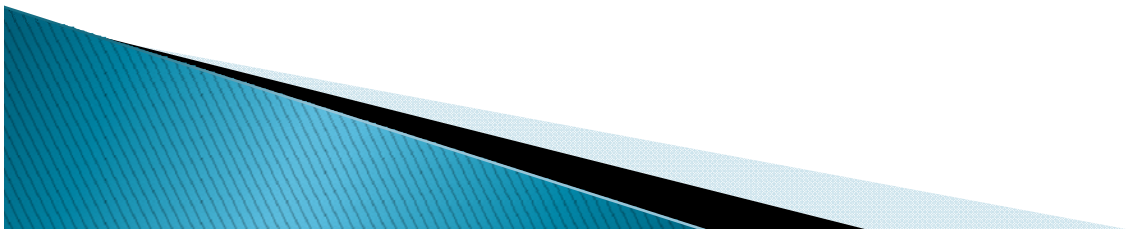


City Commission Flood Mitigation Project Update

»» February 2015



Now & Future Floodplain

- ▶ Now Effective Floodplain
 - 39.4 Feet River Gage (29,300 cfs)
 - Approx. 2,470 Impacted Structures
 - Approx. 7,500 Impacted properties
 - 27,600 Acres Impacted
 - After Diversion – This elevation will be close to 500-year flood levels
- ▶ 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



- ▶ Effective January 16, 2015
- ▶ Approval of Basement Exception Continuance
- ▶ Appeals Accepted by FEMA
 - 208 Individual LOMA's Issued
- ▶ LOMR-F Approvals
 - 10 Additions Newly Approved
 - 702 Properties
 - 4 Additions Reauthorized
 - Can be viewed at fargofloodinsurance.com

www.fema.gov

FARGO

52 MILES OF PROTECTION

29 MILES OF LEVEE
(Fargo)
5 MILES OF LEVEE
(Cass)

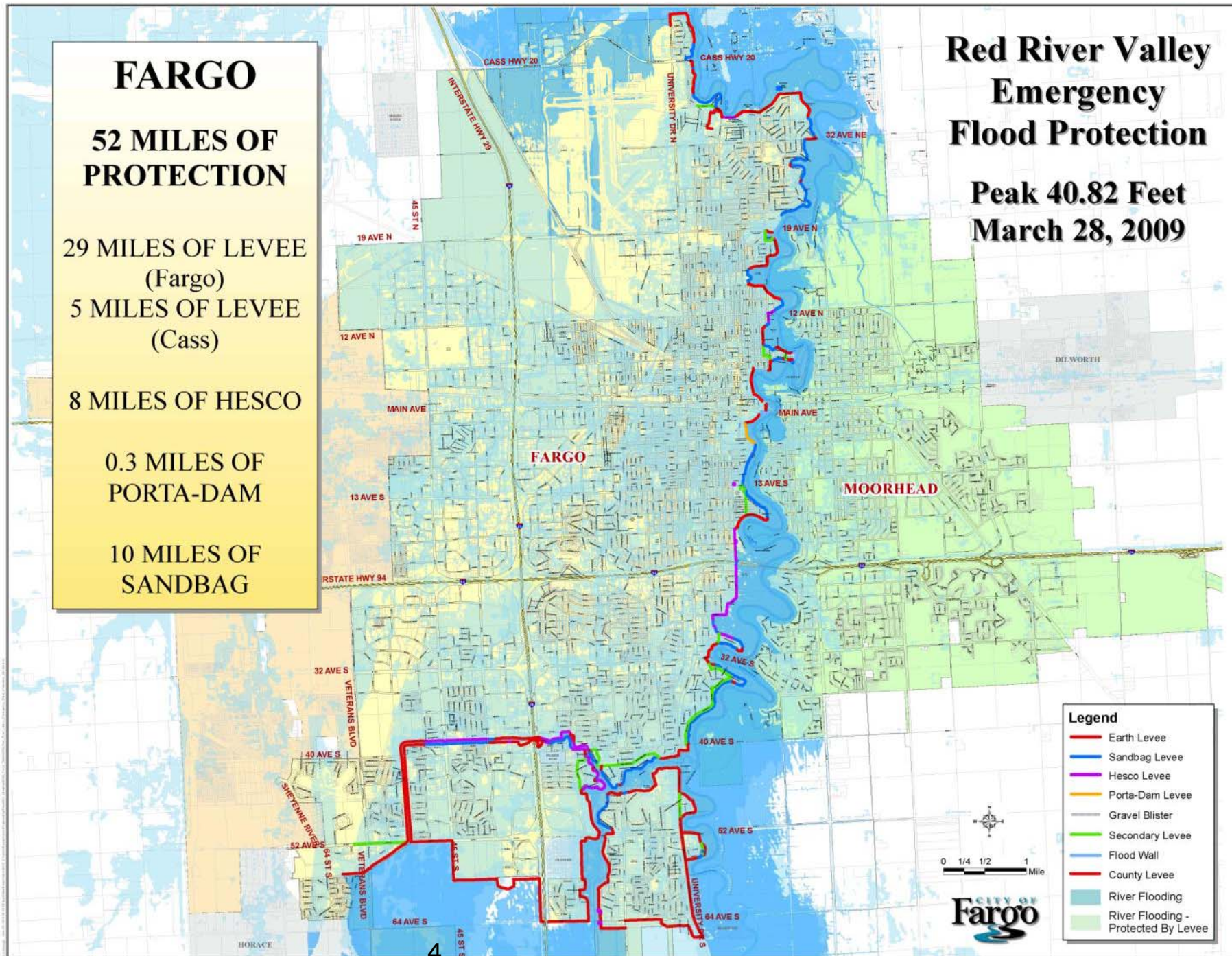
8 MILES OF HESCO

0.3 MILES OF
PORTA-DAM

10 MILES OF
SANDBAG

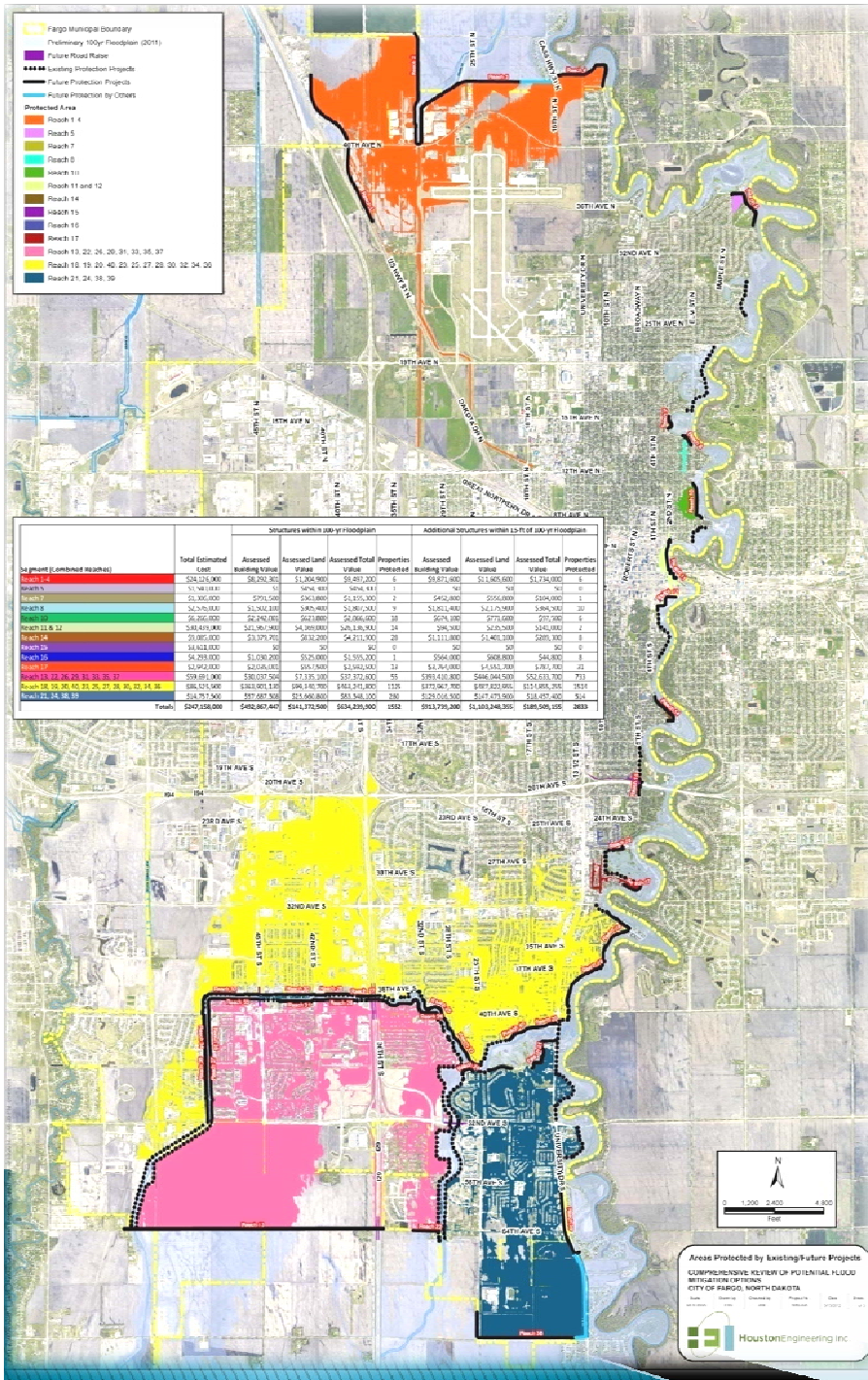
Red River Valley Emergency Flood Protection

Peak 40.82 Feet
March 28, 2009



Comprehensive Plan

- Developed Following the 2009 Flood of Record with Final Draft in 2012
- Certiﬁable Protection From the FEMA Floodplain (39.4 Feet)
- Identified an Estimated \$247 M in Projects (2012 \$)
- Yellow area has approx 1,500 structures in floodplain



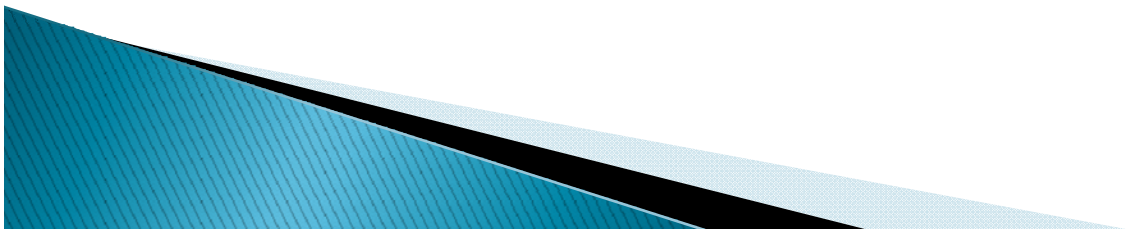
So...Why implement this Comprehensive Plan?

Short Term:

- Reduce emergency measures–immediate benefit from each project
- Provide real protection for existing homes that were built prior to the knowledge of the increased risk

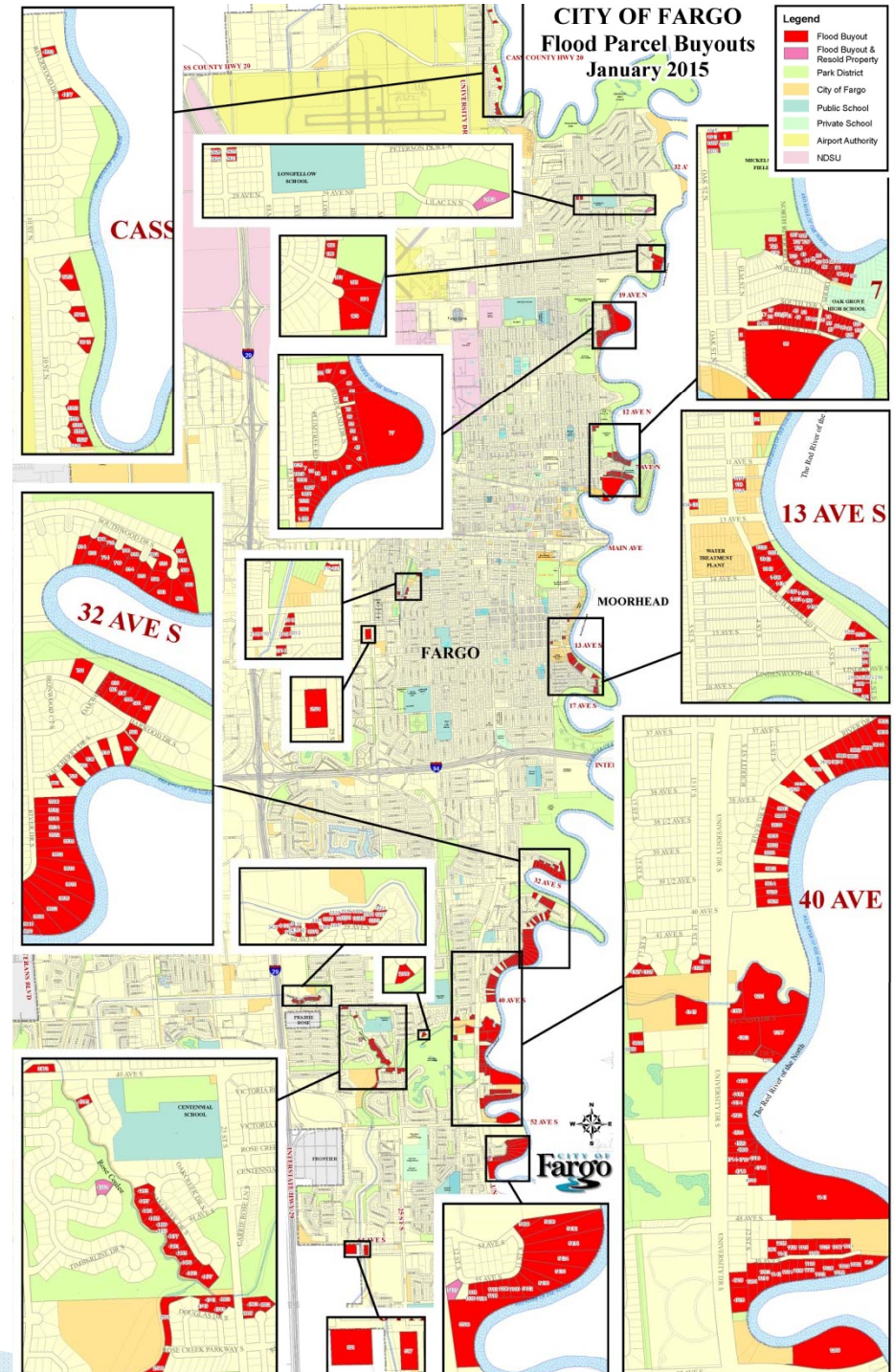
Long Term:

- Upon completion of Certifiable reaches–Keep Housing Affordable for more of our population by making flood insurance available to residents at the lowest possible rates
- Combined with the FM Diversion– Provide for greater than 100 year protection for the largest population center in ND



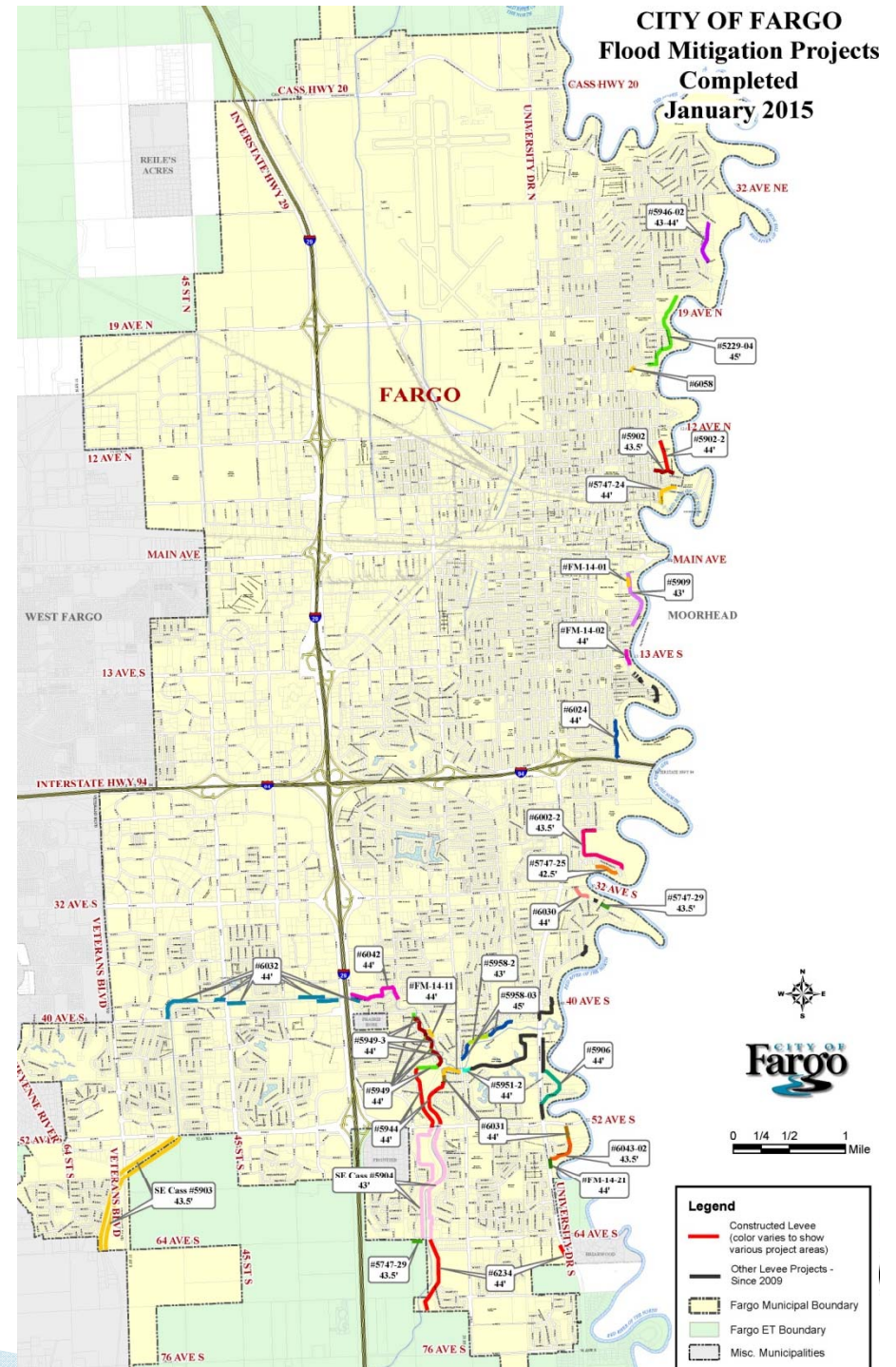
Property Acquisitions (Since 2009)

- ▶ 173 Properties Purchased
 - Over 300 since 1990
- ▶ At cost of over \$57 million
- ▶ Cass County purchased 14 additional homes needed
- ▶ Diversion Authority is in process of acquiring 15 additional properties within Fargo
- ▶ Remaining Properties Under Comprehensive Plan
 - 121 properties to be acquired
 - Approximately \$36 million



Completed Projects (Since 2009)

- ▶ Over 16 miles constructed
 - 15 miles of earth levee
 - 1 mile of floodwall
- ▶ Project Cost \approx \$82 million
- ▶ Reduces required sandbags by approximately 4 million
- ▶ Required over 80 Private Property Easements
- ▶ 45% of the Comprehensive Plan Completed



Meadow Creek

Completed 2011



Timberline

- ▶ Community (2)
-
- ▶ Re...
- ne...
- ap...



Ros

- ▶ Com
201
- Co
Ea
Flo

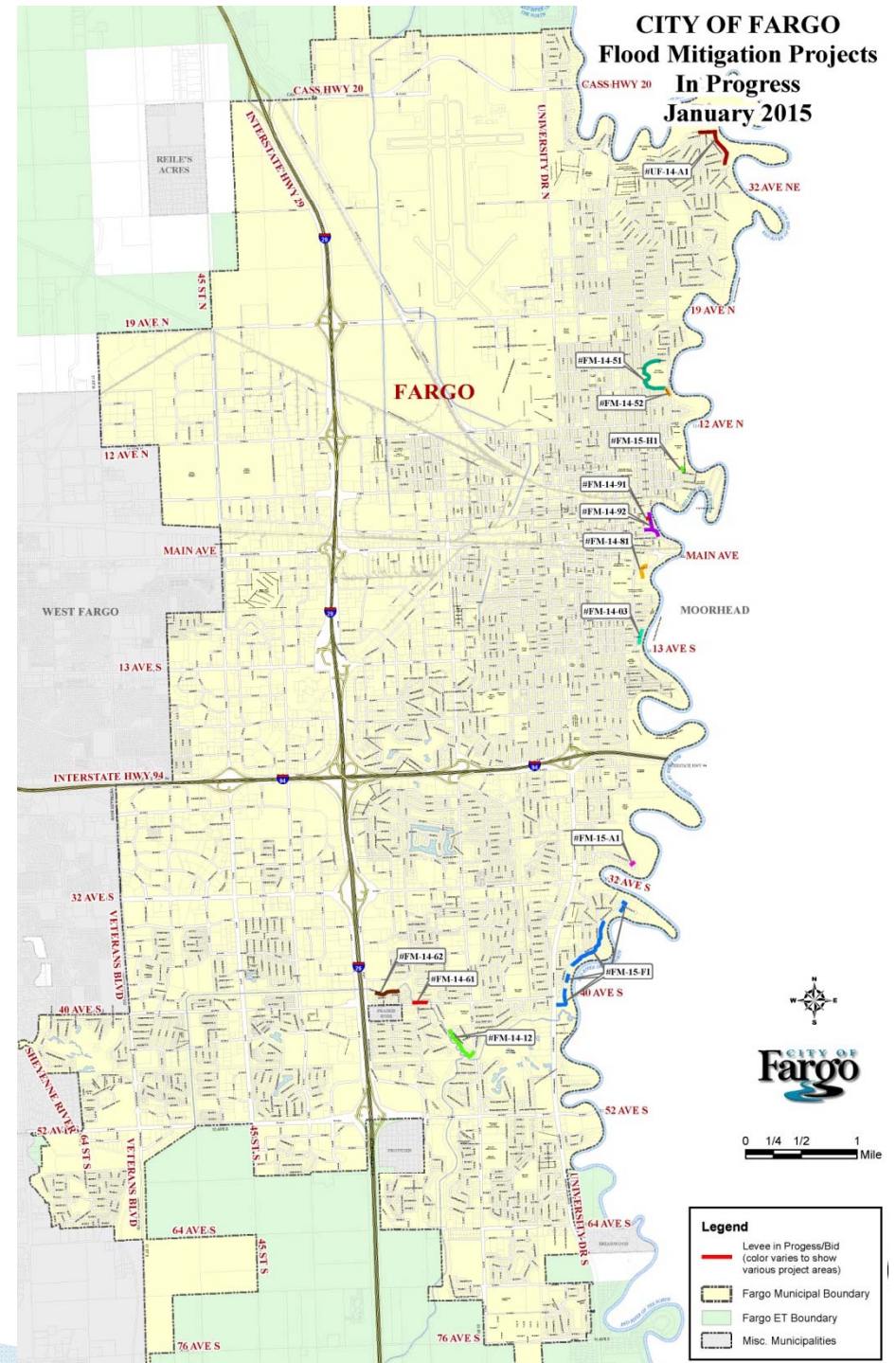


Mickelson Field



In Progress Projects

- ▶ Combination of Projects under Design or Construction
 - 6 City of Fargo Led
 - 6 Diversion Authority Led
- ▶ Over 3.5 miles in progress
- ▶ Project Cost \approx \$100 million
 - Construction Cost \approx \$67 million
- ▶ 55% of the Comprehensive Plan completed once these projects are done



El Zagal

- ▶ Phase 1 – Started Fall 2014
 - 80% of Levee Completed
 - 80% of Storm Sewer Completed
- ▶ 2015 Major Work Items
 - 1 Gatewell
 - 1 PTO Pump Station
 - Finish Levee



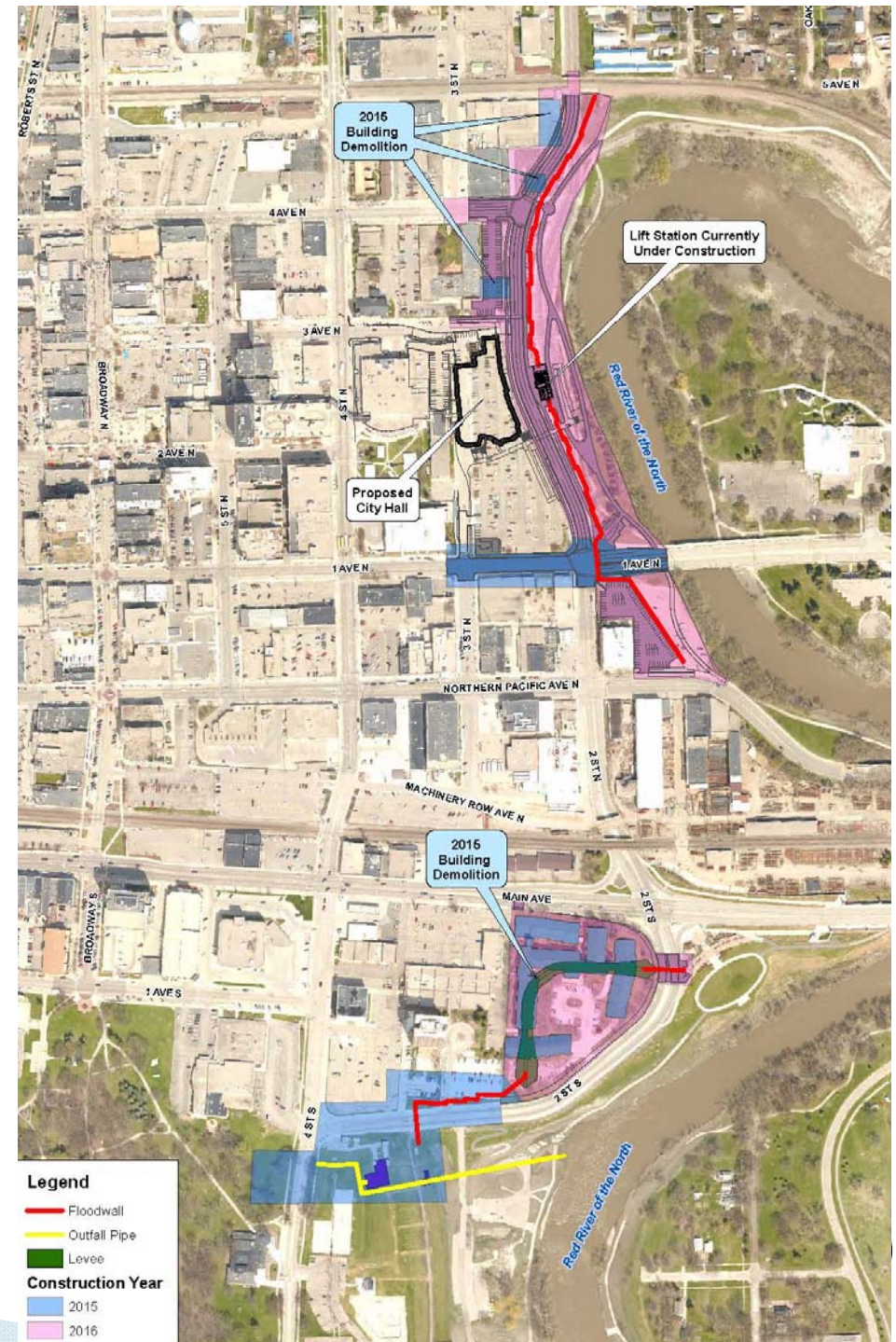
Harwood, Hackberry, River Drive Area

- ▶ Phase 1 – February 2015 Bid Opening
 - Levee Construction on Previously Acquired Properties
 - Construction of new storm sewer lift station
 - New lift station will replace two existing lift stations
 - Fall 2015 Completion



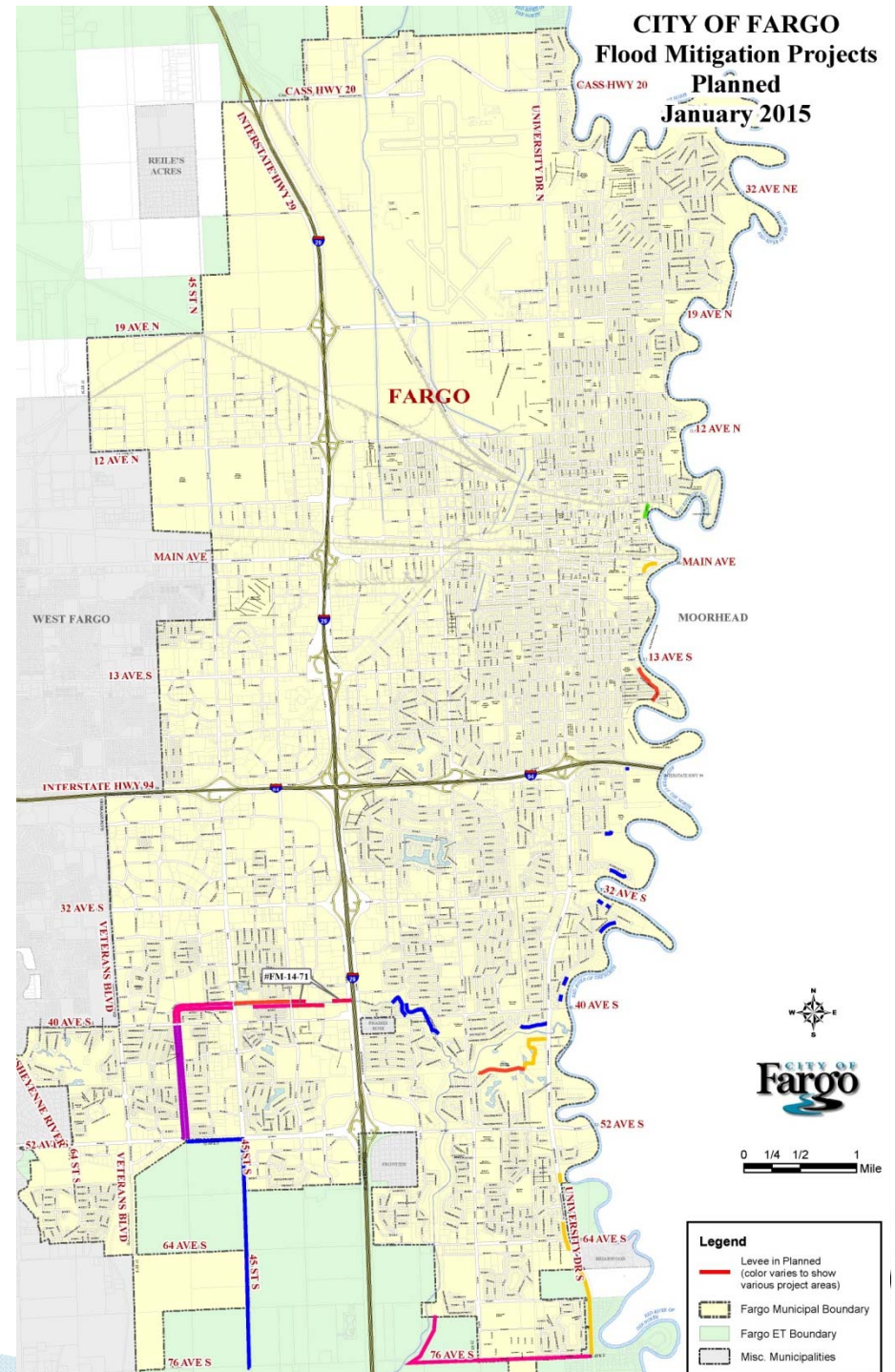
2nd Street N & S

- ▶ Diversion Authority Led
- ▶ Two Projects Under Construction
 - 2nd Street N Pump Station
 - 4th Street Pump Station & 2nd Street S Floodwall
- ▶ 2015 Planned Construction
 - 1st Avenue N Utility Relocations
 - Building Demolitions
- ▶ All Projects will carryover to 2016.

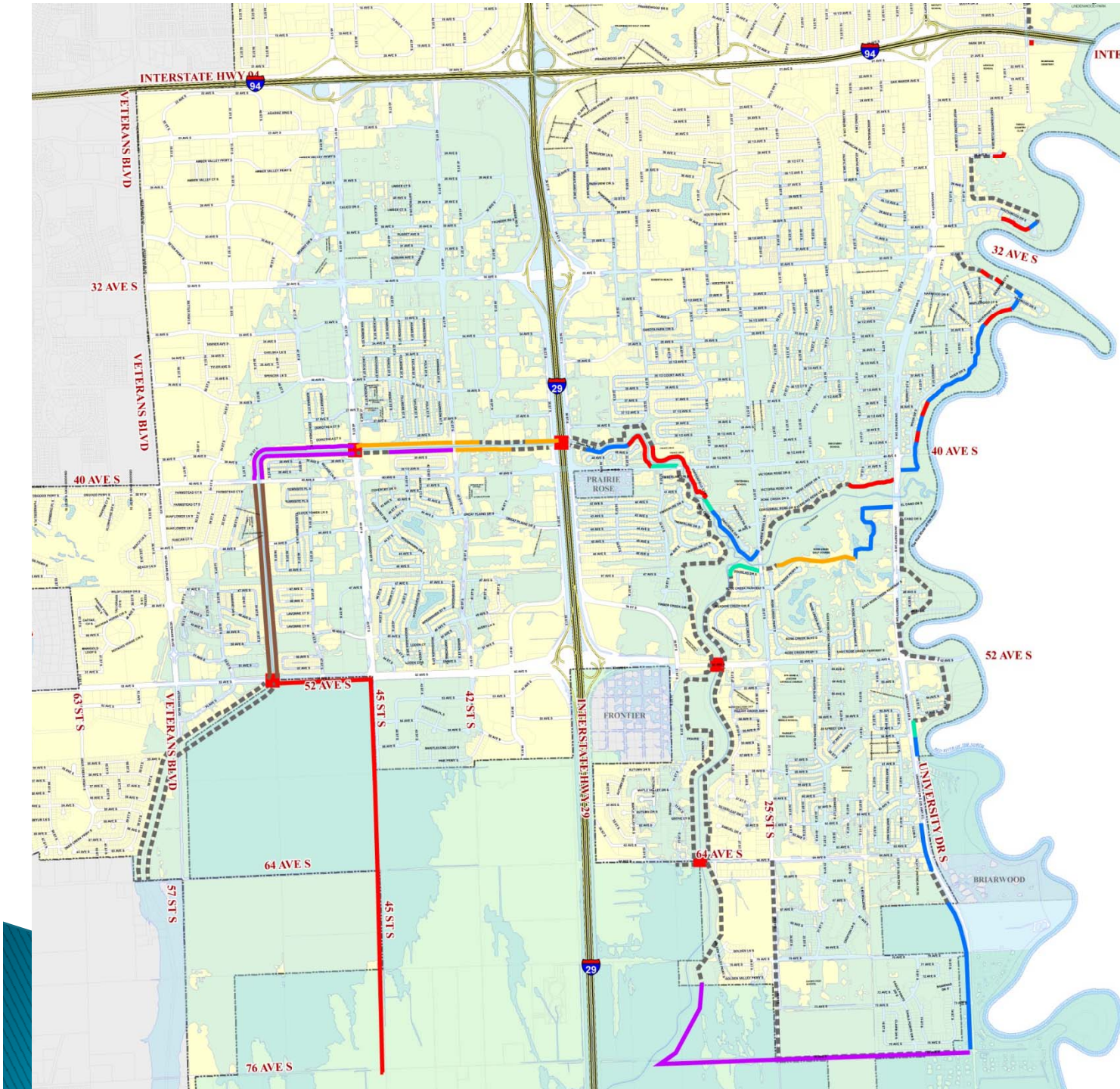


Remaining Projects

- ▶ Over 13.38 miles remaining
 - *excludes Cass County 20 Area
- ▶ Project Cost \approx \$240 million
 - # Includes 2015 Planned Projects
 - # Does not include Diversion Authority More Flow Through Town Projects
- ▶ Type of Projects:
 - Levees along River & Legal Drains
 - Road Raises
 - Includes Interstate 29 at Drain 27
- ▶ 92% of the Comprehensive Plan would be completed



Projects

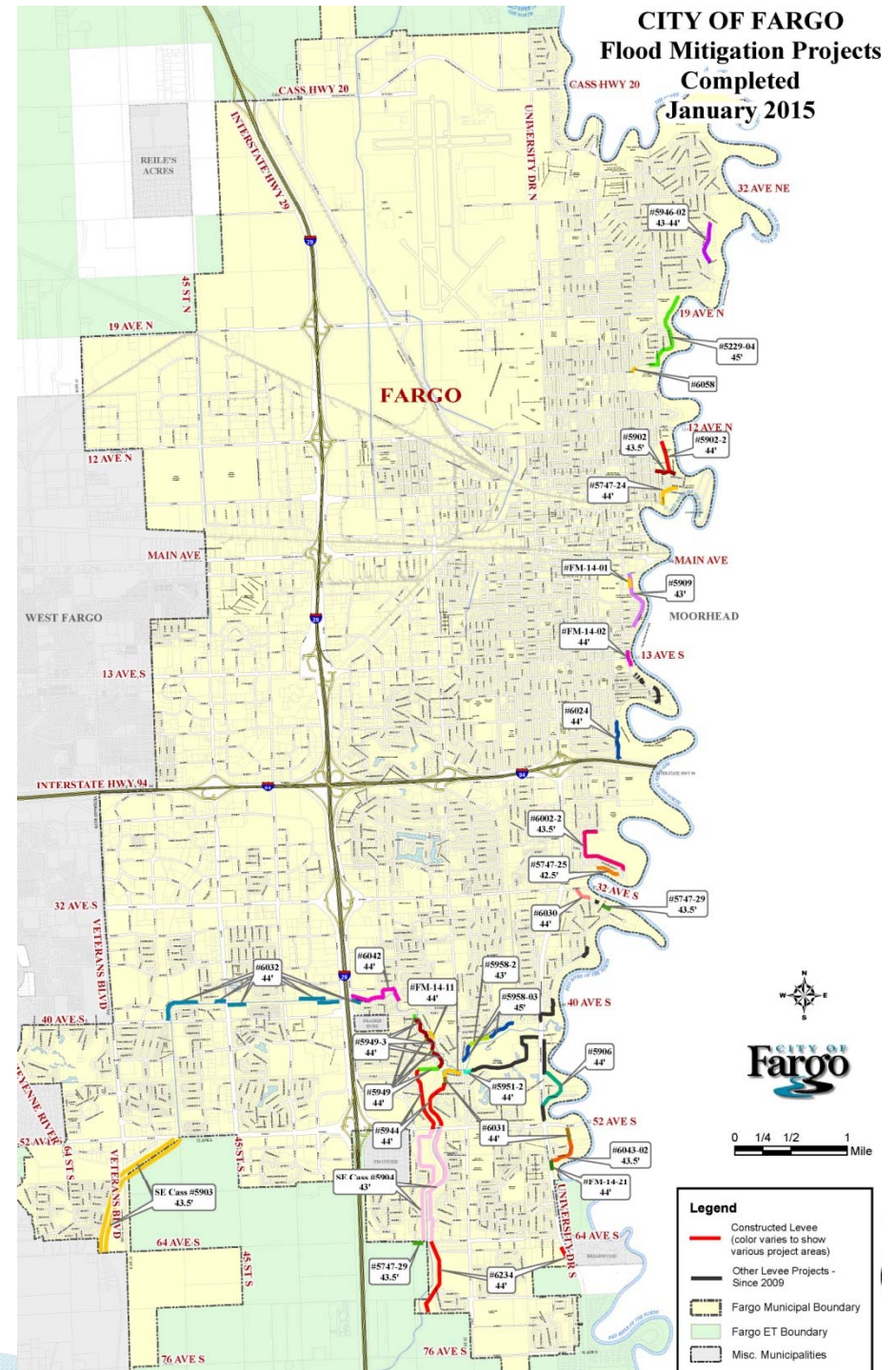


Legend

- Constructed
- Under Construction
- Planned for 2015
- Planned for 2016
- Planned for 2017
- Planned for 2018
- Unidentified
- FEMA 1% Annual Chance Floodplain (Adoption in January 2015)
- Fargo Municipal Boundary
- Fargo ET Boundary
- Misc. Municipalities

Summary

- ▶ Over 16 Miles of Improvements Totaling Over \$82M Since 2009
- ▶ Reduces required sandbags by approximately 4 million
- ▶ 45% of the Comprehensive Plan Completed
 - Additional projects under construction would bring total to 55% completed
- ▶ Outstanding Issues
 - With Comprehensive Plan completed would still need:
 - 7.6 miles of emergency clay levees
 - 3.2 miles of sandbag levees
 - Not all areas have feasible solutions
 - Events greater than
 - 39.5 feet
 - 42.5 feet
 - ?!?



QUESTIONS?

