

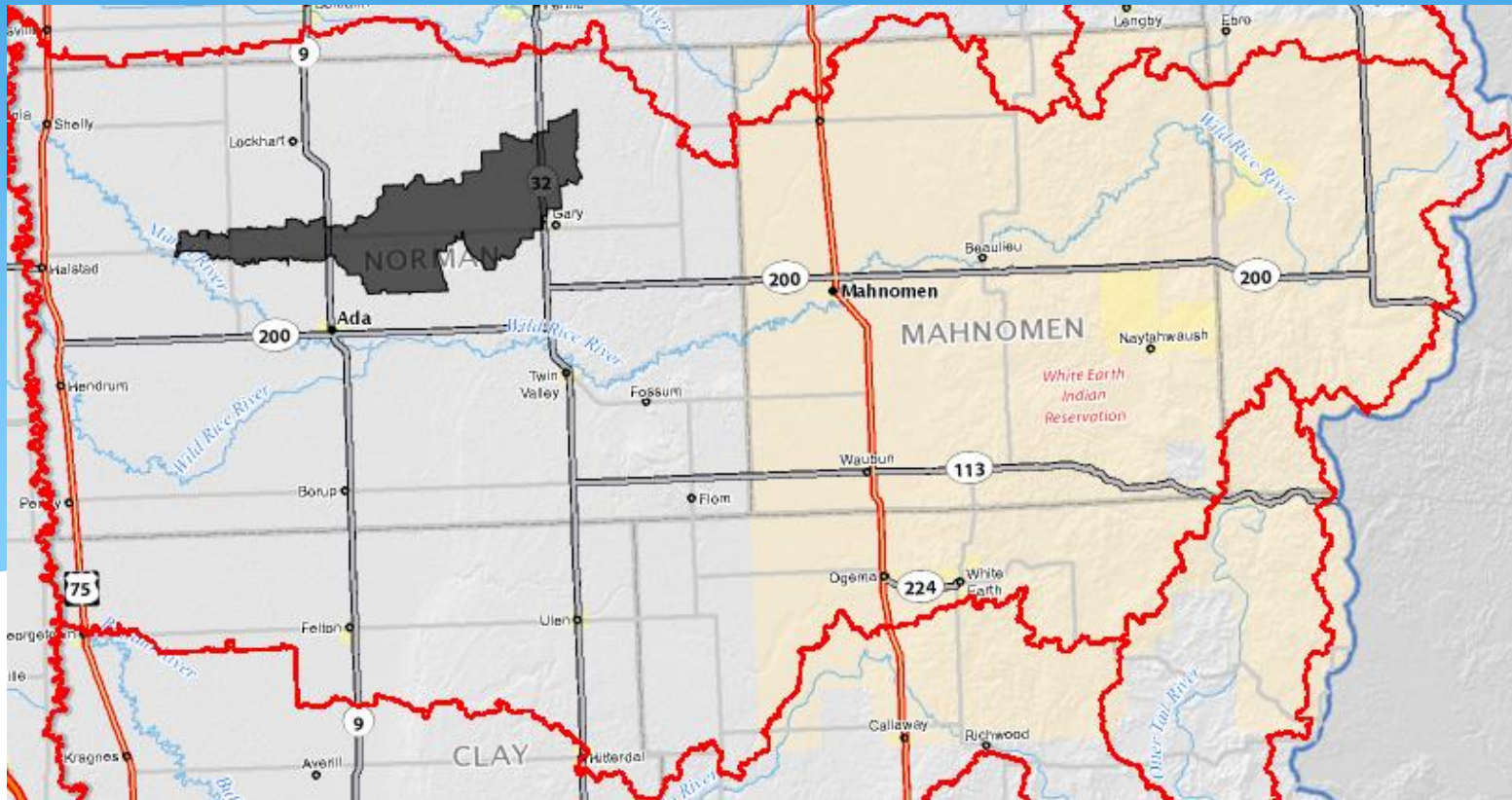
Wild Rice Watershed District

Green Meadow Watershed

Regional Conservation Partnership Program (RCPP)

Public Meeting

February 28, 2018

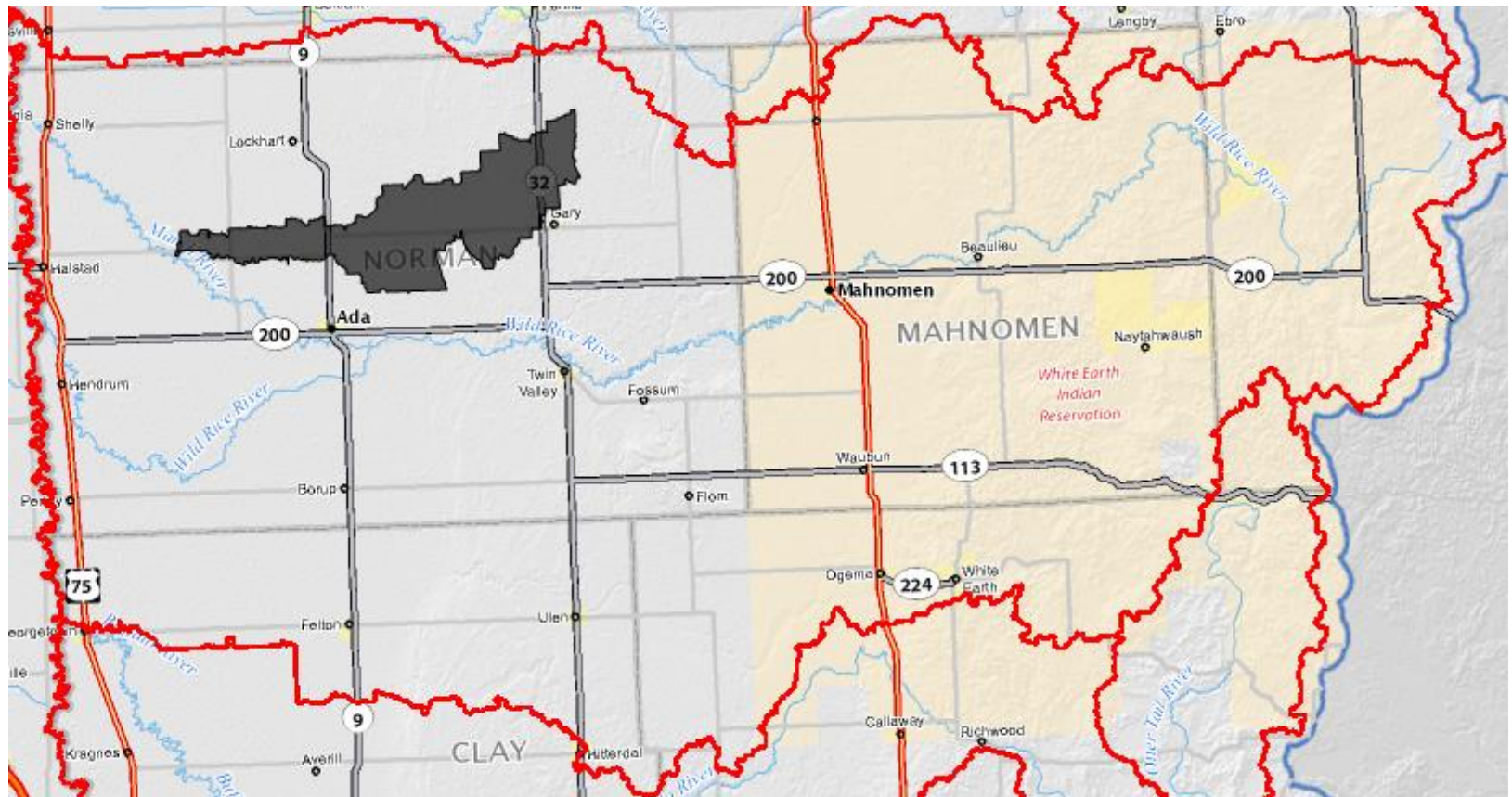


Agenda

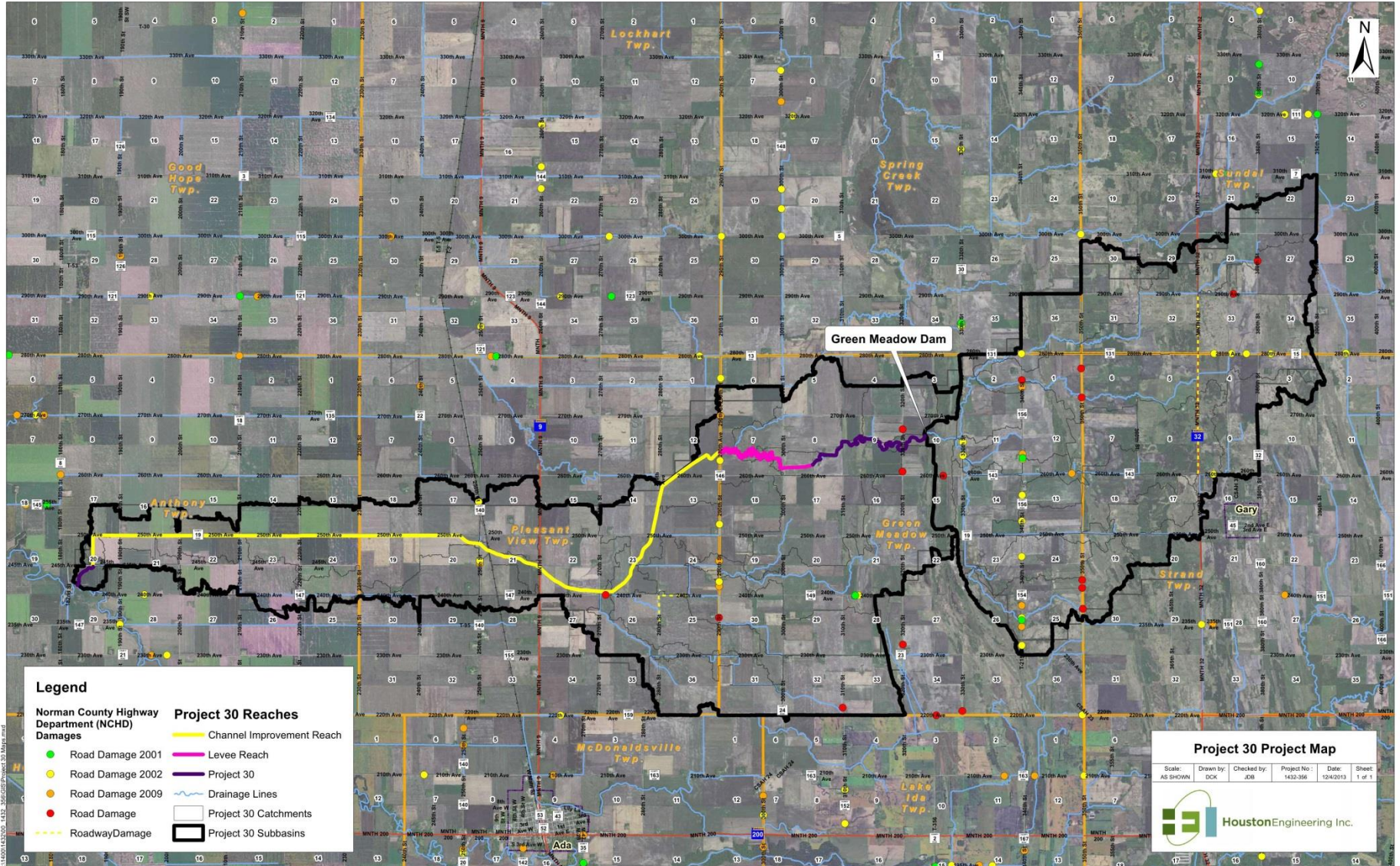
- * Green Meadow Subwatershed Overview
- * GM Project Team Status
 - * Local
 - * RCPP Process Overview
- * Hydraulics/Damages Summary – To Date
- * Public Law 566 Planning Process Status
- * Additional Problem Area/Concern Identification/Discussion
- * Overview of Next Steps
- * Adjourn

Existing Conditions

- * Marsh River Subwatershed
- * Approximately 69 Square Miles
- * Contains Upper Green Meadow Dam
- * Project 30 – WRWD Project



Existing Conditions



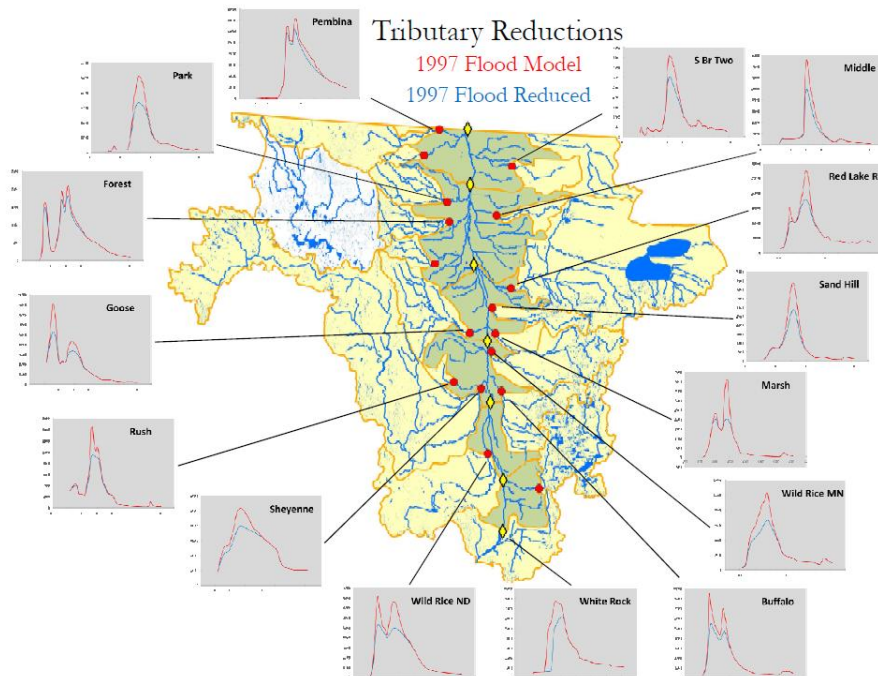
GM Project Team Status – Local Interagency Project Team (2013)

NAME	STAKEHOLDER
Brett Arne	Board of Water and Soil Resources
Shawnn Balstad	Natural Resources Conservation Service
Steve Bommersbach	Norman County Commissioner
Mark Chisholm	Landowner
Mike Christensen	Wild Rice Watershed District Manager
Mark Christianson	Soil and Water Conservation District
Duane Erickson	Wild Rice Watershed District Manager
Diane Ista	Landowner
Curt Johannsen	Wild Rice Watershed District Manager
Tara Mercil	Minnesota Pollution Control Agency
Larry Puchalski	US Army Corps of Engineers
Emily Siira	Department of Natural Resources
Dave Vilmo	Landowner

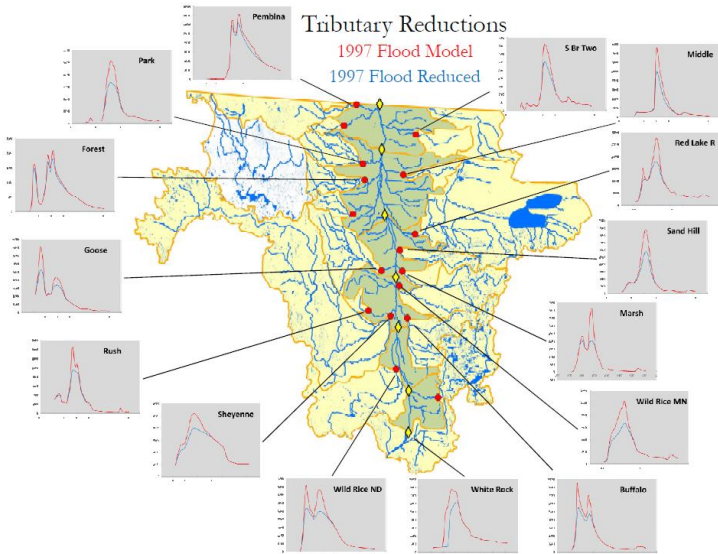
Red River Basin Commission Basinwide Flow Reduction Strategy

20% Reduction Model					1/20/2010
Summary of Tributary Flow Reductions					cla
1997 Spring Flood					
	Peak Flow Reduction	Peak Flow Reduction	Volume Reduction	Volume Reduction	Reduction Focus
	%	cfs	%	acft	
Gaged Tributaries					
BdS R @ White Rock	20%	1542	20%	61760	Store early water
Ottertail R @ Orwell	0	0	0	0	No reduction
Wildrice ND @ Abercrombie	35%	2854	17%	57908	Peak flow reduction
Sheyenne R @ Harwood	23%	2401	11%	68395	Peak flow reduction
Rush R @ Amenia	35%	508	13%	4324	Peak flow reduction
Buffalo R @ Dilworth	35%	2930	17%	38158	Peak flow reduction
Wild Rice MN @ Hendrum	35%	3610	20%	74385	Peak flow reduction
Goose R @ Hillsboro	35%	2820	16%	35356	Peak flow reduction
Marsh R nr Shelly	51%	2100	18%	15247	Peak flow reduction
Sand Hill R @ Climax	35%	1510	21%	22161	Peak flow reduction
Red Lake R @ Crookston	35%	9600	13%	119097	Peak flow reduction
Turtle R nr Arvilla	10%	90	13%	4615	Store late water
Forest R @ Minto	14%	300	7%	5875	Store late water
Middle R @ Argyle	35%	1330	23%	15067	Store late water
Park R @ Grafton	35%	1800	20%	26462	Peak flow reduction
S Br Two R @ Lake Bronson	27%	1100	14%	15208	Store late water
Tongue R @ Akra	7%	50	4%	1580	Store late water
Pembina R @ Neche	13%	1900	9%	51113	Peak flow reduction
Average/Total	22%		13%	616709	
Ungaged Areas					
Rabbit R @ TH 75 ung	35%	2108	26%	24377	Peak flow reduction
BdS ungaged	13%	1135	9%	12119	Peak flow reduction
Ottertail ung	13%	500	12%	7217	Peak flow reduction
Fargo ungaged	13%	3000	13%	30433	Store late water
Halstad ung	13%	7500	13%	81002	Store late water
RLR ung	12%	1888	10%	14427	Store late water
GF ungaged	12%	4400	10%	32015	Store late water
Snake R ung	16%	1367	15%	17128	Store late water
Tamarac R ung	13%	563	12%	7179	Store late water
Drayton ung	8%	1370	10%	22208	Store late water
Emerson ung	7%	3000	7%	23364	Store late water
Average/Total	14%		12%	268468	
Total volume of flow reduction on the tributaries			885177	acre-feet	
			13%	of total volume	

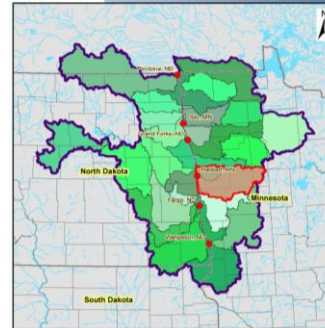
- Part of Long Term Flood Solutions Report
- Reduce Red River main-stem flows by 20%
- Based on 1997 Spring Flood Event
- Applied to HEC-HMS Synthetic Hydrology



Distributed Detention Report



Wild Rice Watershed District Expanded Distributed Detention Strategy



Prepared for the Wild Rice Watershed District & Red River Watershed Management Board by:

Houston Engineering, Inc.
1401 21st Avenue North
Fargo, ND 58102
9/23/2013
HEI Proj. No. R131782-019

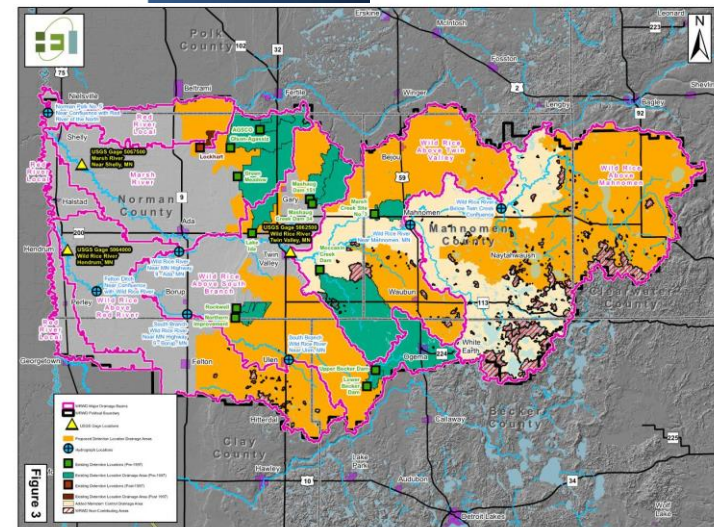
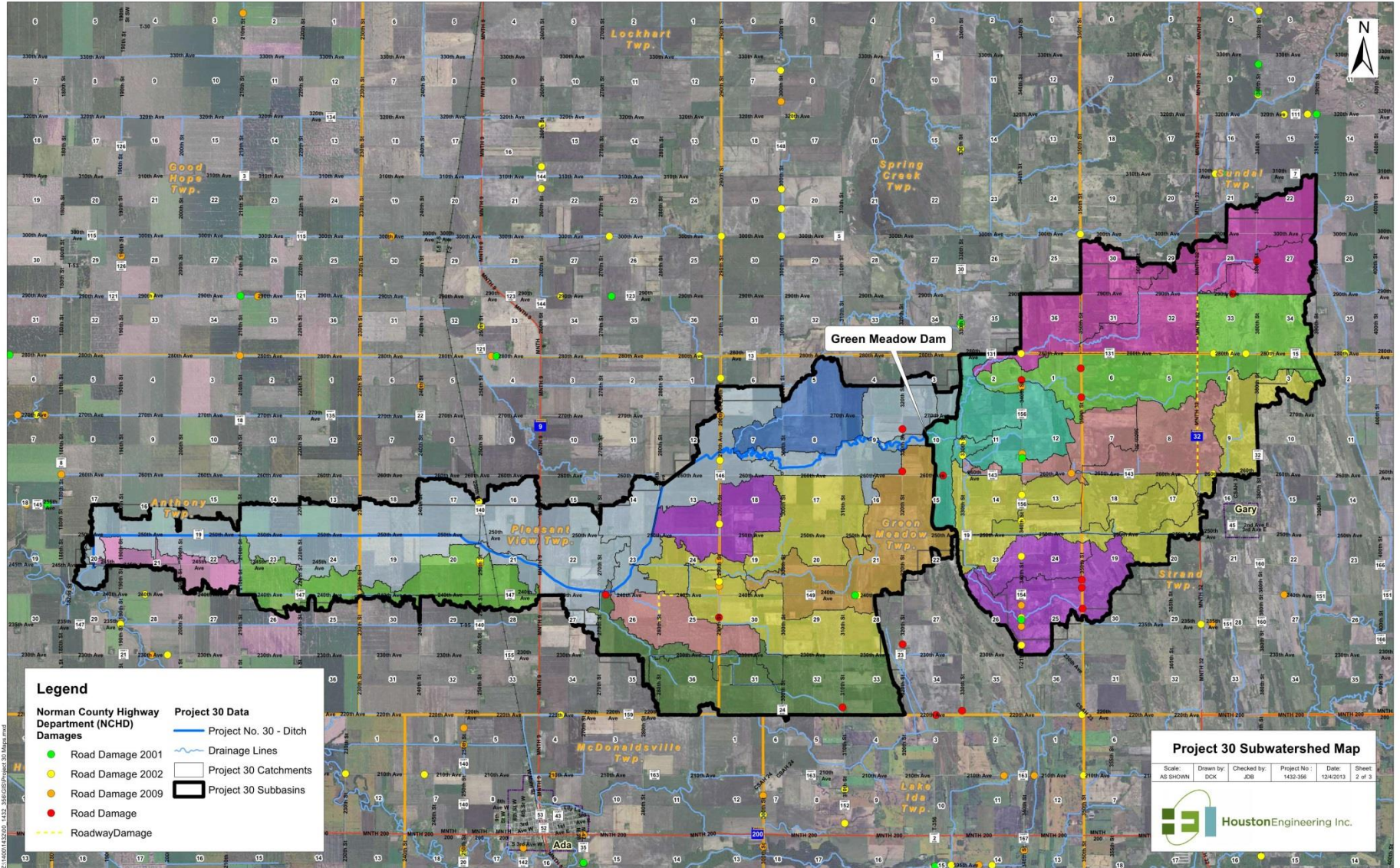


Figure 3

Existing Conditions



Legend

Norman County Highway Department (NCHD) Damages	Project 30 Data
● Road Damage 2001	— Project No. 30 - Ditch
● Road Damage 2002	— Drainage Lines
● Road Damage 2009	— Project 30 Catchments
● Road Damage	— Project 30 Subbasins
● Roadway Damage	

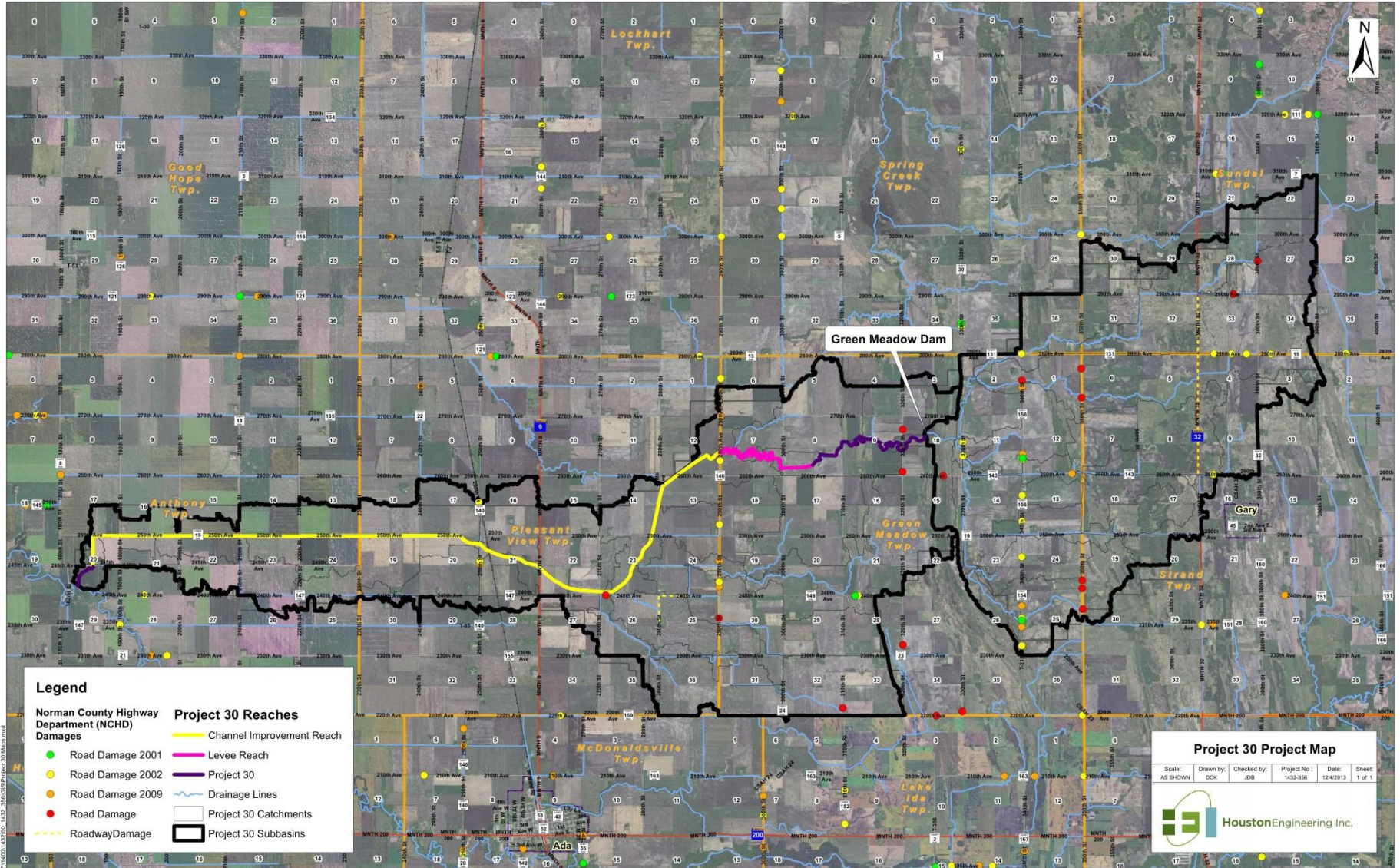
Project 30 Subwatershed Map

Scale: AS SHOWN	Drawn by: DCR	Checked by: JDB	Project No: 1432-306	Date: 12/4/2013	Sheet: 2 of 3
-----------------	---------------	-----------------	----------------------	-----------------	---------------

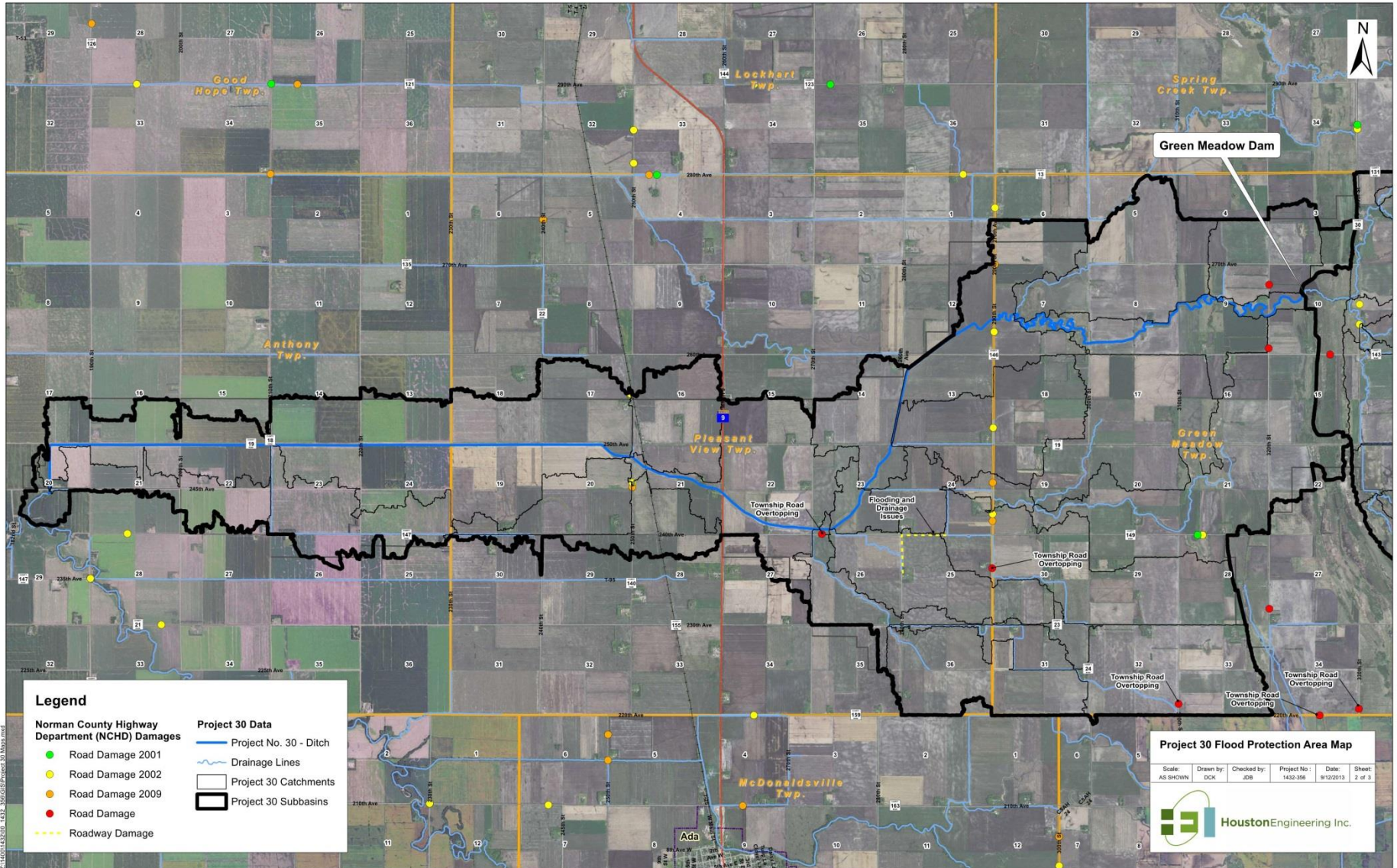
HoustonEngineering Inc.

Z:\43001432006_1432_306\GIS\Project30 Map.mxd

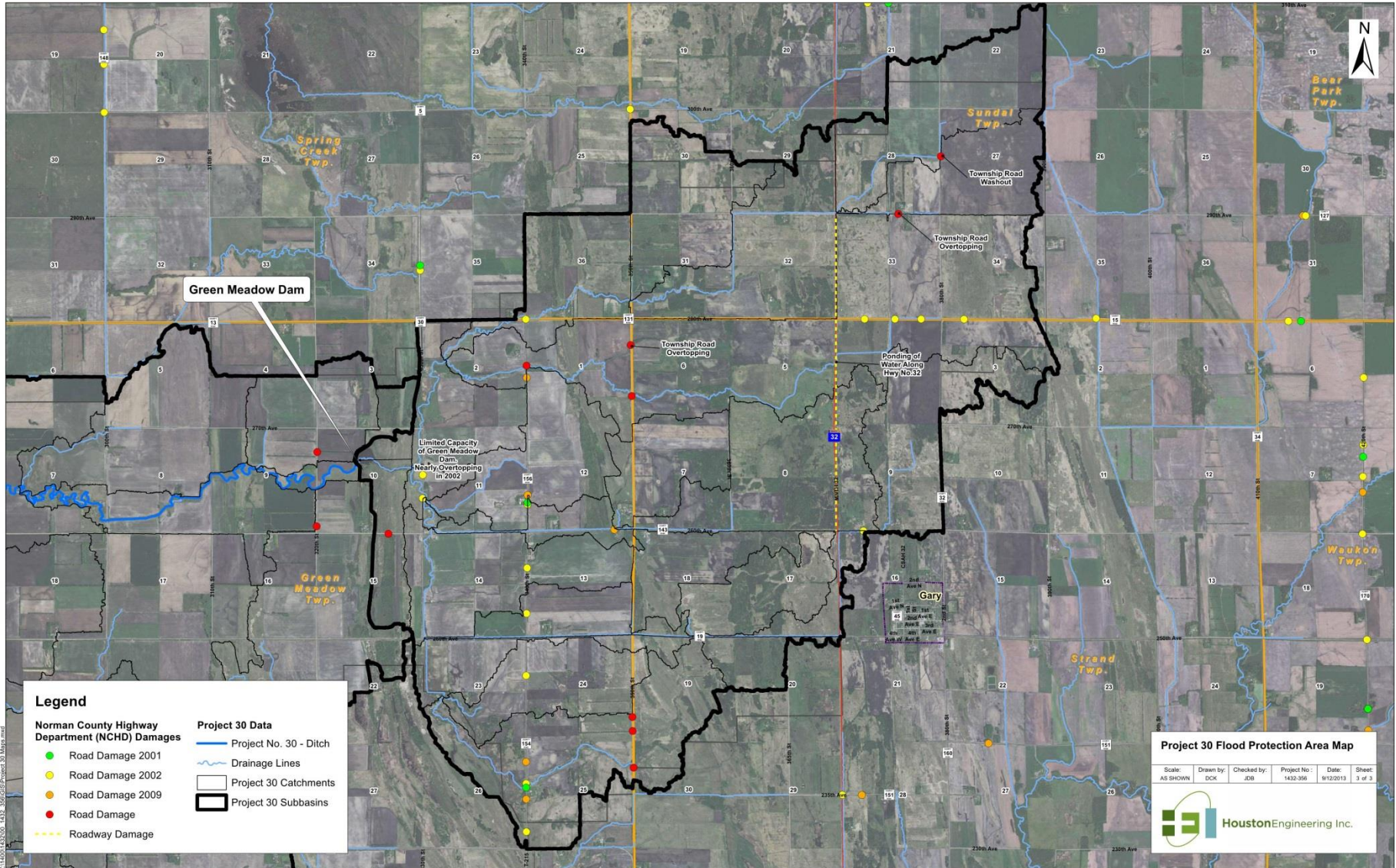
Existing Conditions



Problems - Infrastructure Damages



Problems - Infrastructure Damages



Existing Conditions

* Green Meadow Dam

* Location

- * Sections 10 and 15 of Green Meadow Township (Norman County). West of Gary, MN

* History

- * The dam was constructed in approximately 1973 by the Soil Conservation Service.
- * It was later added to become part of the downstream ditch system as part of WRWD Project No. 30.



Existing Conditions

- * Green Meadow Dam

- * Drainage Area

- * 29.6 SM±

- * Storage

- * 2,200 AC-FT (1.4" of runoff from contributing watershed)

- * Soils

- * Poor / Granular



Problems

- * Green Meadow Dam
- * Limited Capacity
- * Sandbagging Overflows in 2002



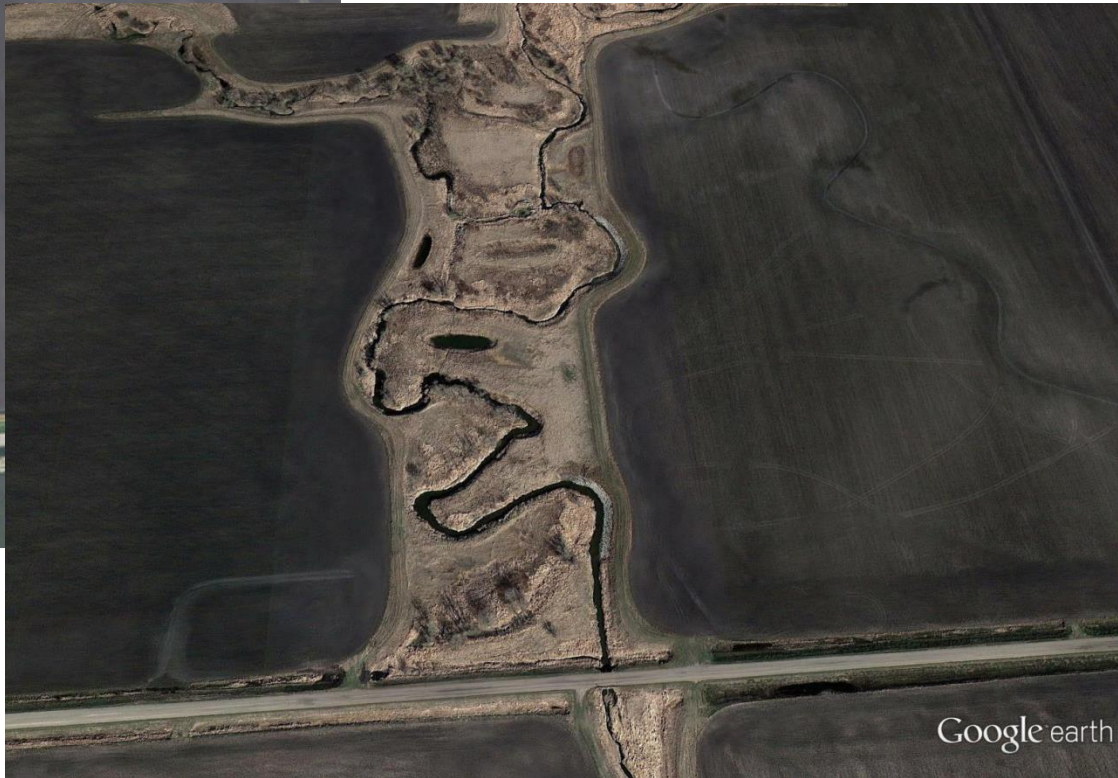
Problems

- * Green Meadow Dam
- * Substantial Repair (2006)
 - * Erosion Repairs
 - * Clay Liner - Partial



Problems

- * Channel Erosion
 - * Middle Reach – Erosion on Setback Levees
 - * Riprap and Levee Setbacks



Problems

- * Lower Reach Channel – 2011 Repair
- * Substantial Repair (2011)
 - * Section 20-24 (Anthony Township) and Section 19 (Pleasant View Township)
 - * FEMA Funding Assistance



Problems

- * Lower Reach Channel – 2011 Repair
 - * FEMA Approved Repair Method
 - * Backslope at 5:1
 - * Restore Gradeline and Grade Control
 - * Re-Establish Grass Buffers



WRWD Project Team – Points of Concurrency Process

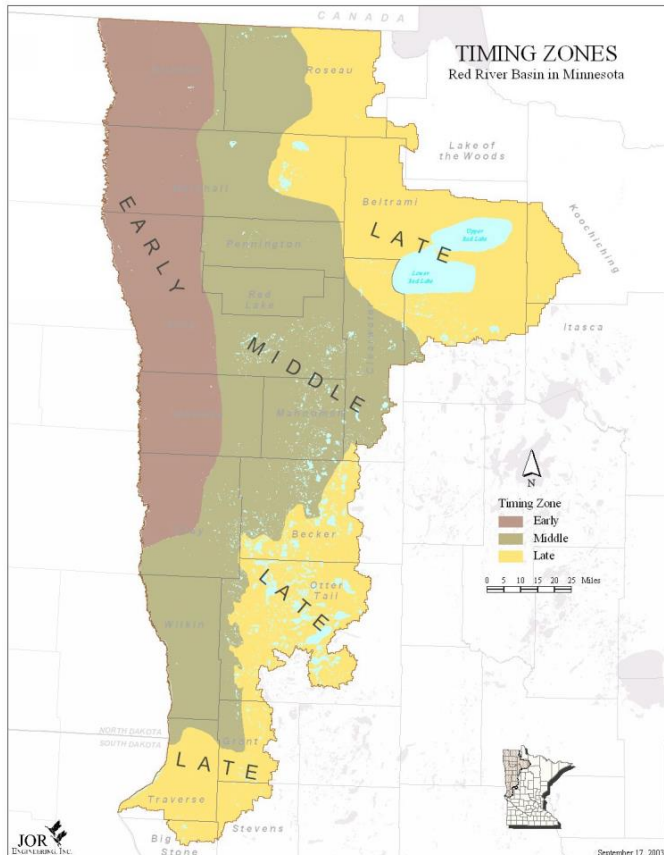
- **Concurrency Point 1: Project Purpose and Need**
- **Concurrency Point 2: Array of Alternatives and Alternatives Carried Forward**
- **Concurrency Point 3: Identification of the Selected Alternative**
- **Concurrency Point 4: Design Phase Impact Minimization**

Evaluate Range of Alternatives

* Overall TP 11 Strategy/Alternative Elimination

Red River Basin Flood Damage Reduction Framework

Red River Basin Flood Damage Reduction Work Group
Technical and Scientific Advisory Committee
Technical Paper No. 11



* Reduce Flood Volume

- * Construction or Restoration of Depressional Wetlands, Cropland BMPs, Conversion of Cropland to Perennial Grassland, Conversion of Land Use to Forest, Other Beneficial Uses of Stored Water

* Increase Conveyance Capacity

- * Channelization, Agricultural Drainage, Diversions, Setting Back Existing Levees, Increasing Road Crossing Capacity

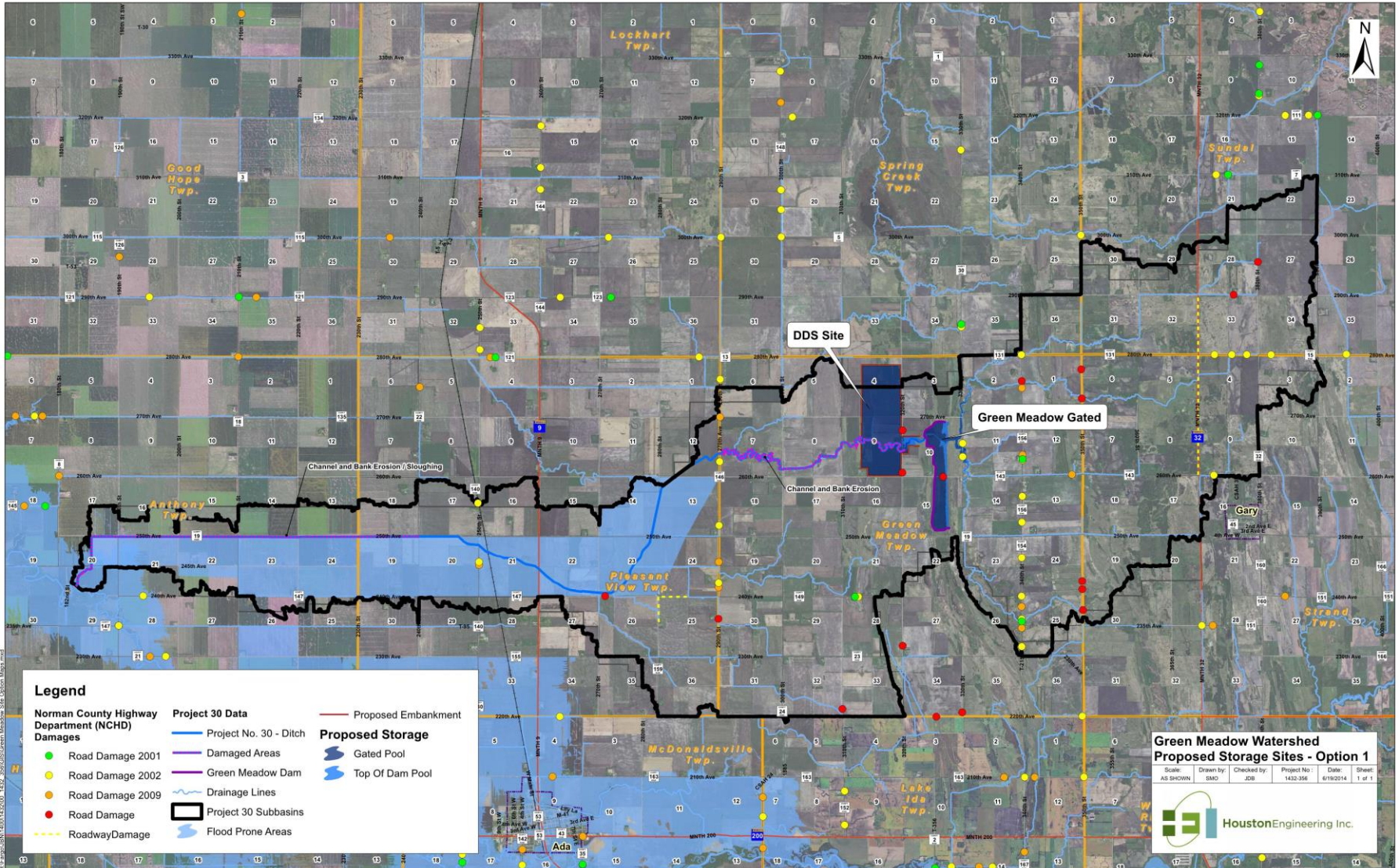
* Increase Temporary Flood Storage

- * **On Channel Impoundments, Off Channel Impoundments**, Restored or Created Wetlands, Drainage, Culvert Sizing, Setting Back Existing Levees, Overtopping Levees

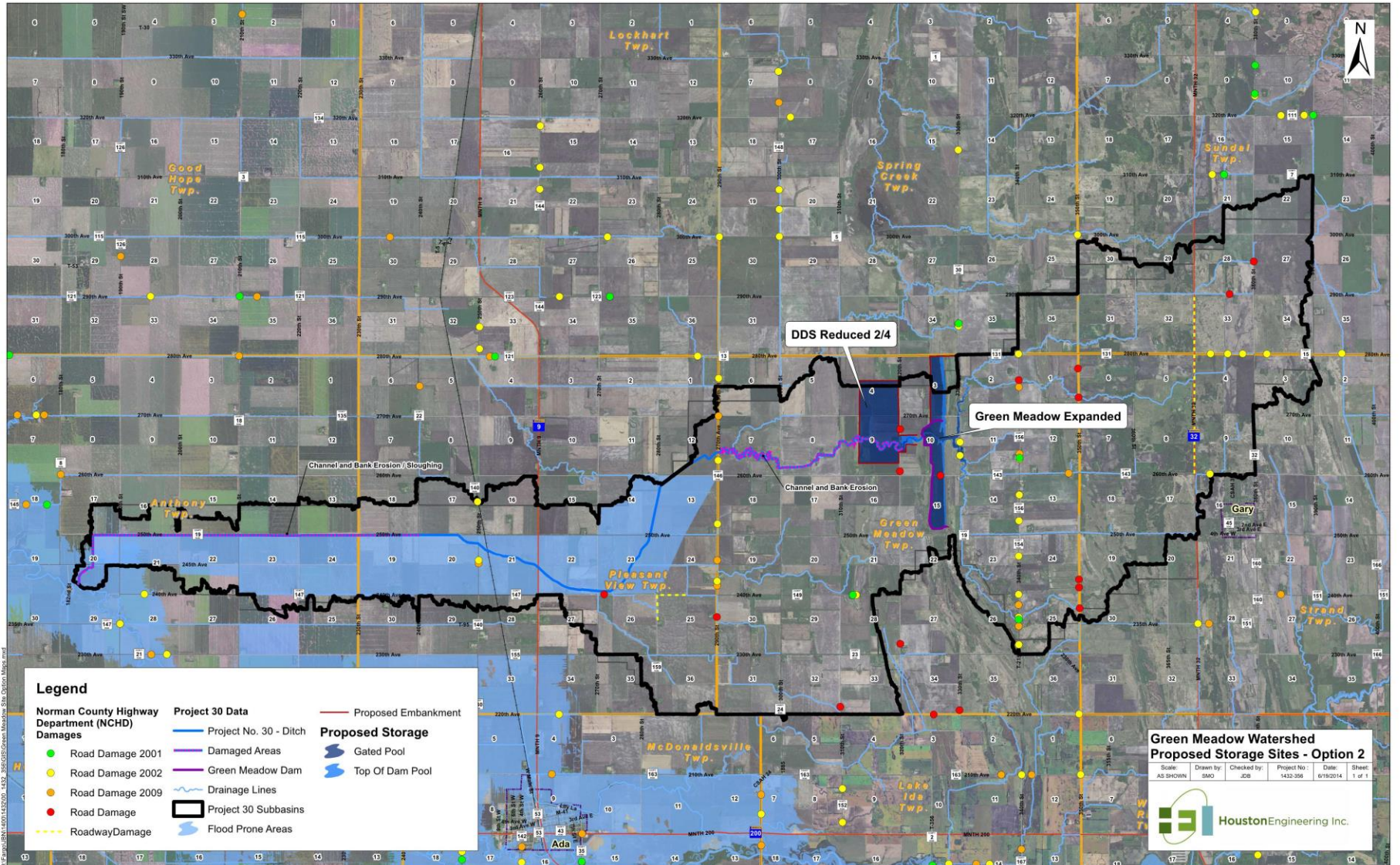
* Protection / Avoidance

- * Urban Levees, Farmstead Levees, Agricultural Levees, Evacuation of the Floodplain, Floodproofing, Flood Warning and Emergency Response Planning

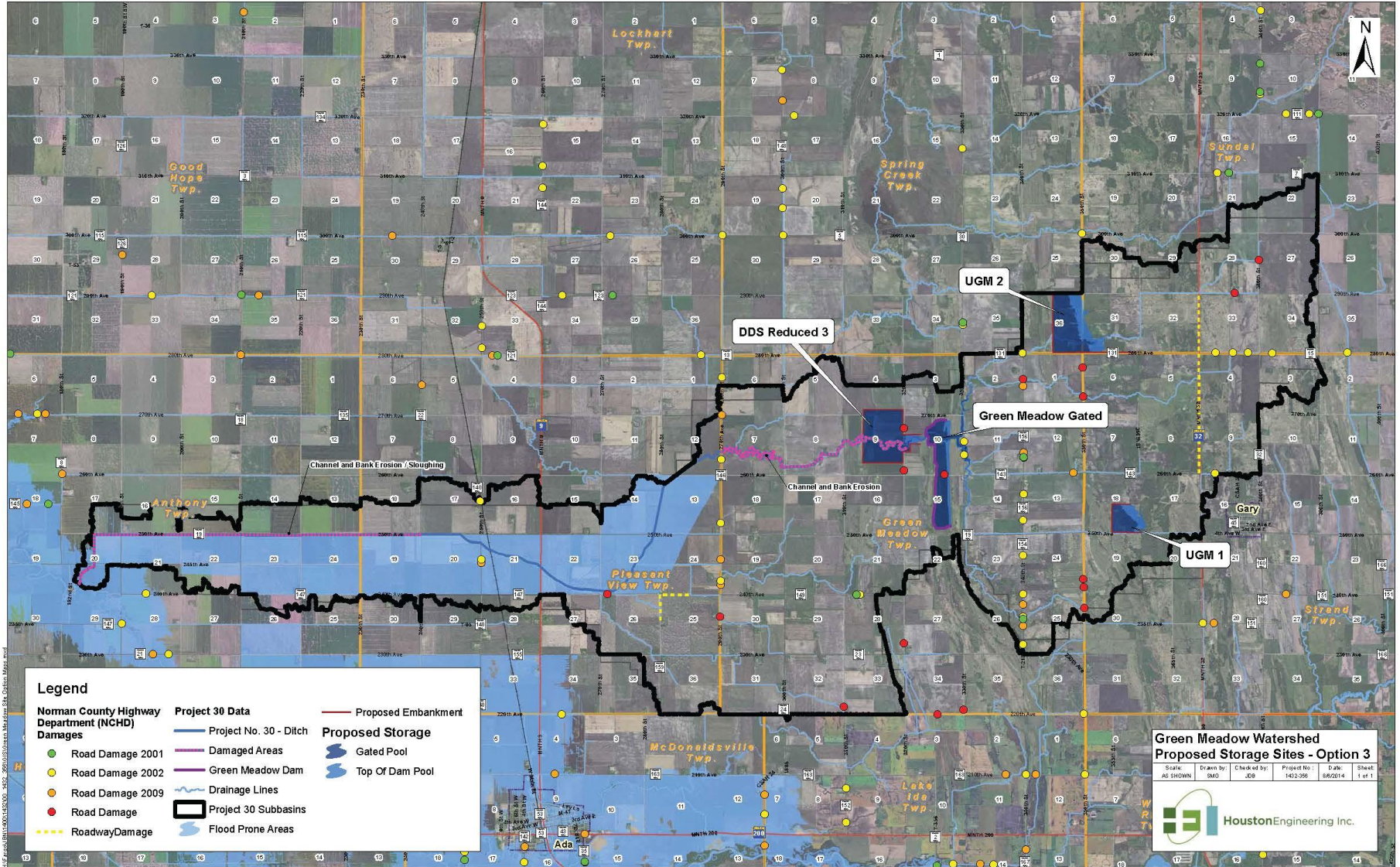
Option 1 – Distributed Detention Plan



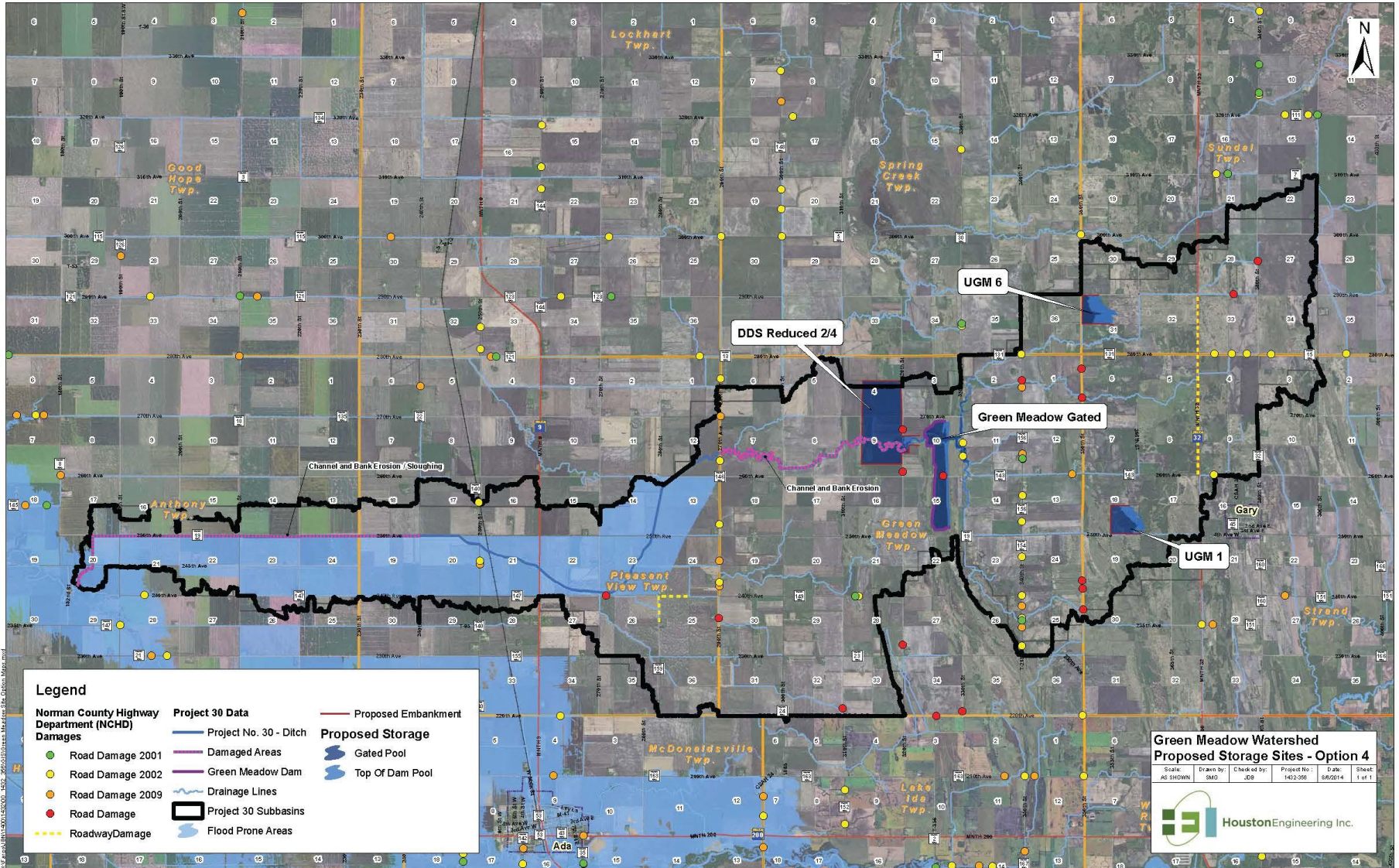
Option 2



Option 3



Option 4



Legend

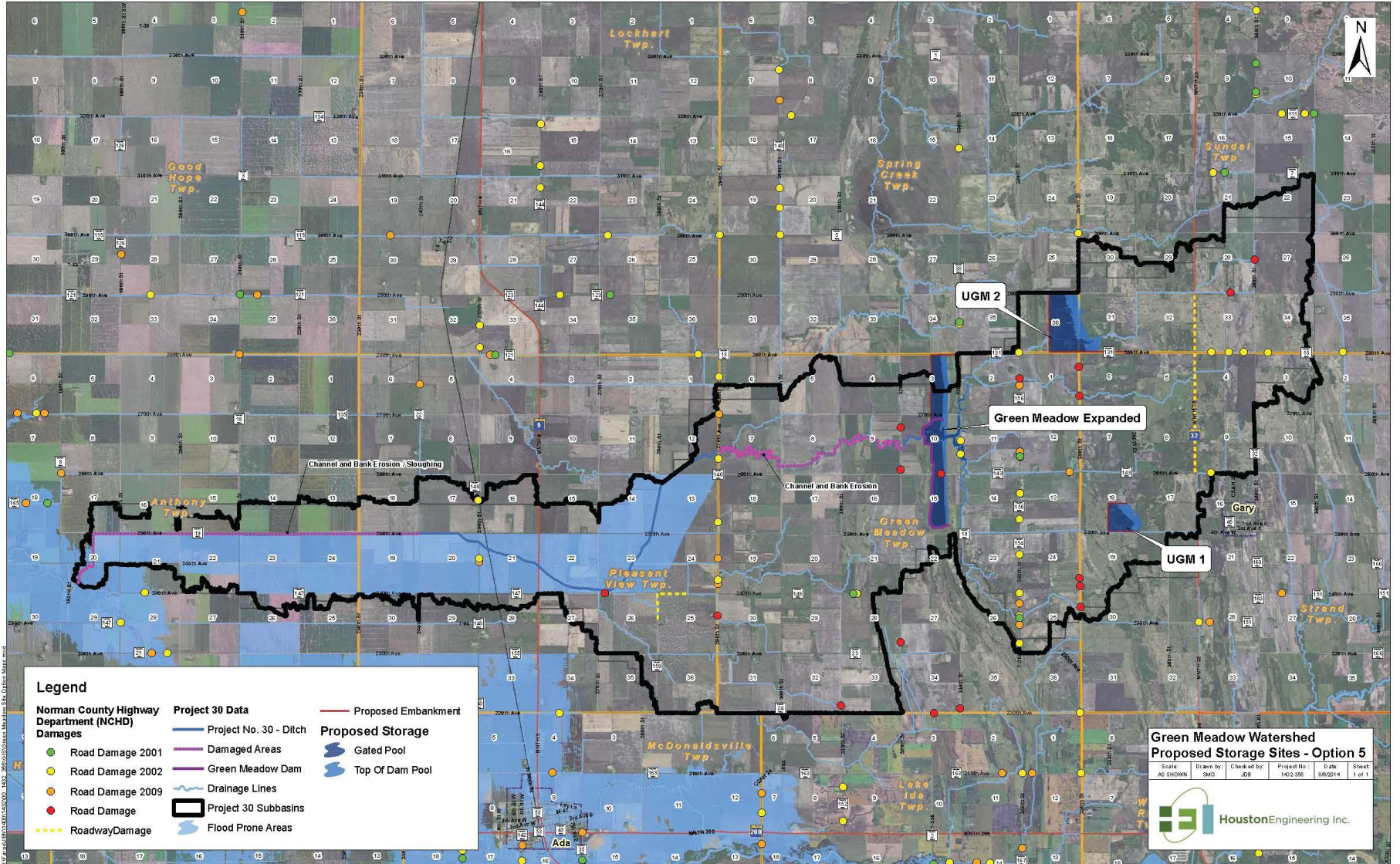
Road Damage 2001	Project No. 30 - Ditch	Proposed Embankment
Road Damage 2002	Damaged Areas	Gated Pool
Road Damage 2009	Green Meadow Dam	Top of Dam Pool
Road Damage	Drainage Lines	
Roadway Damage	Project 30 Subbasins	
	Flood Prone Areas	

**Green Meadow Watershed
Proposed Storage Sites - Option 4**

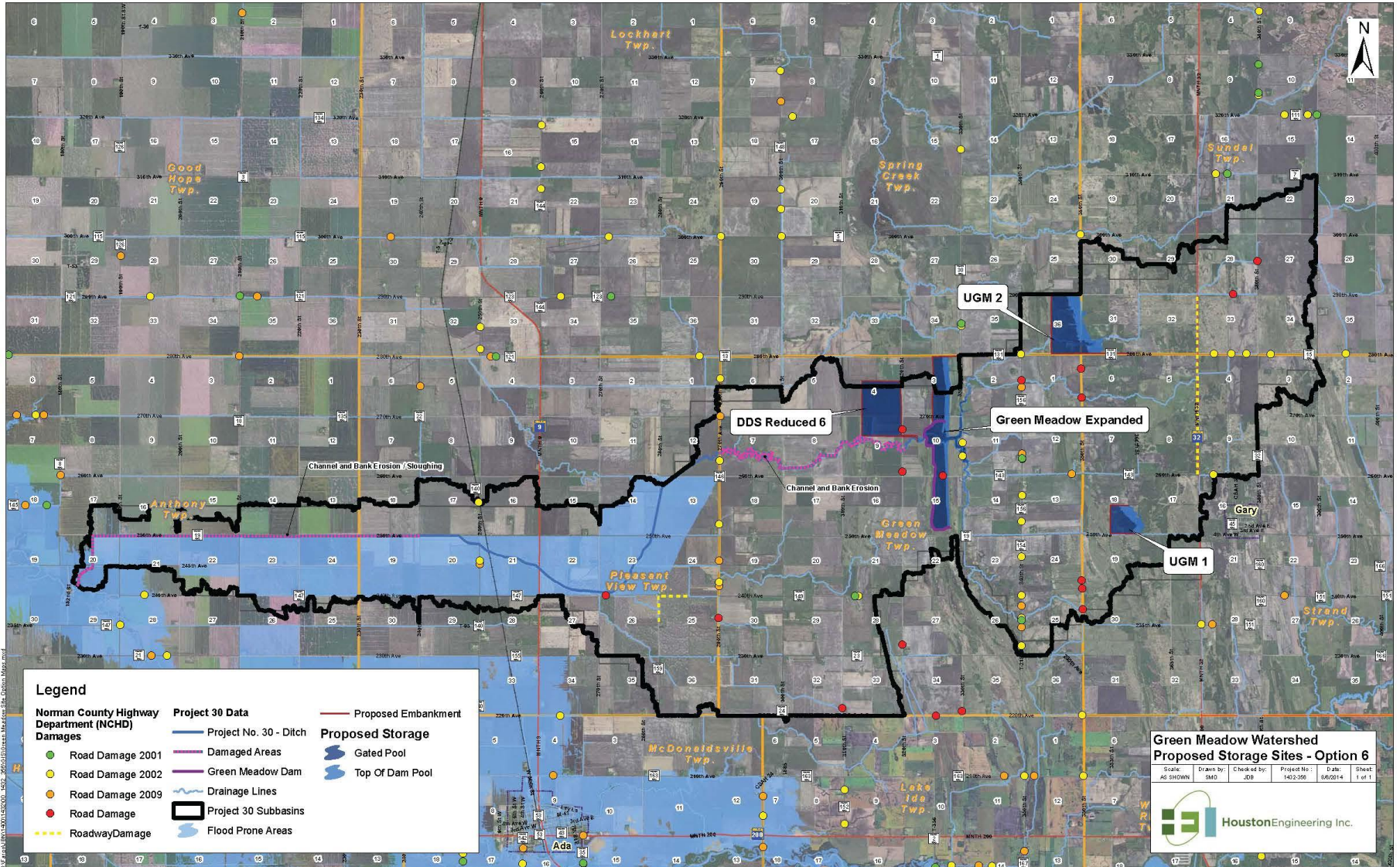
Scale: AS SHOWN	Drawn by: SMO	Checked by: JDB	Project No.: 1412-356	Date: 8/6/2014	Sheet: 1 of 1
-----------------	---------------	-----------------	-----------------------	----------------	---------------

Houston Engineering Inc.

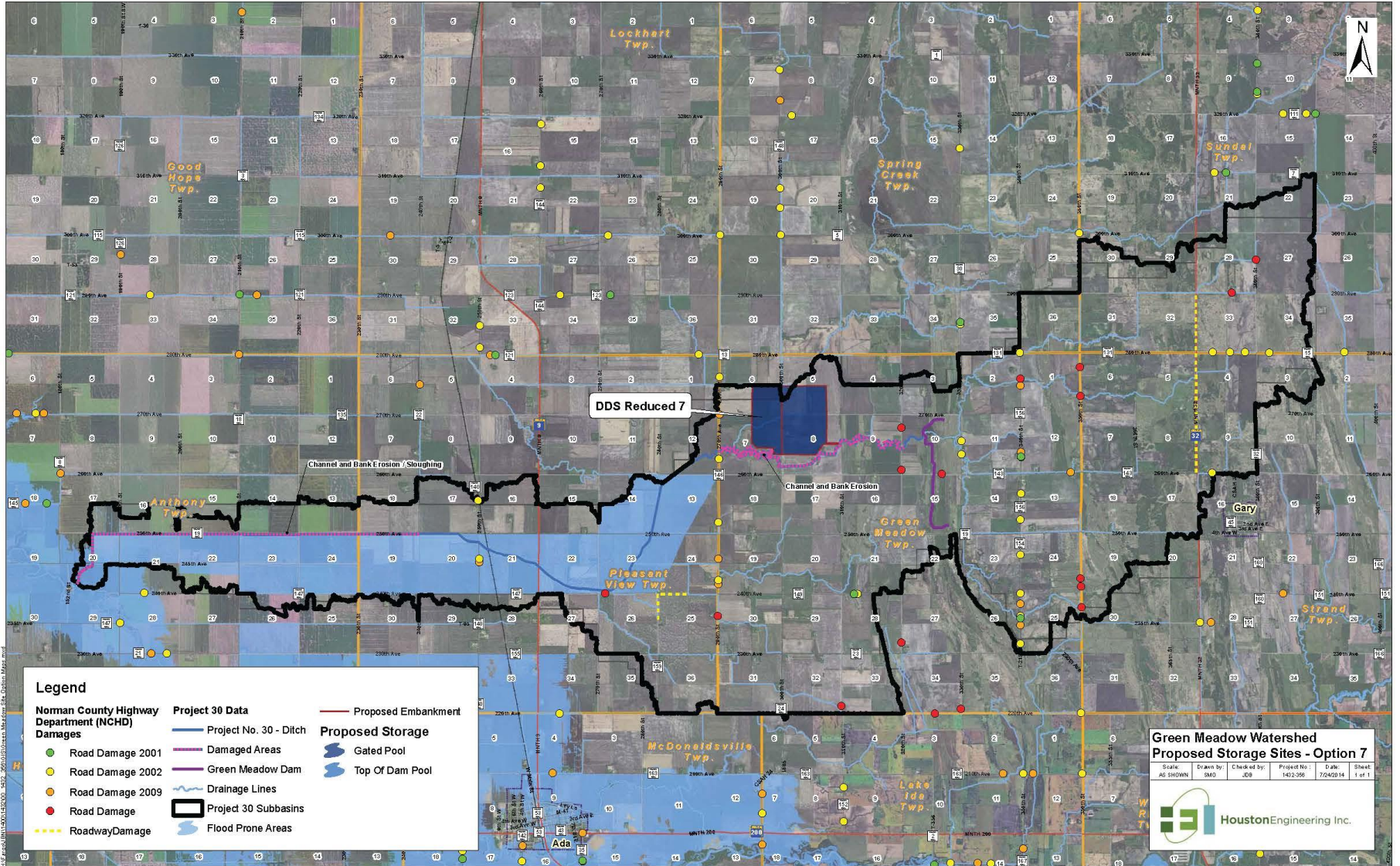
Option 5



Option 6



Option 7



DDS Reduced 7

Legend

Norman County Highway Department (NCHD) Damages	Project 30 Data	Proposed Embankment
● Road Damage 2001	— Project No. 30 - Ditch	— Proposed Storage
● Road Damage 2002	— Damaged Areas	■ Gated Pool
● Road Damage 2009	— Green Meadow Dam	■ Top Of Dam Pool
● Road Damage	— Drainage Lines	
● Roadway Damage	— Project 30 Subbasins	
	— Flood Prone Areas	

**Green Meadow Watershed
Proposed Storage Sites - Option 7**

Scale: AS SHOWN	Drawn by: GMD	Checked by: JBR	Project No: 142-356	Date: 7/24/2014	Sheet: 1 of 11
-----------------	---------------	-----------------	---------------------	-----------------	----------------

Houston Engineering Inc.

Project Team Preferred Option

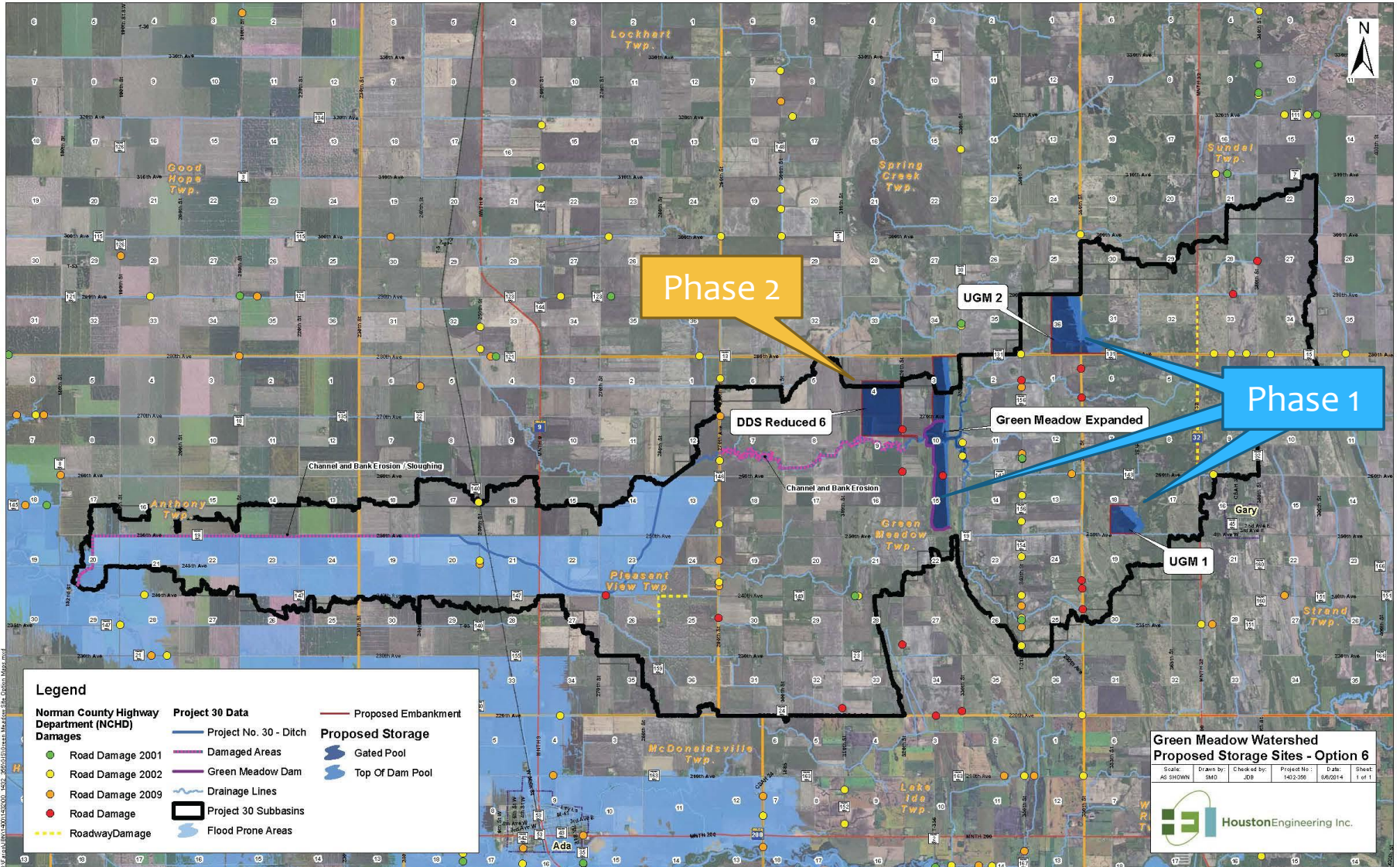
Green Meadow Project Team (GMPT) -Option 6 :

- Project B (GM Expanded): Green Meadow Dam Expanded - 2,300 acre feet gated storage
- Project C (UGM1): 315 Acre feet of gated storage at Klask site
- Project D (UGM 2): 1,370 acre feet of gated storage
- Project I (DDS 6): 2,490 acre feet of off channel gated storage below Green Meadow Dam site

The GMPT prefers that Option #6 be implemented in 2 phases.

- Phase 1 - GM Expanded, UGM1, and UGM 2 above the existing Green Meadow Dam.
- Phase 2 - off-channel impoundment below the existing Green Meadow Dam. The GMPT recommends the Wild Rice Watershed District continue to explore opportunities to establish a practicable (e.g. willing landowners) floodwater storage project below the existing Green Meadow Dam of sufficient size to substantially meet the flood damage goals set forth by the GMPT.

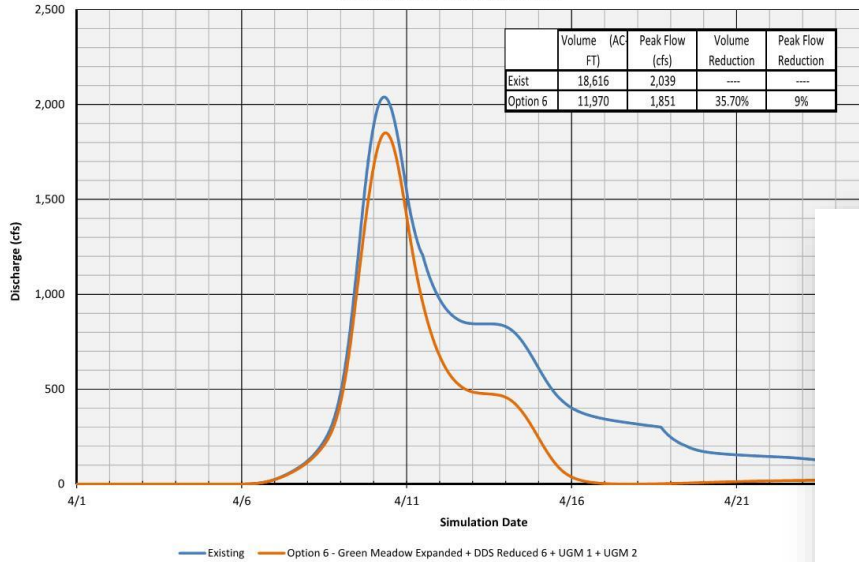
Option 6



Option 6

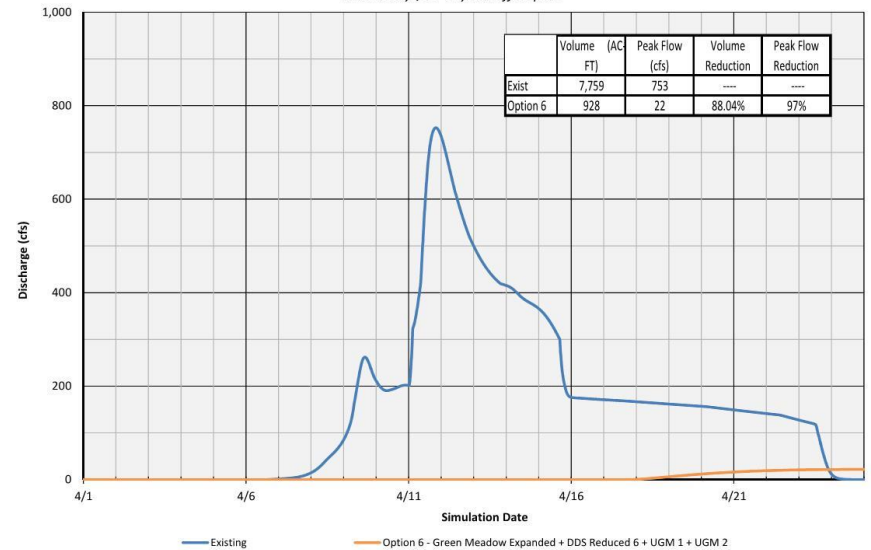
Green Meadow / Project 30 at Confluence with Marsh River

Red River Basin Standardized Melt Progression
TR60 100-yr, 10-day Runoff Depths



Downstream of DDS Site

Red River Basin Standardized Melt Progression
TR60 100-yr, 10-day Runoff Depths



Total Current Estimated Cost
- \$25.5M

WRWD Green Meadow - Status

- **CP No. 1 and 2 – USACE Approved**
- **CP No. 3 – On Hold – Pending Additional Field Studies**
- **Conceptual Designs (5% or less) - <\$40K**
- **No On-site Geotechnical Reviews**
- **Limited Public Involvement and Landowner Coordination**
- **Project Team and Inter-agency Support**

Next Steps on \$25.5M± Project – Expensive!

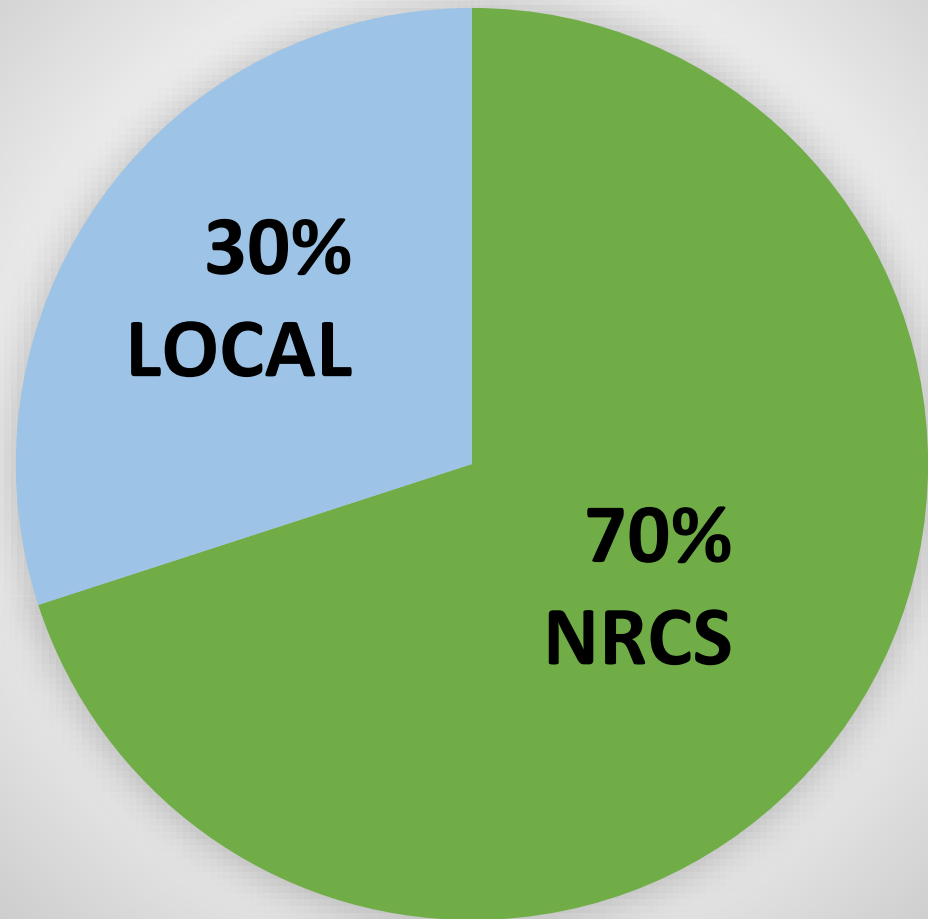
Regional Conservation Partnership Program (RCPP)

- 2014 Farm Bill
- Red River Retention Authority awarded \$12M
- RRRRA approved 20 Watershed Planning Efforts
 - 14 Minnesota, 6 North Dakota
- WRWD
 - Green Meadow, South Branch, Moccasin Creek

Why RCPP?

- Cost Share (70% Federal)
- Public Involvement
- Additional Detailed Design
- Field Surveys
- Geotechnical Review
- Environmental Reviews
- Possible Future Funding (Federal)
- Others

COST SHARE BREAKDOWN



RCCP Planning Process

INITIATE PLANNING

- * Discuss purpose and need for project with sponsors/Initiate study.

Step 1 - IDENTIFY PROBLEMS, OPPORTUNITIES & CONCERNS

- * Identify the need for the proposed action (quantify, extent, magnitude, timing, frequency etc.)

Step 2 - DETERMINE OBJECTIVES

- * Write purpose and need statement and Write scope of plan-EA/EIS

Step 3 - INVENTORY RESOURCES

- * Conduct detailed resource inventories and watershed assessment
- * Economics, social effects, Archeological and historic resources
- * Engineering/Geology/Support maps
- * Document problems

Step 4 - ANALYZE RESOURCE DATA

- * Geology, Hydrology & Hydraulics, Cultural, Economics and Social

Step 5 - FORMULATE ALTERNATIVES

- * Develop reasonable alternatives, mitigation strategies and costs (Preliminary plans)

Step 6 - EVALUATE ALTERNATIVES

- * Env. Resources, Geotechnical, Hydrology & Hydraulics, Economics, Significance of effects,...

Step 7 - MAKE DECISIONS (EA/EIS, Public Involvement,...)

RCPP Planning Process

INITIATE PLANNING

- * Discuss purpose and need for project with sponsors/Initiate study.

Step 1 - IDENTIFY PROBLEMS, OPPORTUNITIES & CONCERNS

- * Identify the need for the proposed action (quantify, extent, magnitude, timing, frequency etc.)

Step 2 - DETERMINE OBJECTIVES

- * Write purpose and need statement and Write scope of plan-EA/EIS

Step 3 - INVENTORY RESOURCES

- * Conduct detailed resource inventories and watershed assessment
- * Economics, social effects, Archeological and historic resources
- * Engineering/Geology/Support maps
- * Document problems

Step 4 - ANALYZE RESOURCE DATA

- * Geology, Hydrology & Hydraulics, Cultural, Economics and Social

Step 5 - FORMULATE ALTERNATIVES

- * Develop reasonable alternatives, mitigation strategies and costs (Preliminary plans)

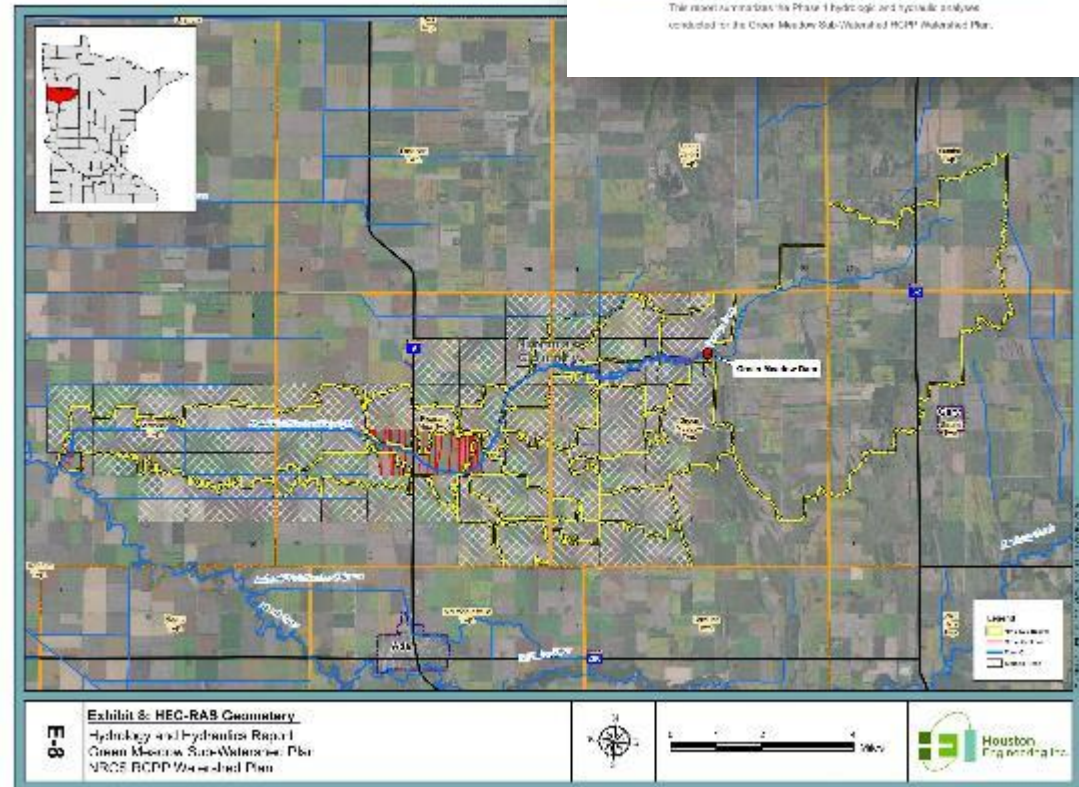
Step 6 - EVALUATE ALTERNATIVES

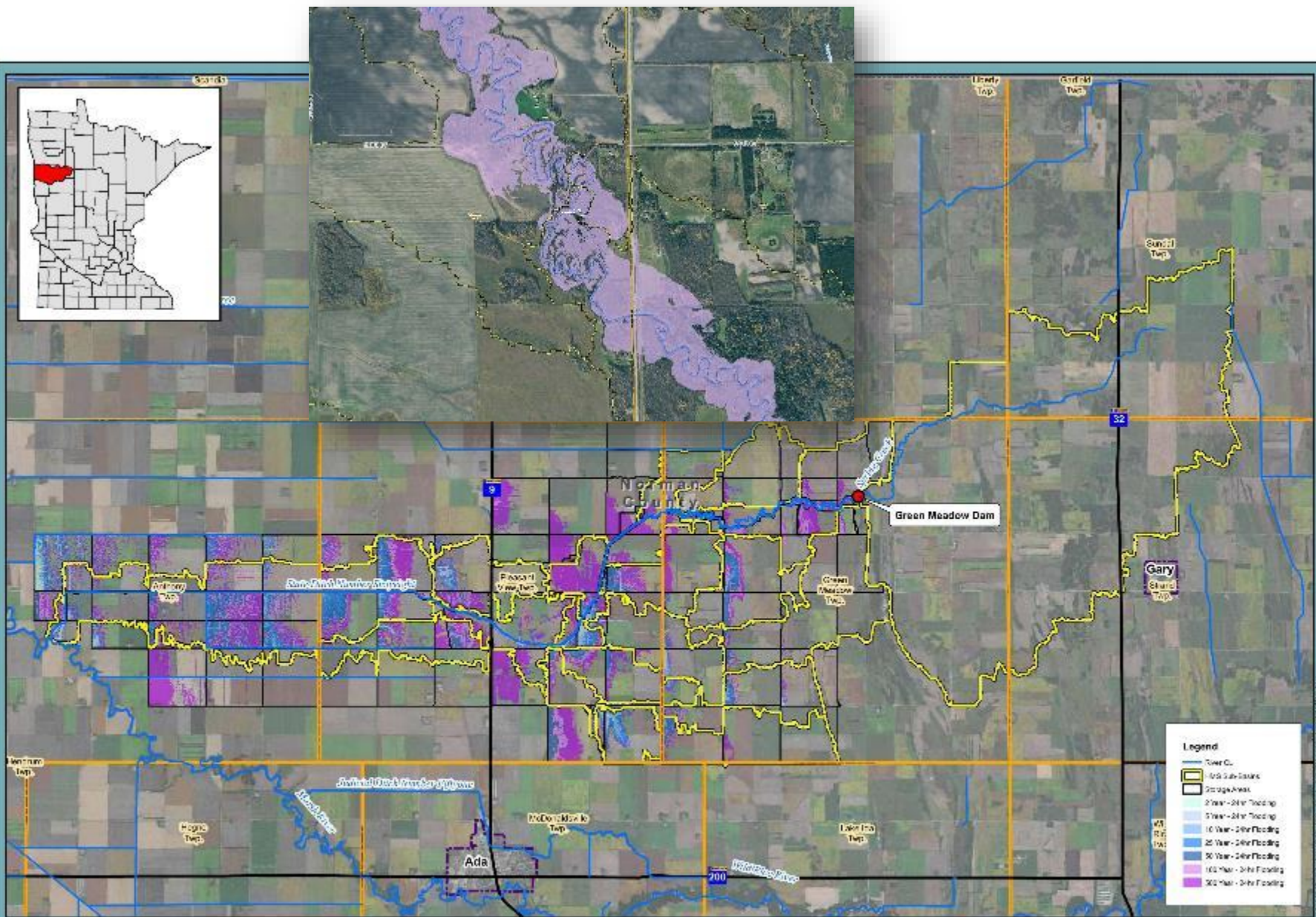
- * Env. Resources, Geotechnical, Hydrology & Hydraulics, Economics, Significance of effects,...

Step 7 - MAKE DECISIONS (EA/EIS, Public Involvement,...)

Model Results

- * H/H Report
 - * Various Rain and Runoff Events (24hr – 10day)
 - * Flows
 - * Inundated Areas



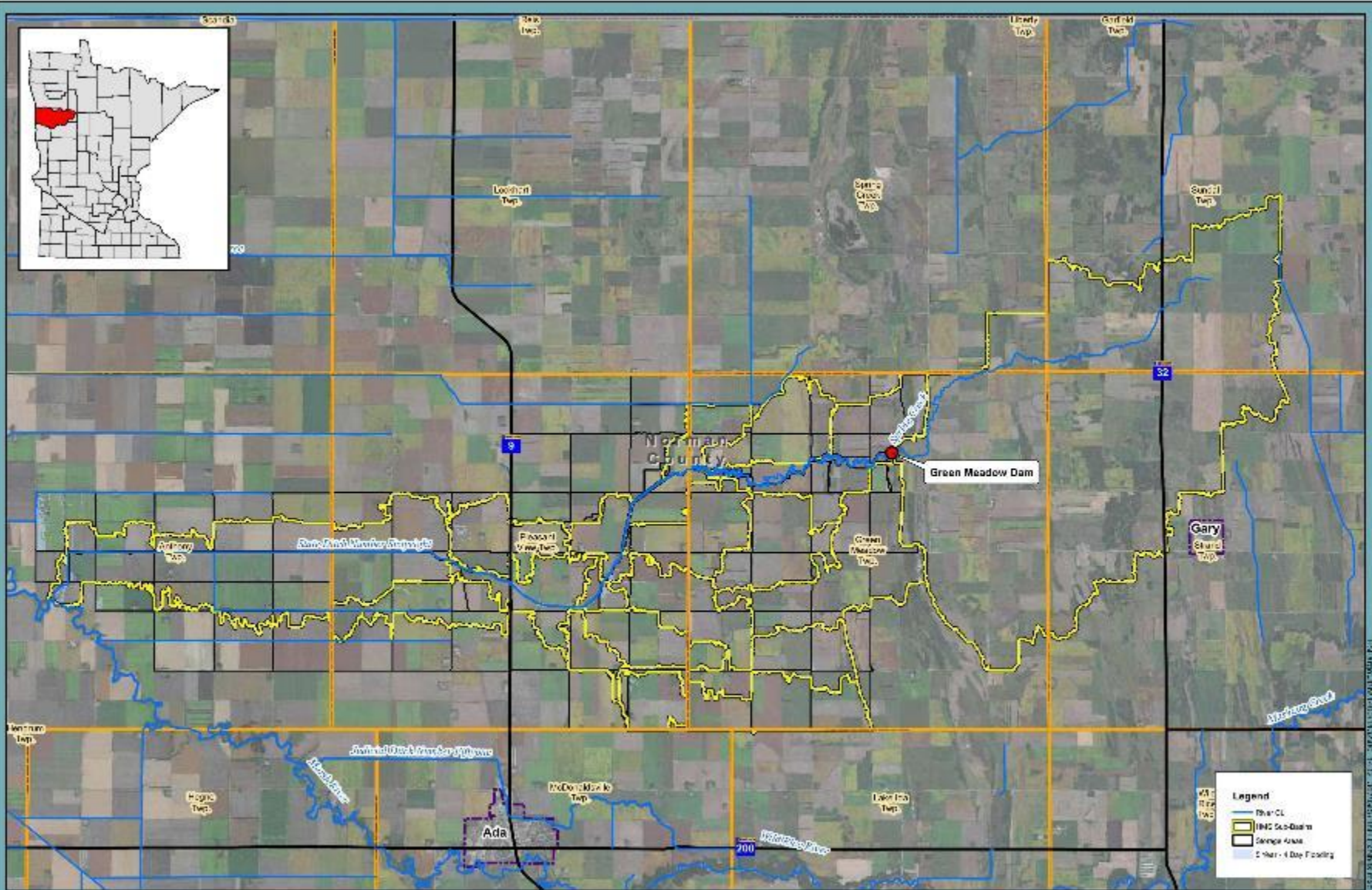


E-9.1

Exhibit 9.1: 24hr Flood Events (All)
 Hydrology and Hydraulics Report
 Green Meadow Sub-Watershed Plan
 NRCS RCPP Watershed Plan



1:2" map, 100' contour interval, 1:25,000 aerial photography

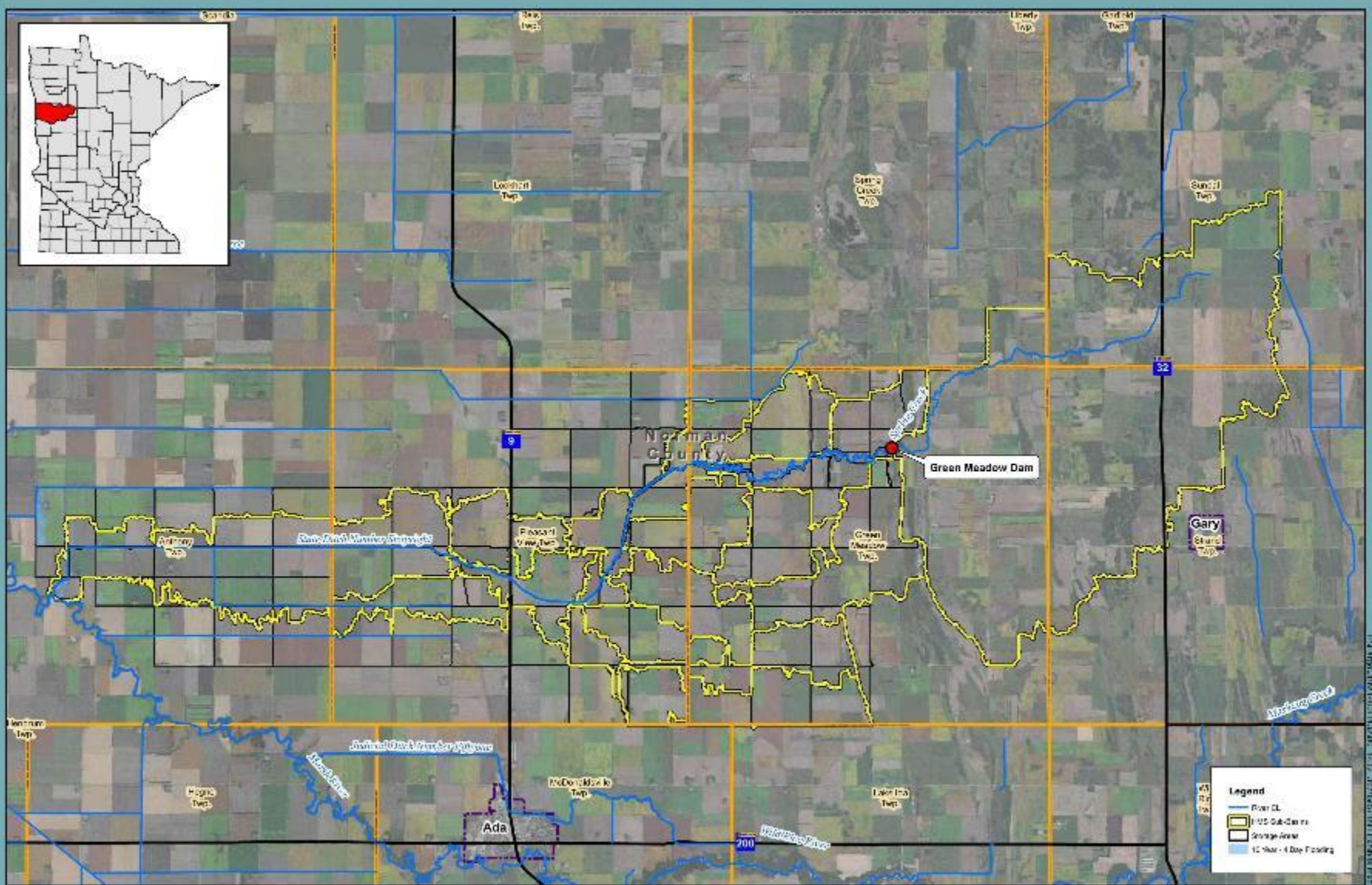


E-10.3

Exhibit 10.3: 4 Day Flood Events (5 - Year)
 Hydrology and Hydraulics Report
 Green Meadow Sub-Watershed Plan
 NRCS RCPP Watershed Plan



1:2" map - 100 feet contour - 10' - 10' contour interval



Legend

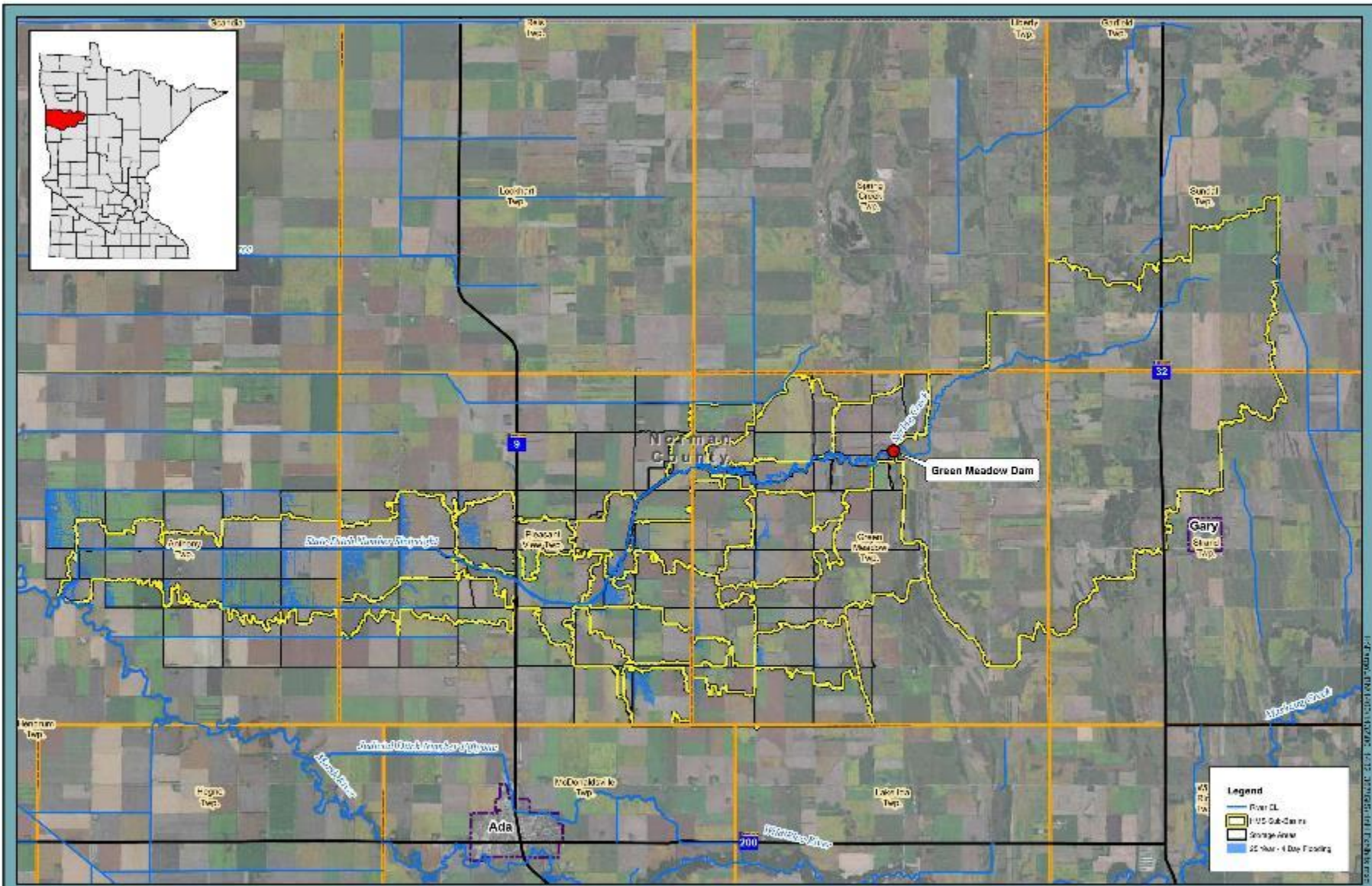
- River CL
- 10 Year - 4 Day Flooding
- Storage Area
- Green Meadow Dam

E-10.4

Exhibit 10.4: 4 Day Flood Events (10 - Year)
 Hydrology and Hydraulics Report
 Green Meadow Sub-Watershed Plan
 NRCS RCPP Watershed Plan



1:2" map - 100 feet contour - 10' contour interval

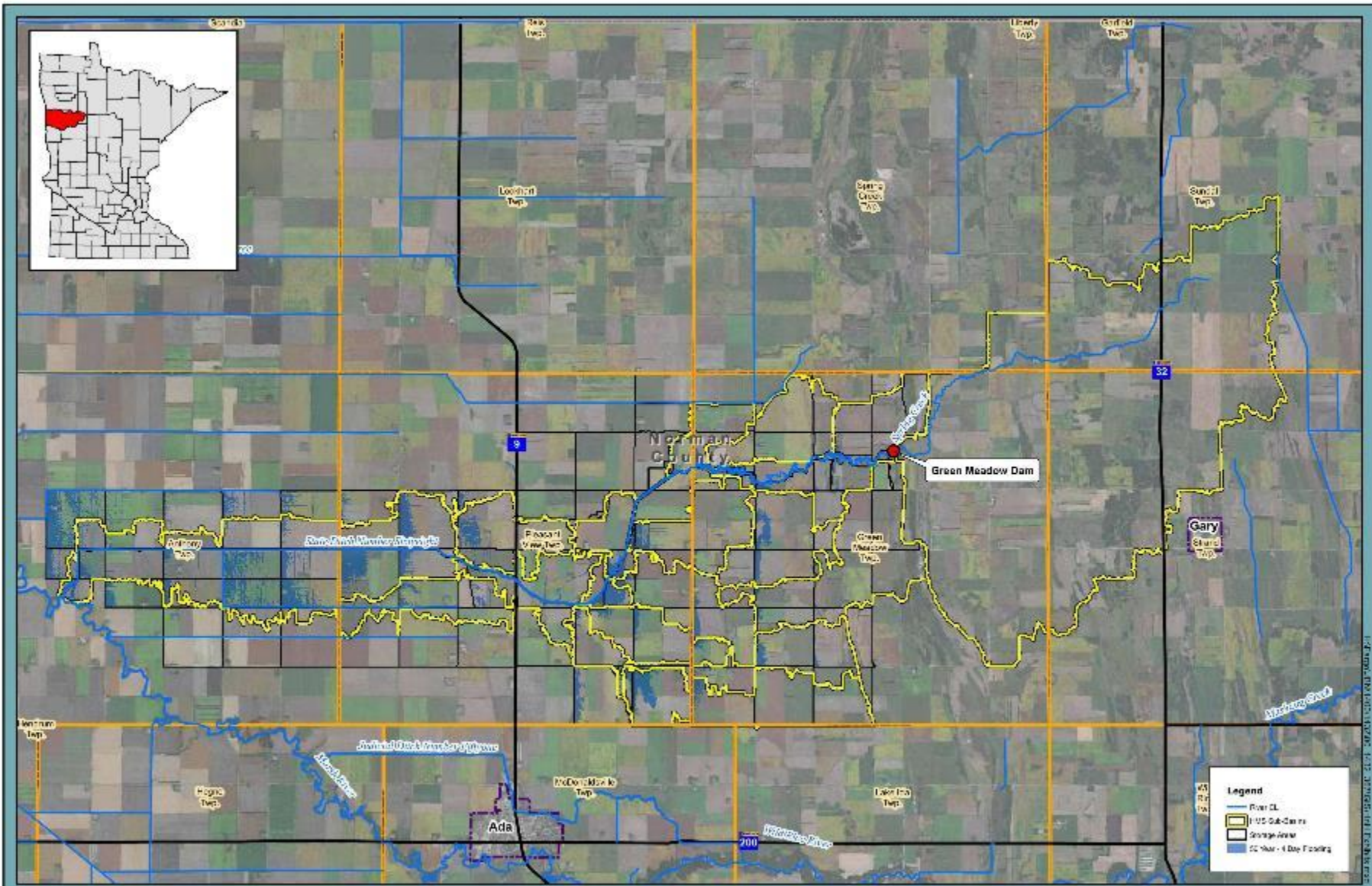


E-10.5

Exhibit 10.5: 4 Day Flood Events (25 - Year)
 Hydrology and Hydraulics Report
 Green Meadow Sub-Watershed Plan
 NRCS RCPP Watershed Plan



1:2" map - 100 feet contour - 10' - 20' interval and 100 feet

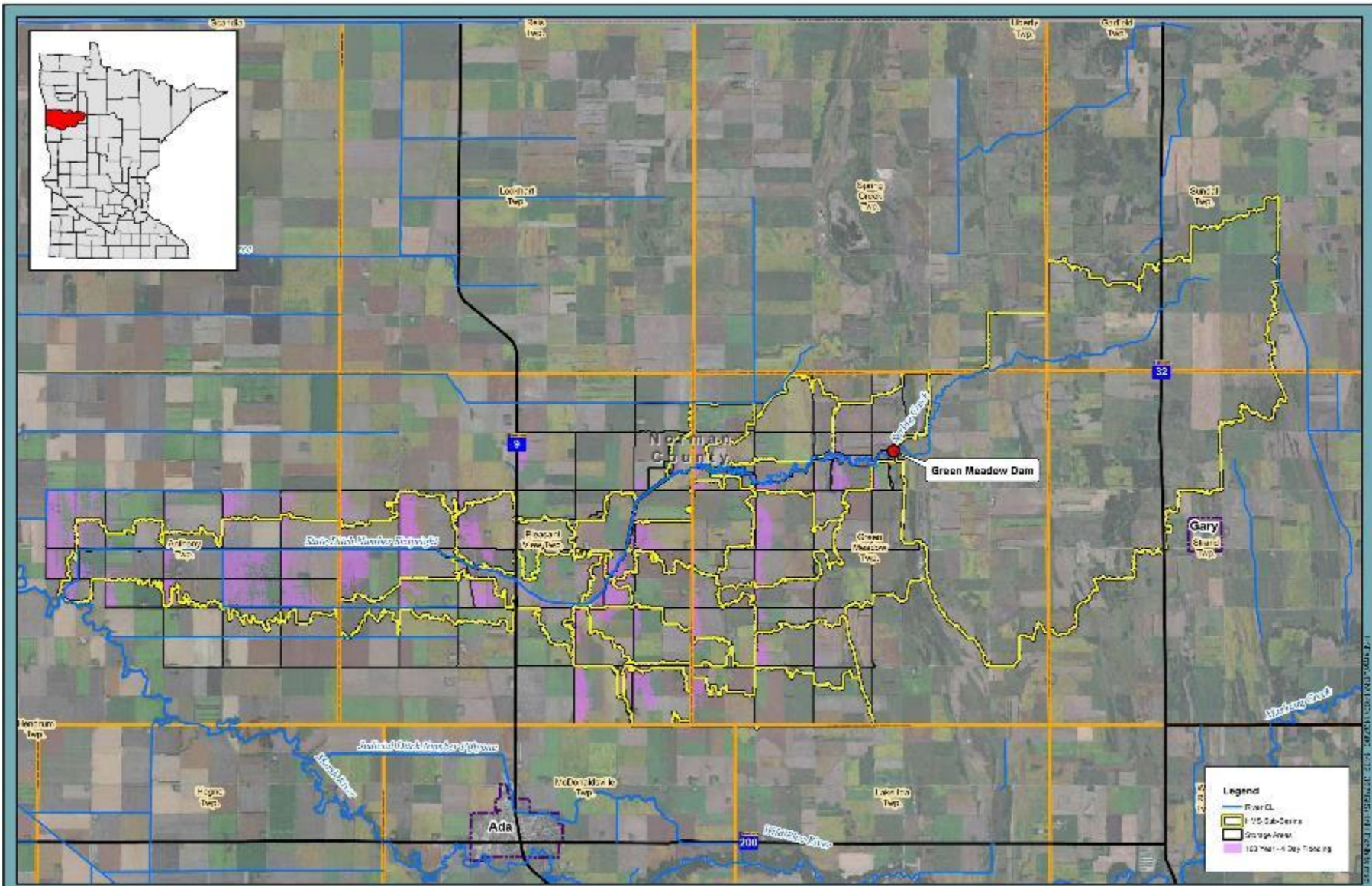


E-10.6

Exhibit 10.6: 4 Day Flood Events (50 - Year)
 Hydrology and Hydraulics Report
 Green Meadow Sub-Watershed Plan
 NRCS RCPP Watershed Plan



1:2" map - 100' contour interval - 10' contour interval

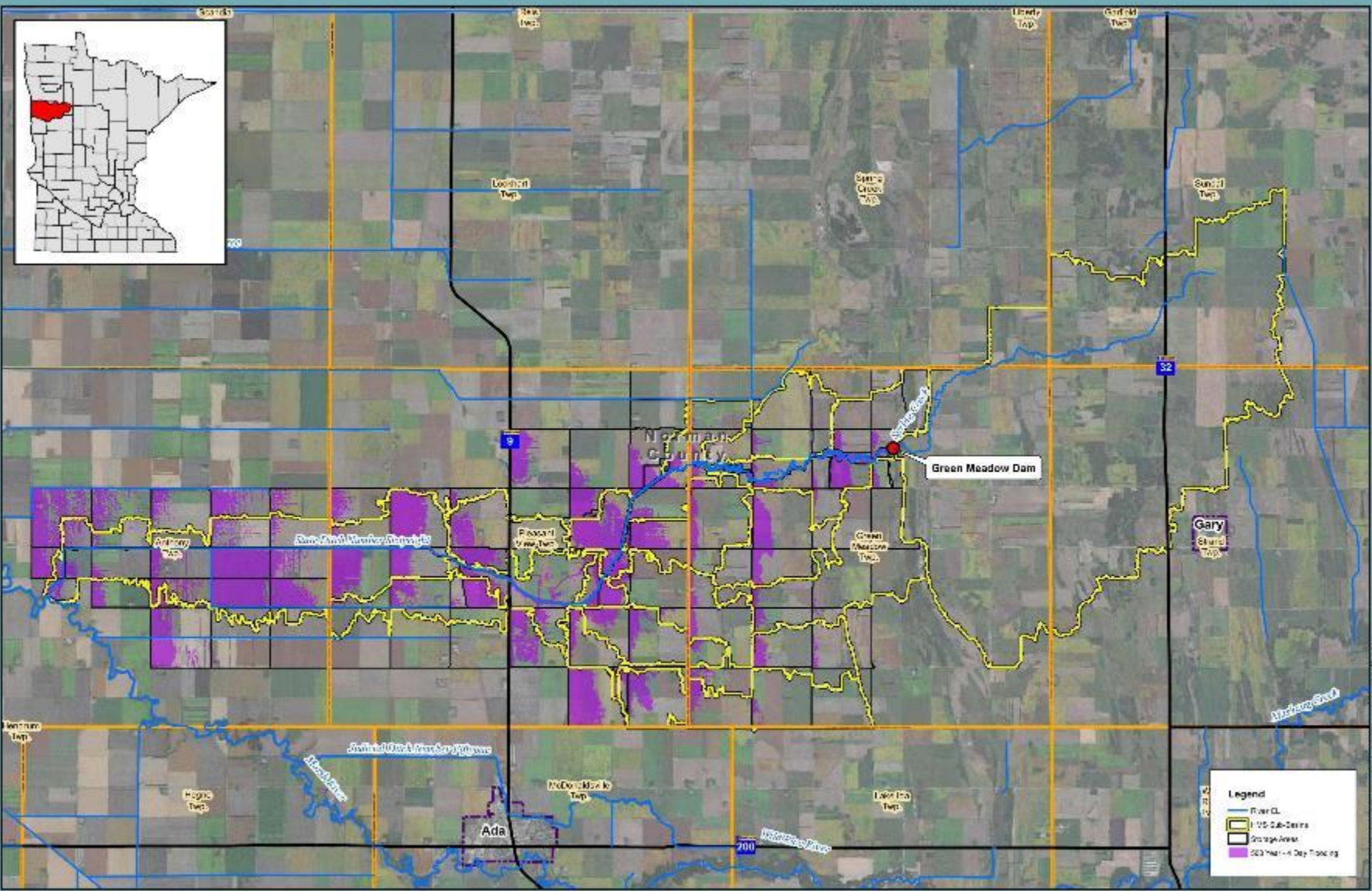


E-10.7

Exhibit 10.7: 4 Day Flood Events (100 - Year)
 Hydrology and Hydraulics Report
 Green Meadow Sub-Watershed Plan
 NRCS RCPP Watershed Plan



1:25,000 - 10/15/2010 - 10/15/2010 - 10/15/2010 - 10/15/2010

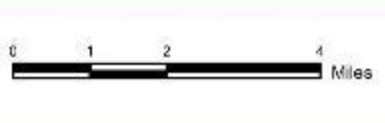


Legend

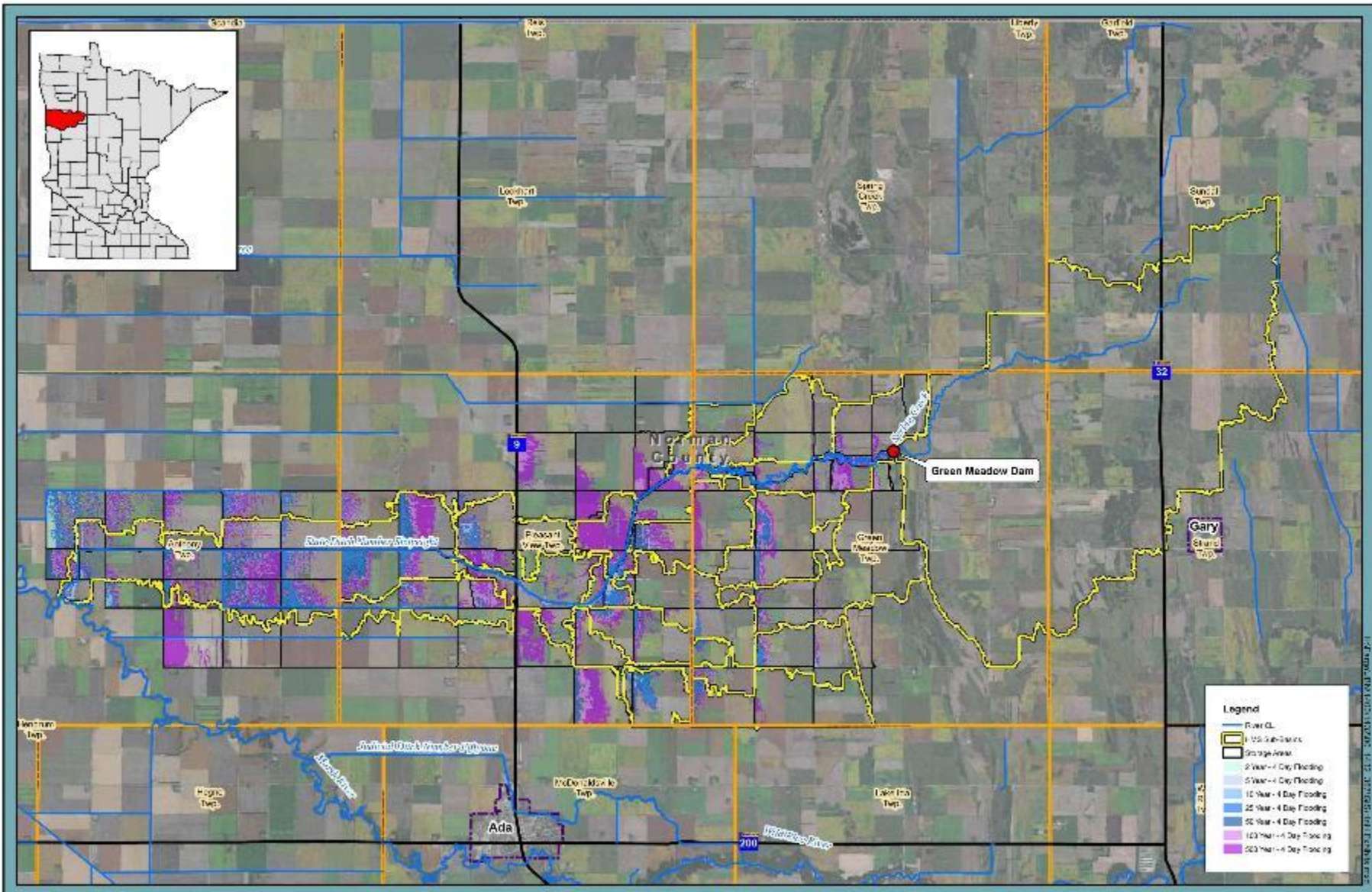
- Blue line: River/Creek
- Yellow outline: 0-100 Sub-Division
- Black outline: Storage Areas
- Purple shading: 500 Year - 4 Day Flood

E-10.8

Exhibit 10.8: 4 Day Flood Events (500 - Year)
 Hydrology and Hydraulics Report
 Green Meadow Sub-Watershed Plan
 NRCS RCPP Watershed Plan



11-17-2010 11:30 AM



E-10.1

Exhibit 10.1: 4 Day Flood Events (All)
 Hydrology and Hydraulics Report
 Green Meadow Sub-Watershed Plan
 NRCS RCPP Watershed Plan



Model Results

- * H/H Report
- * Various Rain and Runoff Events (24hr – 10day)
- * Flows
- * Inundated Areas

GREEN MEADOW SUB-WATERSHED
NRCS RCPP WATERSHED PLAN
PHASE 1 HYDROLOGY & HYDRAULICS REPORT

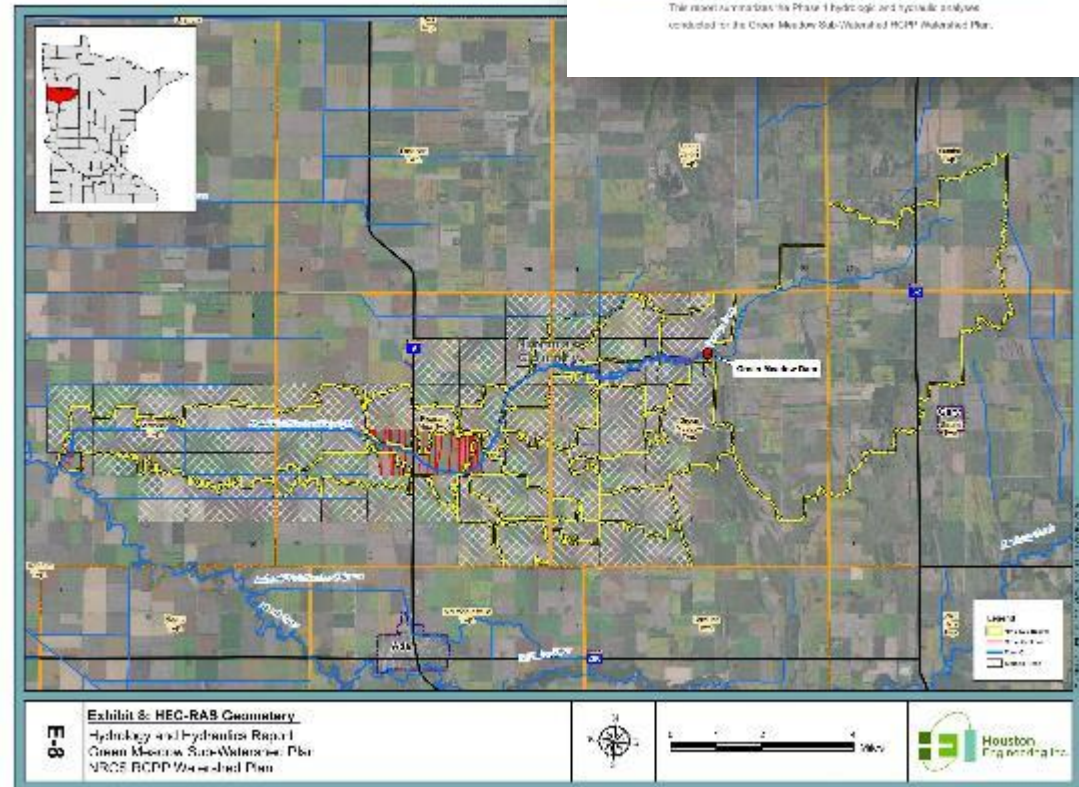
WILD RICE WATERSHED DISTRICT



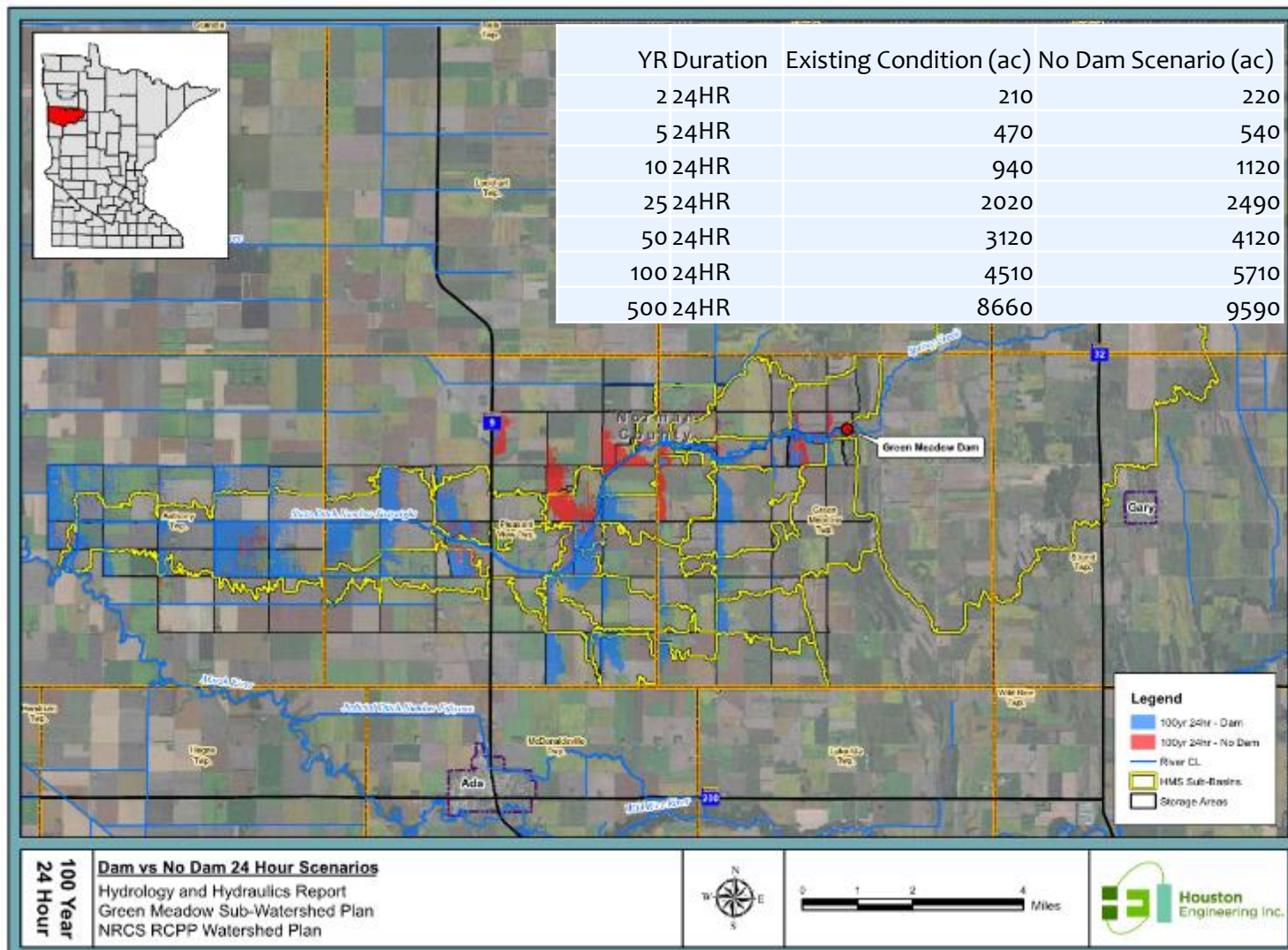
12/2015

This report summarizes the Phase 1 hydrologic and hydraulic analyses conducted for the Green Meadow Sub-Watershed RCPP Watershed Plan.

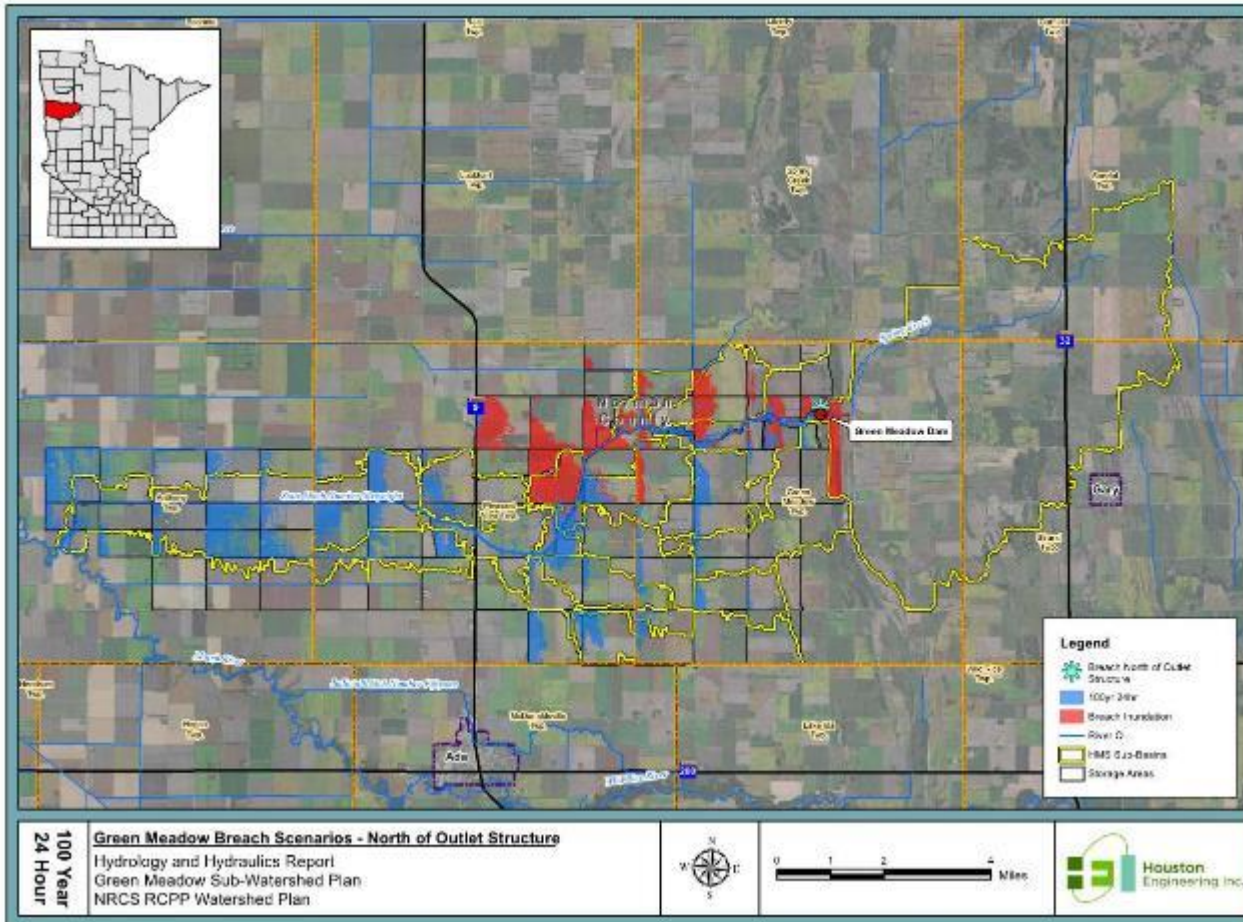
YR Duration	Existing Condition (ac)
2 24HR	210
5 24HR	470
10 24HR	940
25 24HR	2020
50 24HR	3120
100 24HR	4510
500 24HR	8660



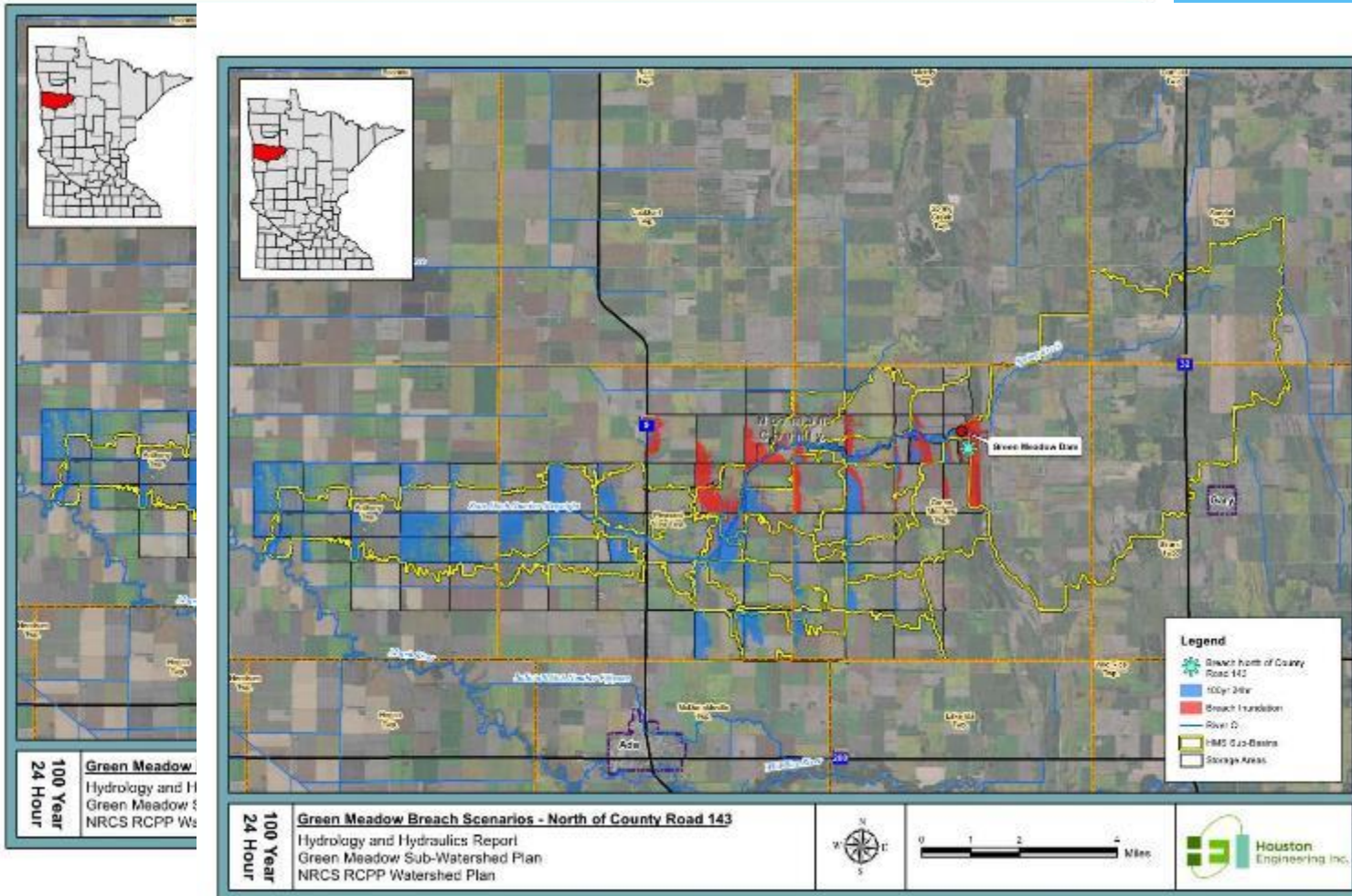
Model Results – Other Scenarios – No Dam



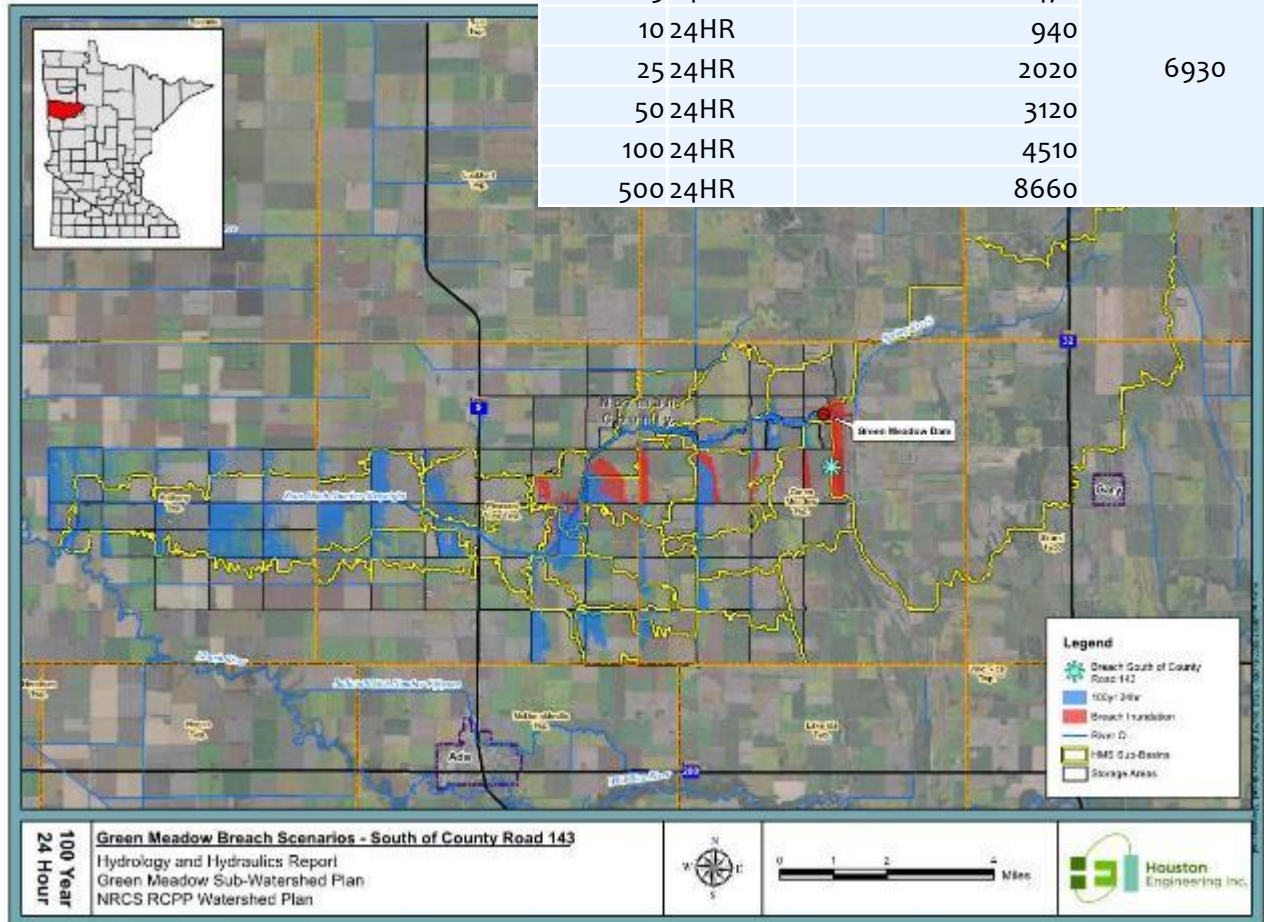
Model Results – Other Scenarios – Approx Breach Analysis



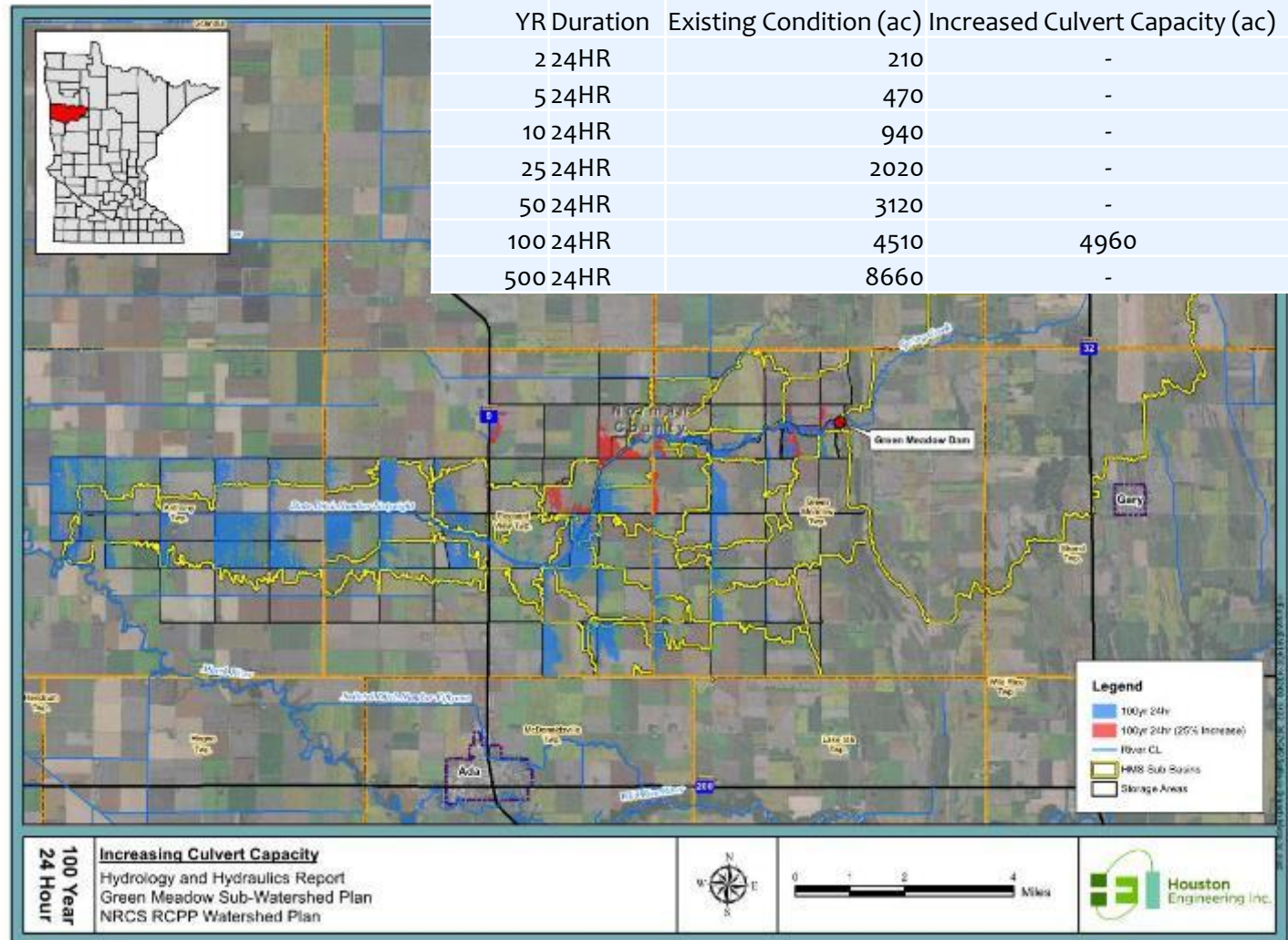
Model Results – Other Scenarios – Approx Breach Analysis



Model Results – Other Scenarios – Approx Breach Analysis



Model Results – Other Scenarios – Increase Drainage Upstream



Purpose and Need - RCPP

- * Draft Purpose/Need 1-25-2017
 - * FDR
 - * Primary – local flooding
 - * Secondary – RRBC Basinwide
 - * NRE
 - * Degraded streams
 - * Degraded wetlands
 - * Flashiness of streams (altered hydrology)
- * Revised Purpose/Need Considerations – **Need Public Input**
 - * 10yr – Maybe 25yr level of ag protection?
 - * Look at upstream issues/modeling?
 - * Roadway infrastructure protection?
 - * Improved Dam Safety (basically making sure that the Dam meets current design standards)?
 - * Others? Entire Watershed Study Area – **Need Public Input**

Questions/Comments/ Form Completion

Public Input

Public Scoping Meeting Comment Form
Green Meadow Sub-Watershed
NRCS Watershed Plan
 February 28, 2018

Background

The Wild Rice Watershed District (WRWD) secured funding through the Red River Retention Authority for Watershed Planning under the Regional Conservation Partnership Program (RCPP), administered by the Natural Resources Conservation Service (NRCS). The RCPP funding was made available for watershed planning in the Green Meadow Sub-Watershed and it is required to follow Public Law 83-566 requirements.

The Watershed Planning must also comply with the National Environmental Protection Act (NEPA) requirements. Tasks required for the NRCS Watershed Plan are described in the *Feasibility Study and Plan of Work* document, and generally include: Identifying a Purpose and Need, Developing an Environmental Assessment, Identifying the Affected Environment (resource problems), Developing Alternatives, Identifying Environmental Consequences of the alternatives, determining a Preferred Alternative, and creating an overall Watershed Plan. Public participation will be a vital component throughout the entire planning process, beginning with this public meeting.

Purpose of Today's Meeting

The purpose of today's meeting is to obtain input from all interested parties including federal, state, and local agencies and other interested groups or persons. Initial input will be focused on resource concerns in and adjacent to the Green Meadow Sub-Watershed. In order to gather input on resource concerns, we would request that the attached comment form be completed and provided to the WRWD.

Identified Resource Concerns:

- **Flooding/Flood Damages** (i.e. agricultural effects from delayed planting, prevented planting, crop flood inundation, road damages, culvert/bridge damages, breakout flows, field erosion/deposition, floodplain management, etc.)
- **Water Quality/Erosion and Sedimentation** (water quality, water resources, soil resources, field erosion/deposition, channel erosion/deposition, etc.)
- **Wildlife and Habitat** (Fish and wildlife, wetlands, endangered and threatened species, invasive species, migratory birds, forest resources, etc.)
- **Other**

Please fill out the following information based on your priorities for the Green Meadow Sub-Watershed. Comment forms will be accepted for all forms postmarked on or before **March 28, 2018**. Completed comment forms can be mailed to the WRWD office at:

Wild Rice Watershed District
 11 East 5th Avenue
 Ada, MN 56510

Or via email to tara@wildricewatershed.org

Name: _____

Phone Number: _____

Address: _____

Affiliation: _____
 (agency, resident, commissioner, mayor, etc...)

Circle the most appropriate ranking for each concern listed below. Refer to the KEY for definitions of each ranking. Concerns where the degree of concern is not indicated will be considered a zero value (No Concern or Not Relevant).

KEY: 0 = No Concern or Not Relevant 1 = Minimal Concern 2 = Minor Concern
 3 = Moderate Concern 4 = Significant Concern 5 = Severe Concern

<i>Concerns for Project Scoping:</i>	No Concern					Severe Concern					
• Flooding/Flood Damages.....	0	1	2	3	4	5					
• Water Quality/Erosion and Sedimentation.....	0	1	2	3	4	5					
• Wildlife and Habitat.....	0	1	2	3	4	5					
• Others (Please describe in comment section).....	0	1	2	3	4	5					

Additional Comments: _____

Public Input

Identified Resource Concerns:

- **Flooding/Flood Damages** (i.e. agricultural effects from delayed planting, prevented planting, crop flood inundation, road damages, culvert/bridge damages, breakout flows, field erosion/deposition, floodplain management, etc.)
- **Water Quality/Erosion and Sedimentation** (water quality, water resources, soil resources, field erosion/deposition, channel erosion/deposition, etc.)
- **Wildlife and Habitat** (Fish and wildlife, wetlands, endangered and threatened species, invasive species, migratory birds, forest resources, etc.)
- **Other**

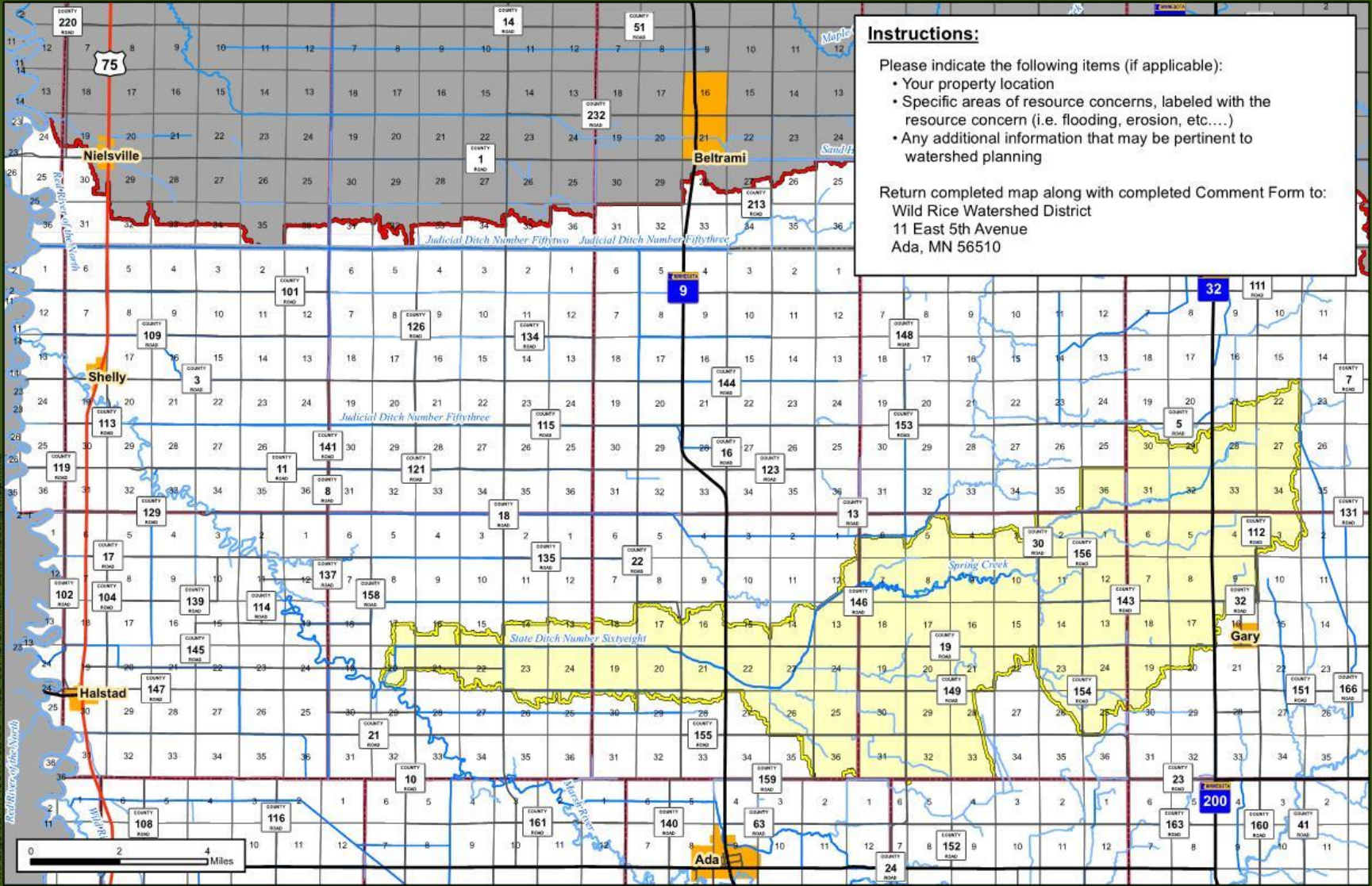
Circle the most appropriate ranking for each concern listed below. Refer to the KEY for definitions of each ranking. Concerns where the degree of concern is not indicated will be considered a zero value (No Concern or Not Relevant).

KEY: 0 = No Concern or Not Relevant 1 = Minimal Concern 2 = Minor Concern
 3 = Moderate Concern 4 = Significant Concern 5 = Severe Concern

Concerns for Project Scoping:

	No Concern					Severe Concern
• Flooding/Flood Damages.....	0	1	2	3	4	5
• Water Quality/Erosion and Sedimentation.....	0	1	2	3	4	5
• Wildlife and Habitat.....	0	1	2	3	4	5
• Others (Please describe in comment section).....	0	1	2	3	4	5

H:\Farroll\IBN1400\143200_1432_367\GIS\Initial Public Meeting Map.mxd
Wild Rice of the North



Instructions:

- Please indicate the following items (if applicable):
- Your property location
- Specific areas of resource concerns, labeled with the resource concern (i.e. flooding, erosion, etc....)
- Any additional information that may be pertinent to watershed planning

Return completed map along with completed Comment Form to:
 Wild Rice Watershed District
 11 East 5th Avenue
 Ada, MN 56510

Wild Rice Watershed District
 Green Meadow Sub-Watershed
 NRCS RCPP Watershed Planning
 Public Comment Form

-  Green Meadow Watershed
-  WRWD Boundary
-  Rivers and Streams
-  County Boundary
-  Township Boundary
-  City Limits

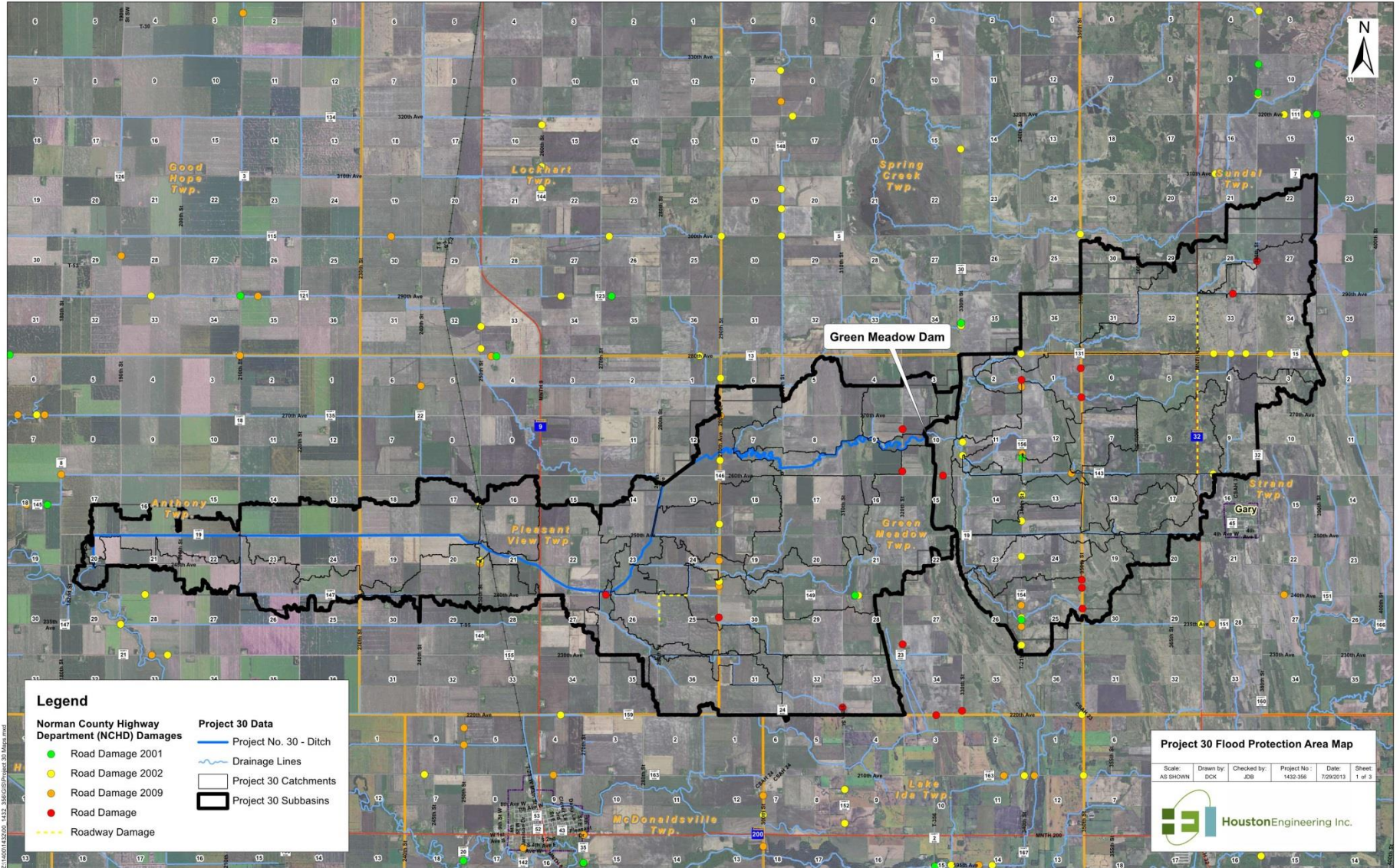


Prepared By:



Houston Engineering Inc.

Problems - Infrastructure Damages



Legend

Norman County Highway Department (NCHD) Damages	Project 30 Data
● Road Damage 2001	— Project No. 30 - Ditch
● Road Damage 2002	— Drainage Lines
● Road Damage 2009	□ Project 30 Catchments
● Road Damage	▭ Project 30 Subbasins
● Roadway Damage	

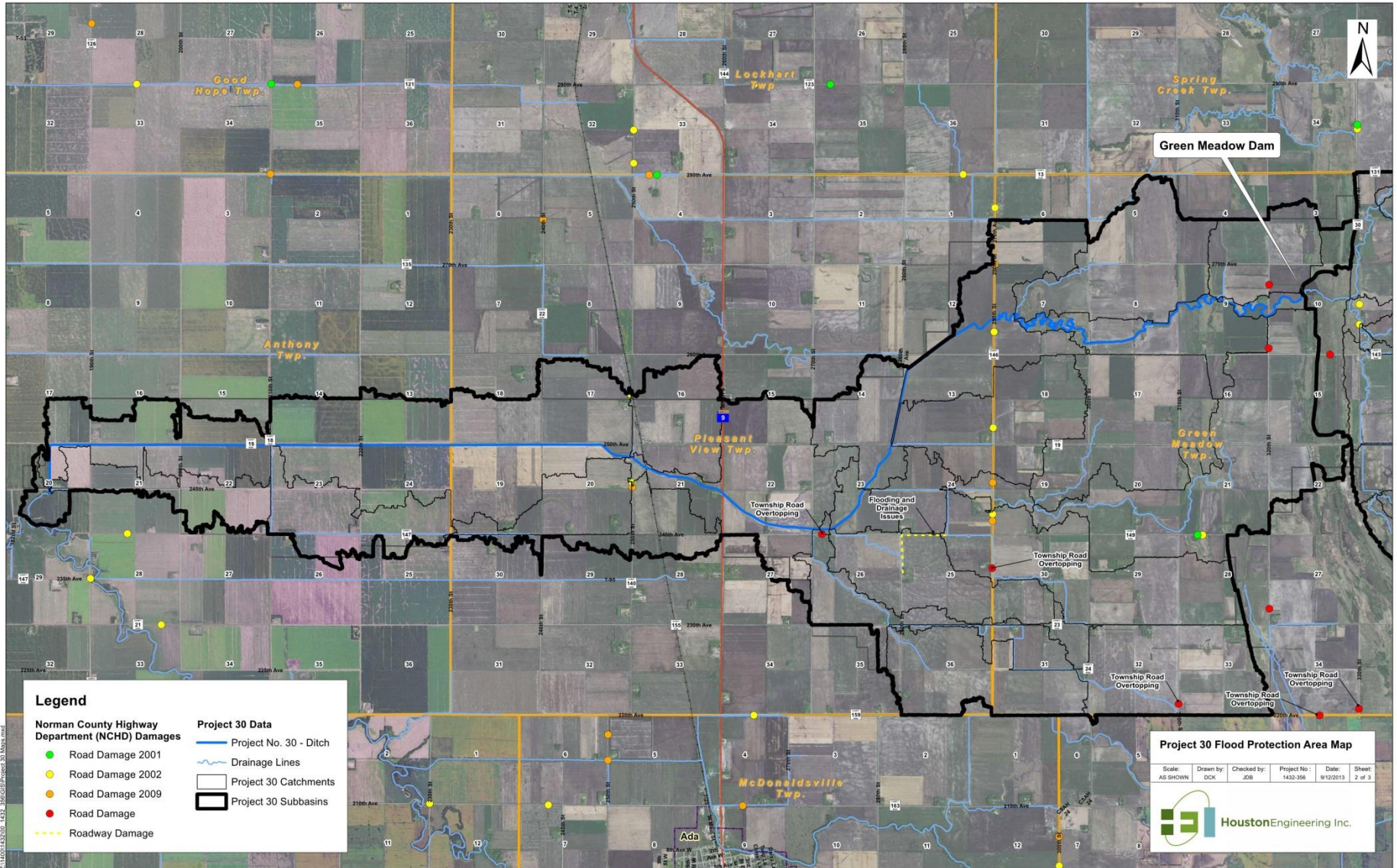
Project 30 Flood Protection Area Map

Scale: AS SHOWN	Drawn by: DCR	Checked by: JDB	Project No: 1430-308	Date: 7/26/2013	Sheet: 1 of 3
-----------------	---------------	-----------------	----------------------	-----------------	---------------

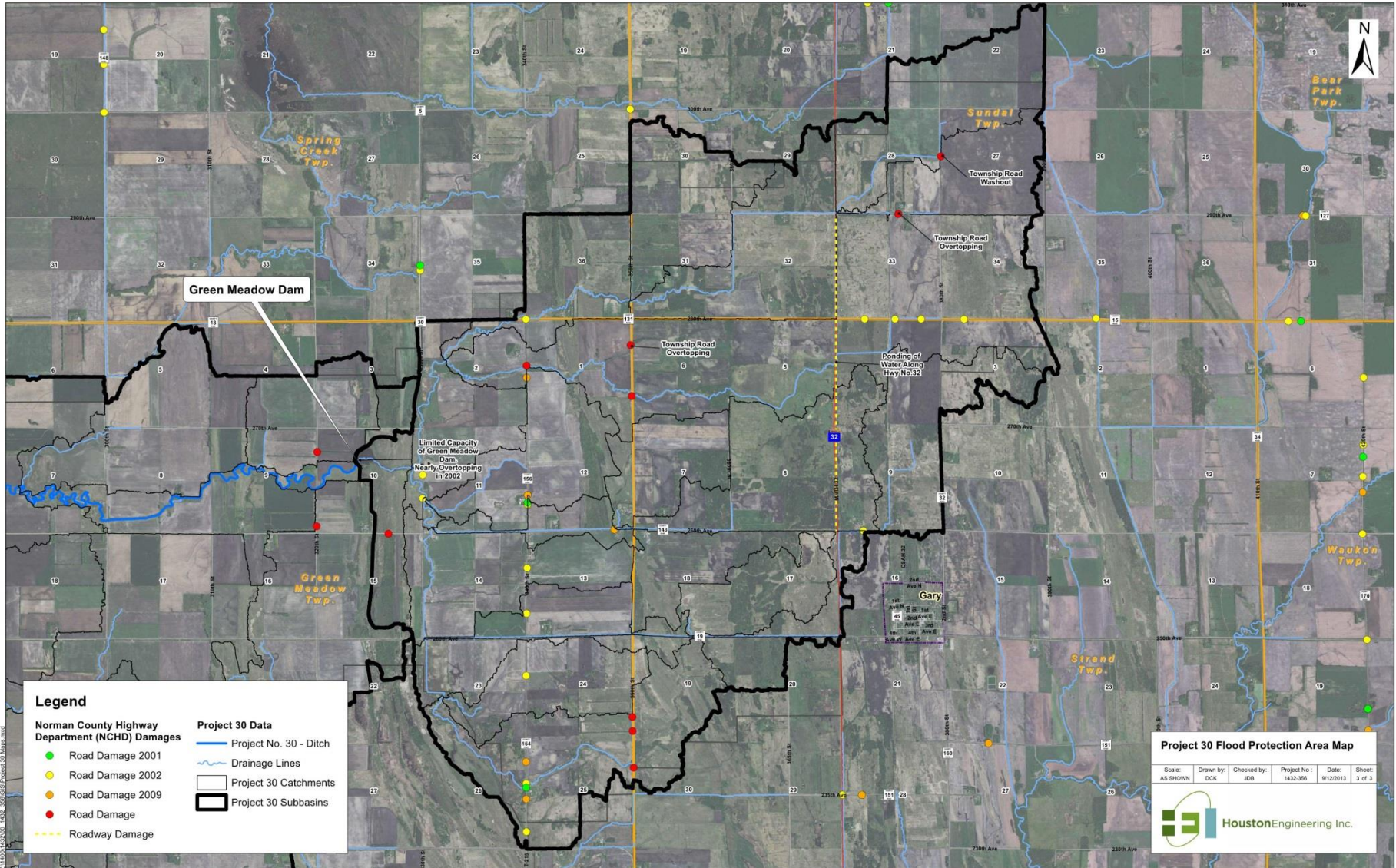
HoustonEngineering Inc.

Z:\43001430308_1430_308\Figures\Project 30 Map.mxd

Problems - Infrastructure Damages



Problems - Infrastructure Damages



Next Steps

- * Review Outcomes from today with WRWD Board
 - * Continue or Stop?
- * Project Team Meeting
 - * Update membership
- * Revised Review Point No. 2 – Purpose/Need
- * Revised Alternatives Consideration / Development
- * Public Input
- * Select Preferred Alternative
- * Permitting/Request Funding/Final Design/Construction.....

Questions