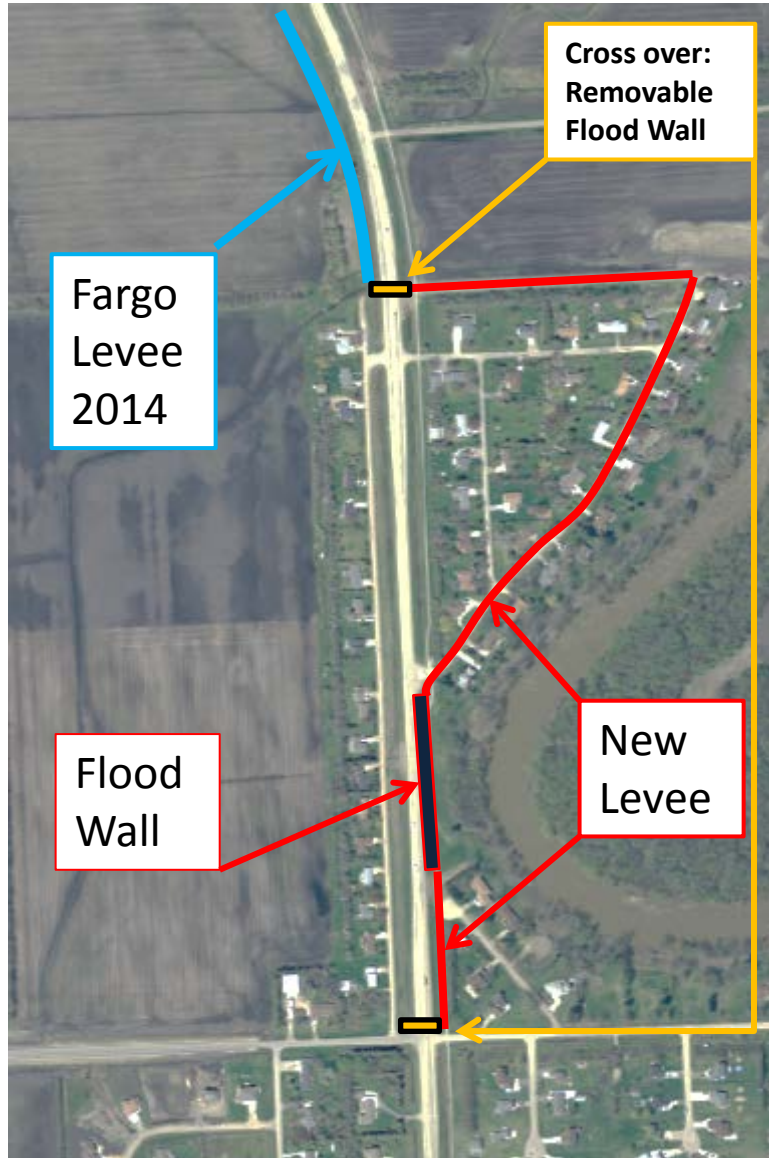
Fargo Permanent Protection Plan



Fargo Permanent Protection Plan

- Overall plan to build interconnected certified levees.
- Focused in areas in central Fargo and areas north of 52nd Ave S.
- Constructing a new levee north of 70th Ave S as part of a new development.

Option 1 – Chrisan Blvd

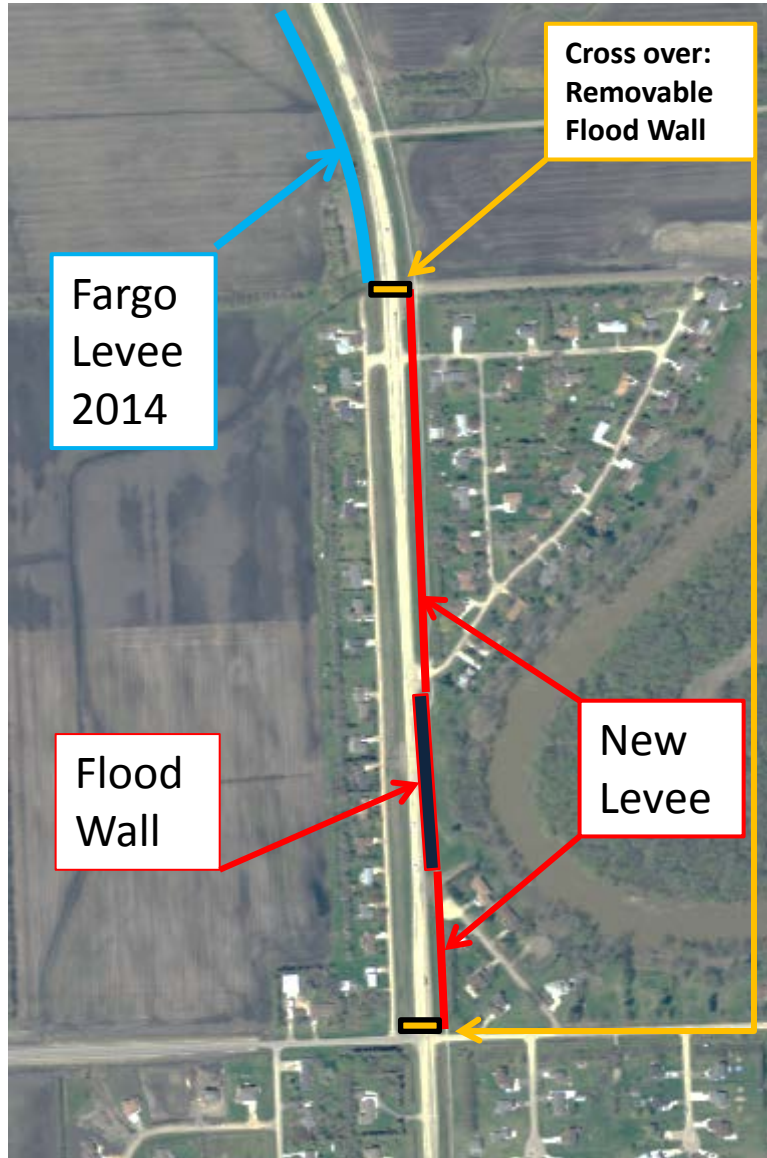


FEMA Cost: \$0

Local = \$6.6 million

Total = \$6.6 million

Option 2 – East Ditch of C81



FEMA Cost: \$3.1 million

Local = \$6.2 million

Total = \$9.3 million

Option 3 – West Ditch of C81



FEMA Cost: \$5.2 million

Local = \$1.9 million

Total = \$7.2 million

Cost of West Chrisan acquisition vs. East C81 Levee

Option 1: Levee Running on Chrisan Blvd

- Total Cost to Cass County: Levee \$6.6 million

Option 2: Levee Running in the East Ditch

- Total Cost to Cass County: Levee \$5.7 + acquisitions \$0.5 = \$6.2 million

Option 3: Levee Running in the West Ditch

- Total Cost to Cass County: acquisitions only = \$0.9 million

Recommended Alignment

- The west side alignment should be selected as the County's preferred alignment for permanent flood protection:
 - Cost effective for total project costs.
 - Smallest cost for Cass County.
 - Eliminates future maintenance costs that could result from the flood wall and riverbank slumping.
 - Eliminates the need for expensive removable floodwall connections.

Recommended Acquisitions

- Purchasing homes in West Chrisan and on the east side of Cass 81.
- This will reduce temporary flood protection costs, temporary clay levees will increase in cost.
- Allows for more cost effective, certifiable permanent flood protection.

Timeline

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Questions?

