Comprehensive Flood Protection

CITY COMMISSION INFORMATIONAL MEETING
AUGUST 20, 2012
Comprehensive Flood Protection

- **Current Floodplain**
  - 38.5 Feet River Gage (29,300 cfs)
  - 475 Impacted Structures
  - 19,700 Acres Impacted

- **Preliminary Floodplain**
  - 39.4 Feet River Gage (29,300 cfs)
  - Approx. 2,300 Impacted Structures
  - 27,600 Acres Impacted

- **Flood of Record**
  - 40.8 Feet River Gage

- **Future of the Floodplain**
  - USACE 41.1 River Gage (34,700 cfs)
  - Approx. 19,400 Impacted Structures
  - 36,430 Acres Impacted
Exhibit 3 - 1% Chance USACE Existing Conditions Floodplain
Discharge @ Fargo gage = 34,700 cfs
Stage @ Fargo gage = 41.1 feet

Legend:
- ND Diversion Alignment
- Tie-Back Levees
- 1% Chance Floodplain (Phase 4 Unsteady HEC-RAS)

Exhibit 4 - 1% Chance USACE ND Diversion Floodplain
Discharge @ Fargo gage = 11,700 cfs
Stage @ Fargo gage = 33.8 feet

Legend:
- ND Diversion Alignment
- Tie-Back Levees
- Storage Area
- 1% Chance Floodplain (Phase 4 Unsteady HEC-RAS)
Map Process

- **Currently under review**
  - Street Names, Jurisdictional Boundaries, Inundation Areas, etc.

- **Anticipated Adoption Summer 2013**
  - Newly mapped properties Eligible for a lower-cost Preferred Risk Policy (PRP) for two years from the map revision date.
  - Standard rate after two years (2016)
Comprehensive Plan

- Certifiable Protection From the Preliminary Floodplain (39.4 Feet)
- Only Proposed Projects If Protection Extended to Interior Property
- Identified an Estimated $247 M in Projects
- Would require
  - 197 residential buyouts
  - 5 commercial/Industrial buyouts
Comprehensive Plan

- Area South of I-94 was identified as having a greater area at risk
- Yellow area has approx 1,500 structures in floodplain
- Recognizing funding limitations staff sought to prioritize potential projects
Summary of Phasing

Immediate Phase $12M
Successive Phases $30M/yr
Immediate Needs

- Rose Creek Phase II-Floodwall/Levee Construction
- Oak Creek/Coulees Crossing Acquisition, & Deconstruction of Homes

Criteria Considered

- Presence of emergency levee
- Need to remove/restore
- Ability to emergency protect
- Pending Development of vacant land
- Buyout Offers proposed
- Floodplain
- Will decrease emergency measures
- Eliminates flood insurance for those properties
- Moves us toward the goal of neighborhood protection
Immediate Needs

Comprehensive Oakcreek/Copperfield/Coulee's Crossing Flood Risk Reduction Plan

CITY OF FARGO
Flood Risk Reduction Projects
Immediate Needs – 2012
Oakcreek/Coulee's Crossing
(Map 1 of 3)
Immediate Needs
Phase 1

- Oak Creek Acquire & Deconstruct Remaining Creek Side Homes, Levee Construction
- Copperfield Court Acquire & Deconstruct Creek Side Homes, Levee Construction
- Coulees Crossing Levee Construction
- River Drive Acquire & Deconstruct 30 Homes
- Hackberry Drive Acquire & Deconstruct 10 Homes
Phase 2

- River Drive Levee Construction
- Hackberry Drive Levee Construction
- Mistwood Townhomes Acquire & Deconstruct Structures, Levee Construction
- Drain 27 Floodwall Construction at 36th Street
- Drain 27 west of I-29 36th to 42nd Street Levee/Floodwall Construction
- Drain 27 N Side 42nd to 45th St Levee/Floodwall Construction
- Drain 27 45th St to 40th Ave Levee/Floodwall Construction
Phase 3

- Rosewood Acquire & Deconstruct 5 Homes, Levee Construction
- Harwood Dr. Acquire & Deconstruct 2 Homes, Levee Construction
- Belmont Park Acquire & Deconstruct 30 Homes, Levee Construction
- 64th Ave South West of I-29 Levee Construction/Road Raise
- Prairie Rose Acquire & Deconstruct 35 Homes, Levee/Floodwall Construction
Phase 4

- West of I-29 S Drain 27
  42nd to 45th Street
  Acquire & Deconstruct
  22 Twin-homes, Levee
  Construction
- Drain 27 40th to 44th Ave
  Levee/Floodwall
  Construction
- Drain 27 44th Ave to 52nd
  Ave Levee Construction
- 64th Ave S East of D53
  Levee Construction
Completion of Phases 1-4 would result in acquisition of 182 properties.
Summary of Funding by Phase

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<th>Proposed Year</th>
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Outstanding Issues

- Not all voluntary buyout offers will be accepted
  - Ultimately Eminent
  - Domain may be necessary
- Some property owners have expressed a desire to be bought out but are not included in the recommended acquisitions
- Not all areas have feasible solutions

- Concept level design only for many reaches
  - will require more detailed design and public vetting prior to implementation
- Some existing property outside of primary line with construction of certifiable reaches
- Impacts of lost floodplain with Development Ahead of Flood Protection