



State of Illinois
Illinois Department of Natural Resources



Report on
ALEXANDER COUNTY, ILLINOIS
Hazard Mitigation Project



Illinois
Department of
**Natural
Resources**

Office of Water Resources | SEPTEMBER 2013

ALEXANDER COUNTY, ILLINOIS
FLOOD HAZARD MITIGATION PROJECT

Alexander County, Illinois

SEPTEMBER 2013

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

OFFICE OF WATER RESOURCES

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I. INTRODUCTION

This report discusses the flood hazard mitigation measures requested by the Alexander County and recommended for implementation by the Illinois Department of Natural Resources, Office of Water Resources. The County's adopted Flood Hazard Mitigation Plan recommends that certain repetitive flood loss properties located within the 100-year floodplain and within the corporate limits of the County be acquired, demolished, and the site maintained for public open space use, thereby eliminating future flood damages and threats to public health.

II. DESCRIPTION OF THE PROBLEM

Alexander County, Illinois has suffered repetitive structural flood losses due to high stages on the Cache River, Mississippi River and the Ohio River and sometimes all three at once. Major flooding has occurred 19 times between 1844 and 2011, with the most recent severe flooding occurring in 2008 and 2011 (flood of record). The Olive Branch area has experienced repeated flood damages including extensive damage after levee breaches in the Len Small Levee System during the 1993, 2008 and 2011 floods. Historically, many residents were forced to evacuate their homes each time flooding occurred. Record flooding in May 2011 was a result of record Spring rainfall in the Ohio River watershed, snow melt on the Mississippi River, existing levee breaches in Pulaski County, and delayed activation of the Birds Point-New Madrid floodway. The opening of the floodway was too late for the Olive Branch area when less than 24 hours earlier, the Len Small Levee System breached in 4 locations. Over 200 structures were inundated with up to six feet of water. The County was also affected by road closures, including State Highway 3 for approximately 4 days around the Olive Branch area, restricting rescue and recovery efforts, emergency services, and potential economic activity.

III. DESCRIPTION OF THE PROJECT

The Alexander Flood Hazard Mitigation Project includes the acquisition and demolition of 111 real property (no mobile homes) structures including clearing of the properties acquired, and reshaping the properties to safe and manageable conditions. The project also includes the preparation of designs, plans and specifications for the clearing and reshaping of the properties, and acquisition transaction expenses such as title commitments, appraisal costs and recording costs. A listing of the flood prone properties approved for inclusion in the project is included in Section IX of this report.

IV. AUTHORITY AND AUTHORIZATION

Participation in this flood hazard mitigation project by the Department of Natural Resources, Office of Water Resources through its Flood Hazard Mitigation Program is granted under the authority of the "Flood Control Act of 1945," 615 ILCS 15 (2004 State Bar Edition). The Illinois General Assembly appropriated funds to the Department of Natural Resources under Public Act 98-0050, Article 31, Section 10 for cost sharing to acquire flood prone structures and to implement flood hazard mitigation plans.

V. PROJECT BENEFITS

The acquisition of the floodplain properties will greatly reduce the need for future federal and state disaster assistance to affected residents in Alexander County. By removing clusters of structures affected by repetitive flooding in the same area, the project will reduce the need for public rescues and emergency services during flood conditions. The acquisition and demolition of the project structures will also allow the County to expand its public open space holdings in the County.

The Department has evaluated the economic feasibility associated with the removal of the project's floodplain structures using the Department's DAMAGES flood damage assessment model. The economic feasibility assessment assumed that flood damages in the County were abated by the existing levee systems up to a 25-year frequency event on the Mississippi River. This economic assessment computed the capitalized value of the flood damage reduction benefits created by the elimination of these structures to be just over \$5,263,000. The Department will participate in the project up to the capitalized value of the computed flood damage reduction benefits (\$5,000,000) assuring at least a 1:1 return on the State's investment.

Through a Memorandum of Agreement between the Department and the Illinois Emergency Management Agency (IEMA) the \$5,000,000 provided by the Department will be used as a 25% local cost share global match under the Federal (FEMA) Hazard Mitigation Grant Program (HMGP) to provide up to an additional \$15,000,000 for all Flood Hazard Mitigation projects identified in Disaster Declaration 1935, including Alexander County, Jackson County, Gallatin County and the City of Metropolis.

VI. PROJECT COSTS

The total estimated cost of the project is \$8,877,000 including acquisition, asbestos abatement, demolition and clearance of the properties acquired, reshaping properties acquired to a safe and manageable condition, preparation of designs,

plans and specifications for the clearance and reshaping of the properties, and property acquisition transaction expenses (such as title commitments, attorney fees, preparation of legal descriptions, plat drawings, recording costs, associated appraisal costs and, if necessary, associated survey costs or other similar expenses). The Department will provide up to \$5,000,000 for the project. The County will be responsible for the remainder of the project costs estimated at approximately \$3,877,000. These remaining flood hazard mitigation costs will be funded by the Illinois Emergency Management Agency using Federal (FEMA HMGP) funds granted to the County for this project.

VII. ENVIRONMENTAL REVIEW

To identify any potential environmental impacts to cultural and biological resources associated with the mitigation work proposed, an environmental review was completed by the Illinois Department of Natural Resources. This review concluded that the mitigation work could proceed without any anticipated impacts to the noted environmental resources. As part of the review process, the Illinois Historic Preservation Agency determined that no historic properties, subject to protection under Section 106 of the National Historic Preservation Act of 1996, will be adversely impacted by the mitigation work.

VIII. PROJECT SPONSORSHIP AND FUTURE ACTIONS

Prior to expenditure of State Funds for the project, a local governmental entity, known as a project sponsor, must agree to participate in the mitigation project with the Illinois Department of Natural Resources, Office of Water Resources. Alexander County serves as that sponsor for this project through an Intergovernmental Agreement with the Department of Natural Resources. As a project sponsor, Alexander County has agreed to:

- acquire the property in fee with title running in the name of the People of the State of Illinois, Department of Natural Resources, Office of Water Resources, demolish or otherwise remove the improvement(s) on the property acquired, develop the designs, plans and specifications needed, prepare contract documents, solicit bids, award contracts, supervise the work, and perform all other work necessary to complete the project;
- furnish billings to the Department of Natural Resources with supporting documentation as evidence that the work covered under such billing(s) is completed and in connection with the project for reimbursement;
- obtain all federal and state permits, in the name of the County, as may be necessary to implement and maintain the project;
- pay all project costs over and above the Department's \$5,000,000 maximum funding obligation;

- maintain in perpetuity all acquired flood prone property in an open, safe, neat and manageable condition from the time of closing with the private owner; and
- maintain eligibility in the National Flood Insurance Program and continue to adopt and enforce appropriate ordinances to satisfy the Federal Emergency Management Agency and the Department's requirements relative to the regulation of development in floodplains under the jurisdiction and control of the County.

IX. LIST OF POTENTIAL ACQUISITION SITES (real property only)

ALEXANDER COUNTY

ITEM	ADDRESS	PARCEL NUMBER
1	21601 Cypress Drive Olive Branch	18-03-03-104-001
2	20383 Mel Grah Road Olive Branch	18-03-03-105-013
3	27063 Grapevine Trail	07-02-03-050-028
4	22733 Old Mill Road	07-02-32-072-002
5	22491 Old Mill Road Olive Branch	07-02-32-073-045
6	26485 State Highway 3 Olive Branch	07-02-32-073-020
7	21667 Cypress Drive Olive Branch	18-03-03-104-007
8	21591 Miller City Road Miller City	08-02-33-092-006
9	21497 Miller City Road Miller City	08-02-33-092-007
10	20449 Mel Grah Road Olive Branch	18-03-03-106-016
11	113 South 3rd Street Thebes	18-03-03-084-022
12	22020 Oakwood Road Olive Branch	08-02-04-081-028
13	22571 Old Mill Road Olive Branch	07-02-32-072-003
14	17123 Naomi Ruthie Avenue Tamms	08-02-01-079-027
15	25265 State Highway 3 Olive Branch	08-02-04-081-035
16	31101 Reiman Road McClure	10-02-30-118-014
17	26755 State Highway 3 Olive Branch	18-03-03-099-015
18	20728 Vaughn Lane Olive Branch	18-03-03-100-023
19	26711 State Highway 3 Olive Branch	07-02-32-071-028
20	25551 State Highway 3 Olive Branch	08-02-04-081-001
21	21772 Cypress Drive Olive Branch	18-03-03-106-006
22	28085 Bodieville Road Thebes	18-03-03-078-018
23	21030 Miller City Road Miller City	08-02-28-090-017
24	22621 Old Mill Road Olive Branch	07-02-32-072-042
25	21664 Cypress Drive Olive Branch	18-03-03-104-025
26	22029 Cypress Drive Olive Branch	07-02-33-075-008
27	22524 State Rt.127 Tamms	07-02-36-077-003
28	26532 South Rt.3 Olive Branch	07-02-32-073-032
29	21723 Cypress Drive Olive Branch	18-03-03-104-013
30	28166 Bodieville Road Thebes	10-02-33-120-001
31	24163 Miller City Road Miller City	18-03-03-115-015
32	20464 Unity Road Olive Branch	07-02-33-075-012
33	22476 Old Horeshoe Lake Road Olive Branch	07-02-32-073-013
34	17810 Sandy Ridge Road Tamms	07-02-36-076-022

35	21741 Cypress Drive Olive Branch	18-03-03-104-015
36	1 Lost Acre Road Olive Branch	18-03-03-117-001
37	30504 Gerard Road McClure	10-02-20-113-020
38	27386 Miller City Road Olive Branch	08-02-05-081-028
39	20309 Mel Grah Road Olive Branch	18-03-03-105-005
40	28071 Bodieville Road Thebes	18-03-03-078-017
41	19950 East Side Drive Olive Branch	18-03-03-119-001
42	27380 Miller City Road Olive Branch	08-02-05-081-029
43	22225 Promised Land Road Miller City	08-02-20-087-003
44	20357 Mel Grah Road Olive Branch	18-03-03-105-008
45	18784 Sante Fe Road Miller City	17-02-00-139-004
46	31671 Reiman Road McClure	10-02-19-113-010
47	19669 Sante Fe Road Miller City	17-02-00-139-025
48	21609 Shipley Lane Olive Branch	08-02-04-081-025
49	21606 Shipley Lane Olive Branch	08-02-04-081-007
50	32149 Reiman Road McClure	10-02-19-112-022
51	21030 Morgan Street Olive Branch	18-03-03-117-003
52	22554 Old Mill Road Olive Branch	07-02-33-074-023
53	22680 Old Mill Road Olive Branch	07-02-33-074-023
54	21970 Pecan Road Miller City	07-02-32-073-008
55	27222 Miller City Road Olive Branch	08-02-05-082-003
56	27222 Miller City Road Olive Branch	08-02-05-082-003
57	27222 Miller City Road Olive Branch	08-02-05-082-003
58	22490 Miller City Road Miller City	17-02-00-139-015
59	26017 State Highway 3 Olive Branch	18-03-03-102-004
60	17106 Naomi Ruthie Drive Unity	08-02-01-079-021
61	21707 Cypress Drive Olive Branch	18-03-03-104-012
62	19921 Eastside Drive Olive Branch	18-03-03-119-020
63	21780 Cypress Drive Olive Branch	18-03-03-106-007
64	21633 Cypress Drive Olive Branch	18-03-03-104-004
65	26109 State Highway 3 Olive Branch	07-02-33-074-022
66	26215 State Highway 3 Olive Branch	07-02-33-074-026
67	22026 Oakwood Road Olive Branch	08-02-04-081-016
68	21602 Cypress Drive Olive Branch	18-03-03-104-019
69	18091 Gentle Street Cairo	18-03-03-002-020
70	21825 Promised Land Road Miller City	08-02-20-086-026
71	21078 Miller City Road Miller City	08-02-28-090-016
72	26011 State Highway 3 Olive Branch	18-03-03-102-011
73	21788 Cypress Drive Olive Branch	18-03-03-106-008
74	18199 Cache Street Cairo	04-02-19-028-012

75	21777 Cypress Drive Olive Branch	18-03-03-106-002
76	825 Fourth Street Tamms	18-03-03-038-007
77	21794 State Highway127 Tamms	18-03-03-013-026
78	21298 Waston Road Miller City	08-02-32-091-026
79	17384 Sandy Ridge Road Tamms	07-02-36-076-008
80	21744 Cypress Drive Olive Branch	18-03-03-105-002
81	21989 Oakwood Road Olive Branch	08-02-04-081-015
82	20565 Lake Drive Olive Branch	08-02-04-081-012
83	29366 Reiman Road McClure	10-02-29-118-004
84	27338 Miller City Road Miller City	08-02-05-082-002
85	20609 North Lake Drive Olive Branch	18-03-03-118-006
86	20527 North Lake Drive Olive Branch	08-02-04-081-012
87	21720 Cypress Drive Olive Branch	18-03-03-104-031
88	30 Front Street Tamms	14-02-02-147-029
89	31378 Reiman Road McClure	10-02-19-113-004
90	24539 Miller City Road Miller City	08-02-17-085-018
91	27466 Miller City Road Olive Branch	08-02-05-081-027
92	24283 Miller City Road Miller City	08-02-20-086-017
93	19522 E Side (Carp Lane) Drive Olive Branch	18-03-03-119-004
94	26273 State Highway 3 Olive Branch	07-02-33-074-025
95	26635 State Highway 3 Olive Branch	07-02-32-073-028
96	24228 Miller City Road Miller City	08-02-20-086-019
97	24242 Miller City Road Miller City	08-02-20-086-022
98	19100 Sante Fe Road Miller City	17-02-00-139-008
99	20393 Mel Grah Road Olive Branch	18-03-03-105-014
100	20721 Vaughn Lane Olive Branch	18-03-03-100-028
101	24257 Miller City Road Miller City	18-03-03-115-002
102	22194 Promised Land Road Miller City	08-02-20-086-012
103	21586 Miller City Road Miller City	08-02-28-090-015
104	21644 Cypress Drive Olive Branch	18-03-03-104-024
105	24153 Miller City Road Miller City	18-03-03-115-011
106	22000 Miller City Road Miller City	18-03-03-116-004
107	22024 Miller City Road Miller City	18-03-03-116-003
108	21929 Miller City Road Miller City	08-02-32-091-011
109	22552 Miller City Road Miller City	17-02-00-139-017
110	21793 Cypress Drive Olive Branch	18-03-03-106-003
111	26045 State Highway 3 Olive Branch	18-03-03-100-005

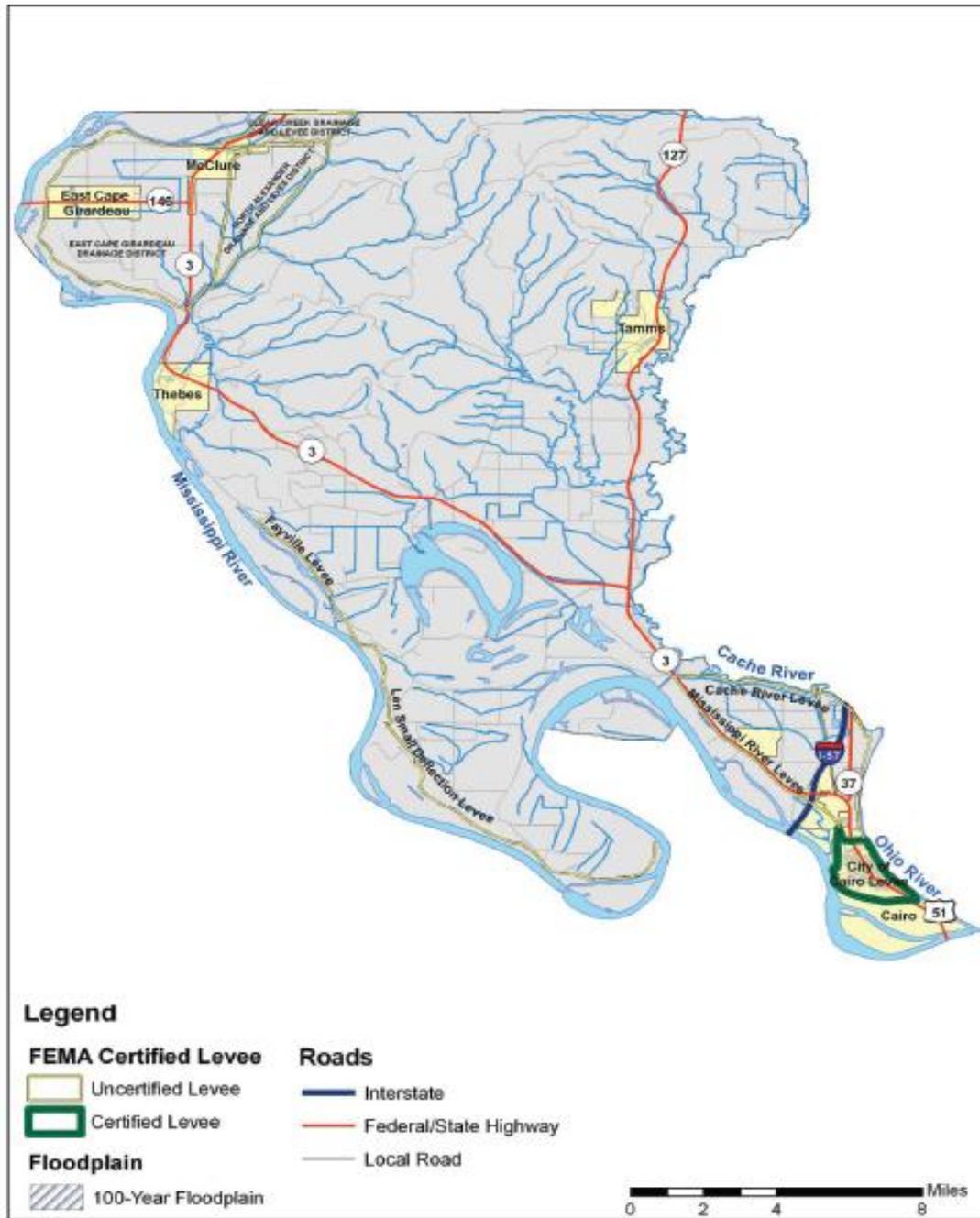


Exhibit 1: ALEXANDER COUNTY LOCATION AND LEVEE MAP

Courtesy of the Alexander County Hazard Mitigation Plan

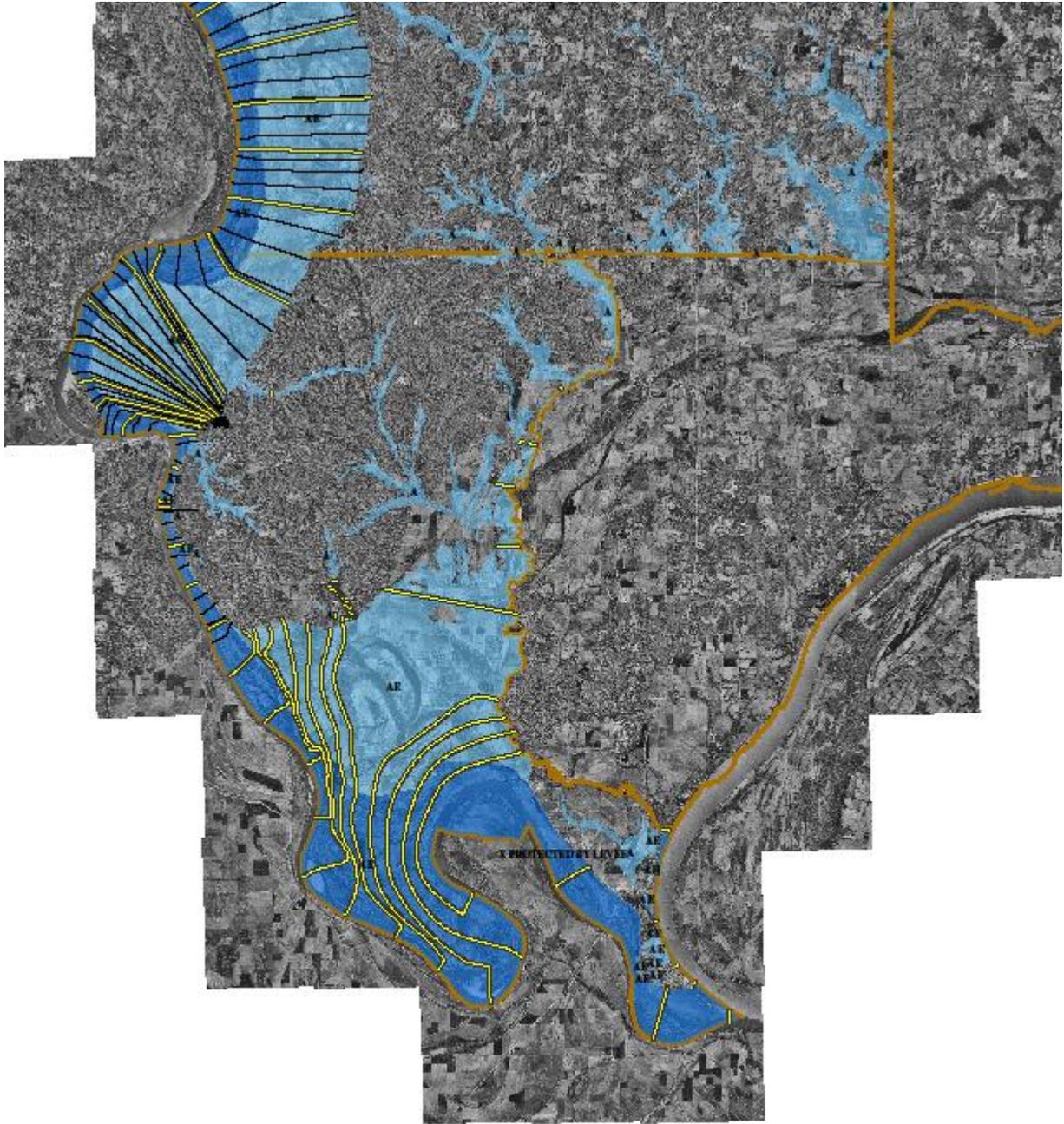


Exhibit 2: ALEXANDER COUNTY FLOOD INSURANCE STUDY BASE MAP (Scale 1:125,000)