

2008 Iowa Mitigation Success Story – Avoided Losses through Property Acquisition and Relocation for Open Space

Summary

The State of Iowa has acquired over 1500 properties in special flood hazard areas over the past two decades to mitigate the adverse effects of riverine flooding on property owners and communities. The goal of this study was to evaluate the losses avoided as a result of implementation of these mitigation measures completed in Iowa prior to the catastrophic flooding event that occurred in 2008. These measures removed structures in special flood hazard areas and returned the property to open space through acquisition/demolition and acquisition/relocation projects.

In this study of 12 Iowa communities, a total of \$98,707,041 in losses were avoided due to past mitigation measures that converted property to open space/green space. All of these communities suffered from past flood events and the 703 properties included would have flooded again due to the magnitude and severity of the 2008 floods. An average of \$140,408 in present day costs was avoided for each property that was converted to open space. Comparing the total net present value (or the present day costs to acquire past properties) which equals \$45,016,192, to the total losses avoided (which are considered to be our benefits in this study) results in a positive benefit cost ratio of 2.19. This study illustrates the losses avoided due to past mitigation efforts and the importance of continuing to implement mitigation measures in the State of Iowa. Funding sources from these mitigation projects includes the Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance, Repetitive Flood Claims, Pre-Disaster Mitigation program, Community Development Block Grants (CDBG), and State and Local funds. The State is in the process of acquiring approximately 2000 additional flood prone properties through the HMGP, CDBG, and other programs.

Methodology for Loss Avoidance Study

Communities that have been included in this study are those that have had a significant number of acquisitions from past events and experienced at least a 100+ year flood event in 2008. The reasonable assumption is that properties which were mitigated during past disaster declarations would have been impacted again in the 2008 disaster due to the magnitude of the event. The results confirm that structures on those properties would have sustained substantial damage and/or been destroyed. Significant losses were avoided because the properties had previously been acquired and converted to green space.

The net present value of past projects was calculated in order to determine the losses that were avoided by acquiring these properties. This value is used as the cost figure in the final Benefit-Cost ratio and was necessary so that current costs could be compared to current benefits.

Total 2008 losses avoided are the benefits in the final Benefit-Cost ratio. This figure is comprised of avoided costs for replacement value, contents, and displacement. Below is an explanation of how all figures were derived.

Net Present Value (2008) of Past Projects - COSTS

The Net Present Value of past projects was determined by using an inflation calculator that is built into FEMA Benefit Cost Analysis Software version 3.0. Using this software, a user can convert costs of previous projects into current dollars.

First, the “current year” is entered into the module (2008 is the year for which present values were needed). Next the costs of all previous projects are entered into a table along with the year that the project was approved. Functions within the module convert the previous costs into “Current Dollars”. The table allows for several entries in cases where there were multiple projects completed by a community in different years.

Once the Net Present Value was found for each project in each community, the results were entered into a chart that shows each community’s projects, the corresponding year, and the current value of each project’s initial cost.

Community	Old Damage Estimate	Disaster Year/FEMA approval Date	Damage Estimate (Current 2008 dollars)
Cedar Falls	\$55,000	1998	\$73,485
Cedar Falls	\$2,200,051	1999	\$2,870,568
Cedar Falls	\$3,694,551	1994	\$5,432,370
Cedar Falls	\$756,040	2000	\$957,729
Dunkerton	\$742,526	1999	\$968,828
Dunkerton	\$106,361	2002	\$127,001
Dunkerton	\$285,426	2000	\$361,569
Waverly	\$60,996	2002	\$72,832
Waverly	\$59,893	2001	\$73,661
Waverly	\$351,362	1999	\$458,448
Shell Rock	\$73,779	2005	\$80,620
Shell Rock	\$528,503	1999	\$689,577
Dyersville	\$236,932	1999	\$309,143
Dyersville	\$53,990	2002	\$64,467
Dyersville	\$154,182	2006	\$163,572
Dyersville	\$488,067	2000	\$618,269
Dyersville	\$675,862	2003	\$783,509
Charles City	\$206,415	1999	\$269,325
Charles City	\$254,197	2002	\$303,525
Marion	\$147,589	2003	\$171,096
Marion	\$1,142,544	1994	\$1,679,966
City of Des Moines	\$2,371,390	1999	\$3,094,126
City of Des Moines	\$1,690,258	1993	\$2,550,145
Davenport	\$1,892,421	2002	\$2,259,650
Davenport	\$110,565	2001	\$135,981
Davenport	\$156,091	1994	\$229,512
Chelsea	\$1,167,298	1995	\$1,668,638
Chelsea	\$58,250	2002	\$69,554
Louisa County	\$9,772,868	1994	\$14,369,765
Des Moines County	\$650,361	2002	\$776,565
Des Moines County	\$2,331,394	1995	\$3,332,699

2008 Replacement Values (Losses Avoided) – BENEFIT

Since data is not available to determine replacement values for structures acquired in past acquisition projects, average replacement values for current projects were found and substituted. Square footage per structure is the first element required to find replacement value. For each community, an average square footage per structure was calculated. The square footage for all residences to be acquired was divided by the total number of properties to find this figure. This average square footage per structure was then applied to past projects.

For Marion and Dunkerton that did not have a 2008 project, a total square footage for all 2008 project properties was calculated and divided by the total number of 2008 properties.

Replacement cost per square foot is also necessary to determine replacement value. For this study, \$110 per square foot was found to be an accurate yet conservative building replacement cost per square foot. The figure is based on information provided by several Iowa communities for use in benefit-cost analysis of current acquisition projects. The majority of communities documented that replacement cost per square foot is \$120; however a minority used values between \$95 and \$120.

Average square footage per structure multiplied by \$110 replacement cost per square foot gives the average replacement value per structure. The per structure replacement value is multiplied by the number of past acquisitions to find the total replacement value loss avoided per community.

Community	Total Area of structures in 2008 project (Sq. ft.)	Total Number of structures in 2008 project	Average Square feet of 2008 property	Building Replacement Cost (per sq. ft.)	Average Replacement Value
Cedar Falls	103,690	122	850	\$110	\$93,491
Dunkerton	329,378	303	1,087	\$110	\$119,576
Waverly	88,021	69	1,276	\$110	\$140,323
Shell Rock	3,331	4	833	\$110	\$91,603
Dyersville	42,668	27	1,580	\$110	\$173,833
Charles City	19,510	17	1,148	\$110	\$126,241
Marion	329,378	303	1,087	\$110	\$119,576
City of Des Moines	10,361	12	863	\$110	\$94,976
Davenport	6,039	5	1,208	\$110	\$132,858
Chelsea	3,431	3	1,144	\$110	\$125,803
Louisa County	29,864	30	995	\$110	\$109,501
Des Moines County	22,463	14	1,605	\$110	\$176,495

Example (Cedar Falls):

103,690 (total area (sq. ft.) in 2008 project)/122 (# of structures in 2008 project) = 850 sq. ft. (average sq. ft. of Cedar Falls property)

850 (average sq. footage of property) x \$110 (building replacement cost per sq. ft.) = \$93,491 (average replacement value)

\$93,491 (avg. replacement value) x 184 (# of properties in past projects) = \$17,202,341 (total replacement value)

2008 Contents Value (Losses Avoided) - BENEFIT

Based on the Benefit Cost Analysis software (v4.5.5), the FEMA standard contents value (default) for residential buildings is equal to 100% of the building replacement value. To align with FEMA standard processes in analyzing contents value as a benefit, the same approach was used in this study. The total contents value is multiplied by a percentage which represents the portion of total contents value actually lost due to flooding. The percentage used in this study mirrors FEMA's BCA Software in that it is determined by the flood depth and corresponds to the Depth Damage Functions chart (see below).

To incorporate the depth damage function into this contents value method, a standard for the type of structure (1 or 2 story, with or without basement) and flooding depth needs to be determined. Iowa houses tend to vary between one and two story and basements are standard. The depth damage functions (see below) for a one story home are higher than those for a two story for flood depths below 12 feet. In order to keep estimates of benefits conservative the depth damage functions for a two story home with a basement were used.

PROJECT: Depth Damage Function Example, STRUCTURE: Depth Damage Function Example
MITIGATION TYPE: Flood - Acquisition

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STRUCTURE INFORMATION

Total size of building (sf) * (For nonresidential building, input square footage for the first floor only. If a Library Depth Damage Function is used, see Help)

Value of building (BRV) (\$/sf) *

Total value of building (BRV)

Demolition damage threshold (%)

Is the building Residential? * Yes No

RESIDENTIAL STRUCTURE DETAILS

Riverine / Coastal A

Select Building Type

One Story Mobile Home

Two or More Stories Other

Split Level

Select foundation type *

Does the building have a basement? *

Yes No

Coastal V *

With Obstruction Without Obstruction

See the following page for depth damage function information with the above inputs

Because of the extreme nature of the 2008 floods, over three feet of standing water (often much more) could be found in the vast majority of houses affected. 86% of the homes acquired in 2008 were rendered substantially damaged, and in turn a very high percentage of the contents in each home were destroyed. If we determine contents value lost to flooding using the same method as the BCA Module, at a conservative three foot flood depth, 17.7% is the depth damage function for a two story home with a basement. In order to compare, a one story home with a basement would result in a depth damage

function of 24.7%. The contents values for each community were derived from multiplying the total average replacement value by 17.7%.

PROJECT: Depth Damage Function Example, STRUCTURE: Depth Damage Function Example
 MITIGATION TYPE: Flood - Acquisition

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RESIDENTIAL STRUCTURE INFORMATION

Depth Damage Function Type * Default Library Custom

Select Depth Damage Function (DDF) * USACE Generic

Displacement Costs Default (\$1.44/sf/month) \$ 2,160.00
 OR User-entered (\$/month) \$ 0.00
 One-Time displacement costs (\$) \$ 0.00

Building Contents Default (100% BRV) \$ 165,000.0
 OR User-entered (\$) \$ 0.00

Loss of Rent Rent (\$/month) \$ 0.00

Utilities or other contents in the crawspace (if any) \$ 0.00

Depth Damage Functions *

Flood Depth (ft)	Before Mitigation (Pct)	Before Mitigation (\$)	After Mitigation (Pct)	After Mitigation (\$)
-2.0	8.4%	\$13,860	0.0%	\$0
-1.0	10.1%	\$16,665	0.0%	\$0
0.0	11.9%	\$19,635	0.0%	\$0
1.0	13.8%	\$22,770	0.0%	\$0
2.0	15.7%	\$25,905	0.0%	\$0
3.0	17.7%	\$29,205	0.0%	\$0
4.0	19.8%	\$32,670	0.0%	\$0
5.0	22.0%	\$36,300	0.0%	\$0
6.0	24.3%	\$40,095	0.0%	\$0
7.0	26.7%	\$44,055	0.0%	\$0
8.0	29.1%	\$48,015	0.0%	\$0
9.0	31.7%	\$52,305	0.0%	\$0
10.0	34.4%	\$56,760	0.0%	\$0
11.0	37.2%	\$61,380	0.0%	\$0
12.0	40.0%	\$66,000	0.0%	\$0
13.0	43.0%	\$70,950	0.0%	\$0
14.0	46.1%	\$76,065	0.0%	\$0
15.0	49.3%	\$81,345	0.0%	\$0
16.0	52.6%	\$86,790	0.0%	\$0

The above depth damage function for contents was used in this study (two or more stories, with basement at flood depth of three feet)

Example (Louisa County):

Total square footage for Louisa County project is 29,864 feet/30 homes = Average square footage of 995 995 sq. feet x \$110 replacement building cost (per sq. foot) = average replacement value of \$109,501

\$109,501 x 167 properties in past buyouts = \$18,286,723 (total replacement value of past properties)
 \$18,286,723 x 17.7% (17.7% for depth damage function) = \$3,236,750 (total contents loss avoided)

2008 Displacement Costs Avoided - BENEFIT

The methodology for calculating the displacement benefit in this study is the same as what is used in the Benefit Cost Analysis software (v4.5.5). The module uses \$1.44 per square foot/month as the standard default value.

According to the depth damage function portion of the module, the number of days a flooded occupant is displaced is based on the flood depth. The default value the module uses is \$1.44 per square foot/month. To incorporate this value into the study, it was necessary to determine the \$ value per square foot per day. This was done by finding a standard number of days per month (365 days/12 months=30.41). \$1.44 was then divided by the average number of days per month to give the amount per square foot (\$.0473) allowed per day for the default value.

As stated above in the contents method, a conservative 3 foot flood depth was used to incorporate the depth damage function into the calculation. This is a conservative flood depth considering the majority of the properties were substantially damaged and it was a 500+ year event in many communities. As explained in the contents section a two story house with a basement is common in Iowa and using this structure type allows for a more conservative calculation for this study. When using these variables in the Benefit Cost Analysis module the depth damage function allows for 135 days of displacement costs as shown in the image below.

PROJECT: Depth Damage Function Example, STRUCTURE: Depth Damage Function Example
MITIGATION TYPE: Flood - Acquisition

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RESIDENTIAL STRUCTURE INFORMATION

Depth Damage Function Type * Default Library Custom Select Depth Damage Function (DDF) * USACE Generic

Displacement Costs Default (\$1.44/sf/month) \$ 2,160.00 **Building Contents** Default (100% BRV) \$ 165,000.0 Loss of Rent User-entered (\$/month) \$ 0.00
OR User-entered (\$/month) \$ 0.00 OR User-entered (\$) \$ 0.00 Rent (\$/month) \$ 0.00

One-Time displacement costs (\$) \$ 0.00 Utilities or other contents in the crawlspace (if any) \$ 0.00

Depth Damage Functions *

Building Contents **Displacement** Loss Of Function

Flood Depth (ft)	Before Mitigation (Days)	Before Mitigation (\$)	After Mitigation (Days)	After Mitigation (\$)
-2.0	0.0	\$0	0.0	\$0
-1.0	0.0	\$0	0.0	\$0
0.0	0.0	\$0	0.0	\$0
1.0	45.0	\$3,196	0.0	\$0
2.0	90.0	\$6,391	0.0	\$0
3.0	135.0	\$9,587	0.0	\$0
4.0	180.0	\$12,782	0.0	\$0
5.0	225.0	\$15,978	0.0	\$0
6.0	270.0	\$19,174	0.0	\$0
7.0	315.0	\$22,369	0.0	\$0
8.0	360.0	\$25,565	0.0	\$0
9.0	405.0	\$28,761	0.0	\$0
10.0	450.0	\$31,956	0.0	\$0
11.0	495.0	\$35,152	0.0	\$0
12.0	540.0	\$38,347	0.0	\$0
13.0	585.0	\$41,543	0.0	\$0
14.0	630.0	\$44,739	0.0	\$0
15.0	675.0	\$47,934	0.0	\$0
16.0	720.0	\$51,130	0.0	\$0

The last factor in determining the displacement benefit is the average square footage of a property in each community. As explained in the replacement value methodology, the total square footage of the 2008 project was calculated for each community and divided by the number of properties included in the 2008 project.

To calculate the average displacement benefit for each community the average square footage was multiplied by the \$.0473 per square foot/day (default used in module reduced to per day). This amount is then multiplied by 135 days as shown in the depth damage function for a two story house with a basement that had a 3 foot flood depth.

To calculate the total displacement benefit for a community the average is multiplied by the number of properties in past projects.

Community	Average Square Feet of 2008 properties	Displacement Costs per day (based on \$1.44/sq ft/month default)	Number of days displaced for 3 ft flood depth (damage function)	Average Displacement Benefit Per Property
Cedar Falls	850	\$0.0473	135	\$5,431
Dunkerton	1,087	\$0.0473	135	\$6,947
Waverly	1,276	\$0.0473	135	\$8,152
Shell Rock	833	\$0.0473	135	\$5,322
Dyersville	1,580	\$0.0473	135	\$10,099
Charles City	1,148	\$0.0473	135	\$7,334
Marion	1,087	\$0.0473	135	\$6,947
City of Des Moines	863	\$0.0473	135	\$5,518
Davenport	1,208	\$0.0473	135	\$7,718
Chelsea	1,144	\$0.0473	135	\$7,309
Louisa County	995	\$0.0473	135	\$6,362
Des Moines County	1,605	\$0.0473	135	\$10,254

Example (Charles City):

1,148 (avg. square footage of structure) x \$.0473 (displacement costs per day) x 135 days (for 3 feet flood depth in two story home with basement) = \$7,334 in total average displacement benefit for Charles City property

\$7,334 (average displacement benefit) x 9 (properties included in past projects) = \$66,007 total displacement benefit for Charles City

Additional Losses Avoided

Additional losses were avoided due to past mitigation projects that were not included in the above study due to their subjectivity and the difficulty in assigning an accurate dollar figure. These avoided losses are, however, worth mentioning.

Past acquisition/relocation and demolition projects remove considerable burden from those involved in the recovery effort for floods that follow. When homes and their residents are not flooded due to having participated in a mitigation project, there are no displaced citizens or need to provide replacement housing, or individual assistance, or to rehabilitate their home in a flood zone.

The eliminated risk to life and safety is also hard to describe in terms of a dollar figure, as well as potential water rescue, emergency shelter / temporary housing (such as FEMA trailers) and the suffering and emotional anguish of the inhabitants of flooded homes.

It should also be mentioned that this study took into consideration only the larger past Iowa buyout projects in communities that experienced a minimum 100 year flood event in 2008 and therefore does not include the comprehensive list of past property acquisitions statewide. It also only took into consideration the 2008 flood event. Substantial additional losses were avoided throughout the state due to smaller projects from other events.

Community Summary

Cedar Falls: In 1993 and 1999 the City of Cedar Falls experienced severe flooding under declared disasters 0996, 1277, and 1282. They acquired a total of 184 properties as a result of those disasters. The total project cost for the past acquisitions was \$6,705,642.

In 2008, the USGS Stream flow Data Station in Waterloo (located approximately 9 miles from Cedar Falls) reported that the area had experienced a 500+ year flood event with a drainage area of over 5,000 square miles. With the data collected in this study it is estimated that over \$21 million was saved during the 2008 flood event due to past acquisitions that took place. A combination of past acquisitions and current 2008 acquisitions shows that over 300 properties will be acquired by the City of Cedar Falls. These mitigation measures will allow the city to return extensive areas of the floodplain into open space and completely discontinue city services to these areas preventing even more future losses.

Cedar Falls Loss Avoidance Map

The attached map displays an area in northern Cedar Falls that has been the focus of several acquisition projects in the city since 1993. Though not representative of all properties acquired by the city, a majority of acquisitions did take place in this area, with a total of 129 properties confirmed as being acquired in the area prior to the 2008 flood.

The area experienced complete inundation during the 2008 flood, with high water marks up to 866 feet above sea level, and ground elevations ranging from 855 feet to 860 feet above sea level. Therefore it is reasonable to project that each of the 129 properties previously acquired would have been destroyed during the 2008 floods had it not been for acquisition and removal of the structures.

Dunkerton: In 1999 the City of Dunkerton experienced major flooding in May and July. Disaster 1277 was declared for May and 1282 for July, both of which included Black Hawk County. In cooperation with HSEMD and FEMA, the city identified and acquired 28 total properties (24 under disaster 1277 and 4 under disaster 1282) that were the hardest hit and most vulnerable to future flooding. The total project cost was \$1,134,313.

In 2008, the USGS Stream flow Data Station in Waterloo (located approximately 10 miles from Dunkerton) reported the area had experienced a 500+ year flooding event with a drainage area of over 5,000 square miles. But due to the past acquisition projects, water washed over open floodplain that no longer contained residential structures and the city did not need to pursue an additional acquisition project. It is estimated that over \$4 million was saved due to past acquisition projects.

Waverly: The City of Waverly suffered extensive flooding in 1999 under disaster declaration 1282. The city acquired 12 properties as a result of this disaster. The total project cost for this project was \$472,251.

In 2008, the USGS Stream flow Data Station in Shell Rock (located around 6 miles from Waverly) listed a 300+ year flood event with a drainage area of over 1,700 square miles. According to this study \$2,079,753 was saved due to past acquisitions.

Shell Rock: The City of Shell Rock acquired 11 properties due to the 1999 declared disaster 1282 for severe flooding. It cost \$602,282 in 1999 to acquire these properties. According to the 2008 USGS Stream flow Data Station in Shell Rock the city suffered a 300+ year flood event. Due to past acquisitions only 4 properties are being acquired in the current 2008 project despite the fact that they had such a large event. It is estimated that they saved over \$1 million due to past acquisitions.

Dyersville: The City of Dyersville acquired 17 properties in 1999 and 2002 over a span of 3 declared disasters (1277, 1282, and 1420). Mitigation funds invested in past projects totaled over \$1.5 million. According to the USGS Stream flow Data Station in Manchester (18 miles from Dyersville) this area had a 100 year flood event with a drainage area of 275 square miles. This study estimates that losses avoided totaled \$3,649,898.

Charles City: The City of Charles City acquired 9 properties in the 1999 declared disasters 1277 and 1282. It cost over \$400,000 to acquire those properties in 1999 and 2002 when the grants were awarded.

Charles City experienced record flooding in 2008 with a flood crest of 25.5 feet (major flood stage is 18 feet). When comparing these flood levels to the Flood Insurance Study flood profiles Charles City experienced at least a 500 year flood event. The city is currently acquiring 17 properties due to the 2008 floods. If the city would not have acquired the past properties and converted them to green space it is estimated it could have caused an additional \$1.4 million in damages (losses avoided).

Marion: The City of Marion can be looked at as very similar to Dunkerton. Disaster declarations 0996 (1993) and 1420 (2002) resulted in the city acquiring 15 total properties and converting them to open space in the floodplain. Project costs were \$1,290,133.

2008 flooding affected the Cedar Rapids area (Marion and Cedar Rapids are adjacent cities) as seriously as anywhere in the state. A 500+ year event with a drainage area over 6,500 square miles was reported, yet no additional properties in Marion needed to be acquired. Approximately \$2.2 million was saved.

City of Des Moines: While past mitigation efforts did not entirely eliminate the need for acquisitions in the City of Des Moines due to flooding in 2008, they did drastically reduce the required efforts. Due to 2008 flooding, only 13 properties needed to be acquired after the city experienced a 100 year flood event. Des Moines acquired 109 properties in past projects – 83 in disaster 0996 (1993) and 26 in disaster 1230 (1998) which saved an estimated \$12,786,163 had those properties not been acquired and converted to open space previously.

Davenport: The City of Davenport acquired 45 properties in 1993 and 2001 due to the declared disasters for severe flooding (0996 and 1367). The project costs were over \$2 million. In 2008 the Mississippi River crested around 21 feet which is 6 feet over the flood stage. More specifically Duck Creek which runs through central Davenport topped 4 feet over the flood stage. When comparing the flood crest levels to the flood profile in the Flood Insurance Study it is clear that Davenport had at least a 100 year event. It is estimated that \$7,384,156 was saved due to past acquisitions in the City of Davenport.

Chelsea: The City of Chelsea acquired 50 properties in the 1993 declared disaster 0996. The project cost over \$1 million in mitigation funds. In 2008 the Iowa River surpassed its flood stage cresting at 22 feet. This caused the flooding of Chelsea, IA. For a week the town could only be reached by boat and many of the primary facilities in the town were closed and people were evacuated. Due to a lack of stream gauge data for the City of Chelsea, an evaluation of stream gauge data was referenced for 8 communities along the Iowa River. These communities were upstream and downstream from Chelsea and had an average flood depth of 4.9 feet above the major flood stages. All of these 8 communities experienced record flooding and based on the data available the same conclusion is made for the City of Chelsea. This study estimates that due to past acquisitions \$7,768,958 was saved due to losses avoided.

Louisa County: The large number of past acquisitions in Louisa County resulted in savings of approximately \$22 million after the 2008 event, which completely inundated almost 30 square miles of flood prone area in southern Louisa and northern Des Moines counties. The county had acquired 167 properties in 1993 during disaster declaration 0996. At the time, these 167 properties were acquired for \$9,772,868. The county is in the process of acquiring an additional 31 properties that were destroyed as a result of the 2008 flood event. But this is a far cry from what would have been necessary had the previous projects not been completed, especially considering the breadth of floodwater inundation in the most recent disaster.

Des Moines County: 56 properties were acquired in past disasters (46 in Disaster 0996 – 1993 and 10 in Disaster 1367 – 2001). The county was hit very hard in 2008 – as stated above 30 square miles was covered in deep water, and has a current project to acquire several properties. However the savings due to past acquisitions is still significant – over \$12 million in damage was mitigated.

2008 Iowa Mitigation Success Story

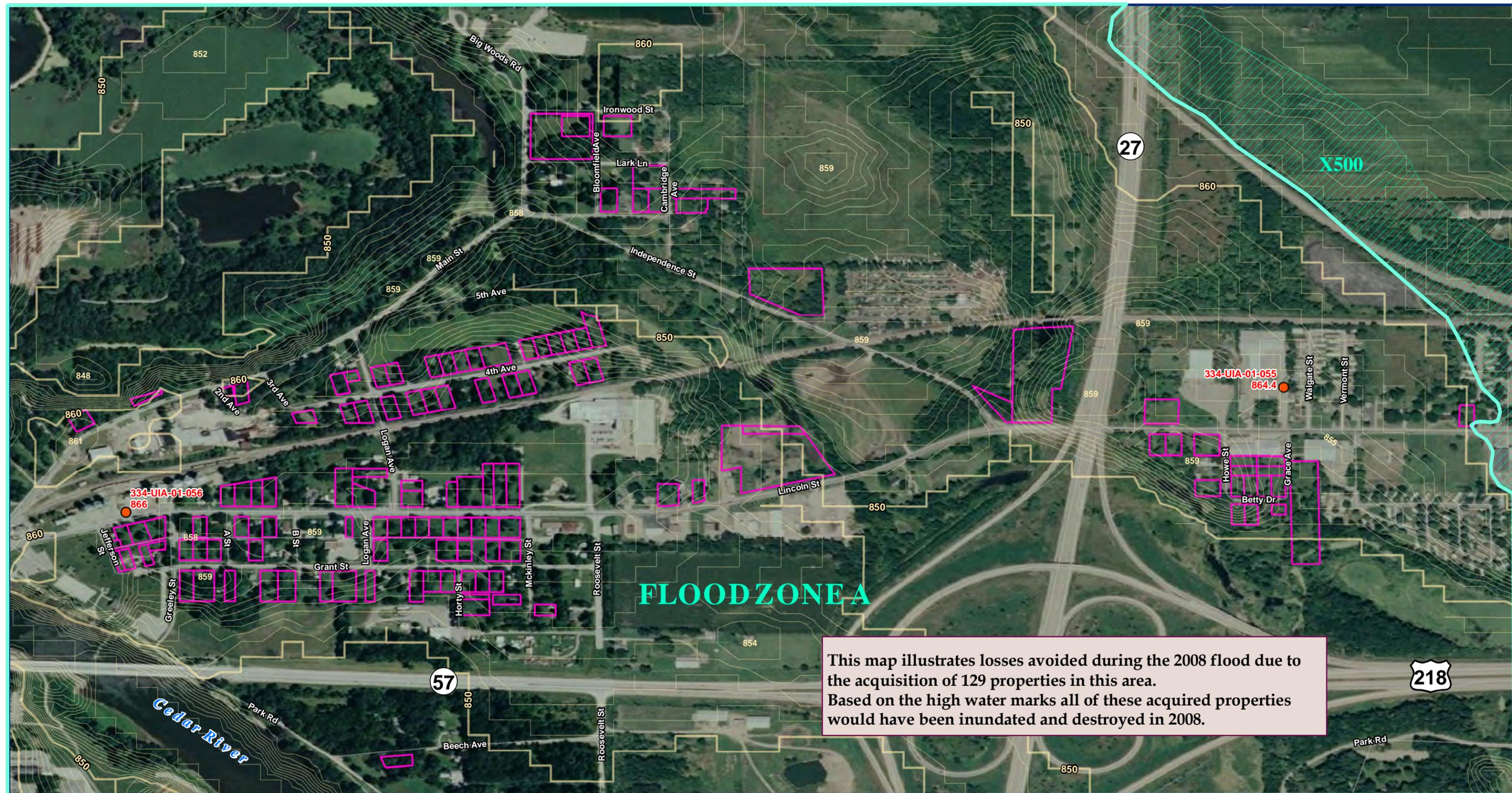
Property Acquisition Projects - Avoided Losses Table

Iowa Location	County	Flood Event	Number of Properties	Mitigation Funds Invested	Year Grant Award	Cost			Contents	Average Displacement Benefit	Total Displacement Benefit	Benefit	
						NPV Mitigation Funds Invested	Average Replacement Value	Total Replacement Value				Losses Avoided (Replacement Value plus contents and displacement)	Benefit/Cost Ratio
City of Cedar Falls	Black Hawk	'93+'99	184	\$ 6,705,642	1994, 1998, 1999, 2000	\$9,334,151	\$ 93,491	\$ 17,202,341	\$ 3,044,814	\$ 5,431	\$ 999,383	\$21,246,538	2.28
City of Dunkerton	Black Hawk	1999	28	\$ 1,134,313	1999, 2000,	\$1,457,398	\$ 119,576	\$ 3,348,133	\$ 592,620	\$ 6,947	\$ 194,512	\$4,135,265	2.84
City of Waverly	Bremer	1999	12	\$ 472,251	1999, 2001, 2002	\$604,941	\$ 140,323	\$ 1,683,880	\$ 298,047	\$ 8,152	\$ 97,826	\$2,079,753	3.44
City of Shell Rock	Butler	1999	11	\$ 602,282	1999, 2005	\$770,197	\$ 91,603	\$ 1,007,628	\$ 178,350	\$ 5,322	\$ 58,539	\$1,244,516	1.62
City of Dyersville	Dubuque	99+02	17	\$ 1,609,033	1999, 2000, 2002, 2003, 2006	\$1,938,959	\$ 173,833	\$ 2,955,154	\$ 523,062	\$ 10,099	\$ 171,682	\$3,649,898	1.88
City of Charles City	Floyd	1999	9	\$ 460,612	1999, 2002	\$572,849	\$ 126,241	\$ 1,136,171	\$ 201,102	\$ 7,334	\$ 66,007	\$1,403,279	2.45
City of Marion	Linn	93+02	15	\$ 1,290,133	1994, 2003	\$1,851,062	\$ 119,576	\$ 1,793,643	\$ 317,475	\$ 6,947	\$ 104,203	\$2,215,320	1.20
City of Des Moines	Polk	93+98	109	\$ 4,061,648	1993, 1999	\$5,644,271	\$ 94,976	\$10,352,366	\$ 1,832,369	\$ 5,518	\$ 601,428	\$12,786,163	2.27
City of Davenport	Scott	93+02	45	\$ 2,159,077	1994, 2001, 2002	\$2,625,143	\$ 132,858	\$ 5,978,610	\$ 1,058,214	\$ 7,718	\$ 347,332	\$7,384,156	2.81
City of Chelsea	Tama	1993	50	\$ 1,225,548	1995, 2002	\$1,738,192	\$ 125,803	\$ 6,290,167	\$ 1,113,360	\$ 7,309	\$ 365,432	\$7,768,958	4.47
Louisa County		1993	167	\$ 9,772,868	1994	\$14,369,765	\$ 109,501	\$18,286,723	\$ 3,236,750	\$ 6,362	\$ 1,062,381	\$22,585,853	1.57
Des Moines County		93+01	56	\$ 2,981,755	1995, 2002	\$4,109,264	\$ 176,495	\$ 9,883,720	\$ 1,749,418	\$ 10,254	\$ 574,202	\$12,207,341	2.97
Total properties mitigated prior to 2008:			703	\$ 32,475,162		\$ 45,016,192						\$98,707,041	2.19

Note: Losses avoided are from Property Acquisition or Structural Relocation for Open Space/Green Space mitigation measures and consider only losses avoided as a result of the 2008 flood event for selected communities.

Cedar Falls Acquired Properties

100/500 Year Flood Zones with Contours and High Water Marks from 2008 Flood



This map illustrates losses avoided during the 2008 flood due to the acquisition of 129 properties in this area. Based on the high water marks all of these acquired properties would have been inundated and destroyed in 2008.

Legend

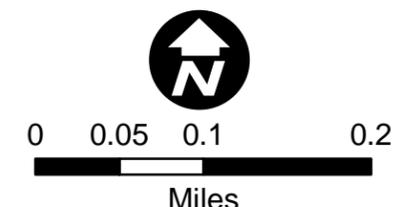
- High Water Marks '08
- Contour 1 ft
- Contour 10 ft
- Acquired Properties

Flood Zones

- 100-year
- 500-year



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FEMA 1763-DR-IA
 Geospatial Intelligence Unit
 Urbandale, IA
 S. Williams, 05/04/2010
 Cedar_Falls_Acquired_FINAL.mxd

LOCAL HAZARD MITIGATION PLAN – DATA COLLECTION SHEETS

Title of Plan
Clarke County Multi-Jurisdictional Multi-Hazard Mitigation Plan

Jurisdictions Included in Plan	
1. Clarke County	9.
2. City of Murray	10.
3. City of Osceola	11.
4. City of Woodburn	12.
5.	13.
6.	14.
7.	15.
8.	16.

Point of Contact
Allan Mathias, EMC

Address
100 South Main Street

City, State and Zip
Osceola, Iowa 50213

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641.342.6654	641.342.1545

Email
clarkees1@iowatelecom.net

DESCRIPTION OF SHEETS ATTACHED

- | | |
|--------------------------------------------|-------------------------------------------------|
| 1. Cover Sheet | must complete |
| 2. Proposed Mitigation Measures | complete with available information |
| 3. Completed or In Progress Actions | complete with available information |
| 4. Local Capabilities Example | example for filling out the Local Cap. Sum. |
| 5. Local Capabilities Summary | complete with available information |
| 6. Assessing Vulnerability | complete - one section per hazard |
| 7. Assessing Critical Facilities | complete - one section per hazard |
| 8. Hazard Ranking by Jurisdiction | complete - for each jurisdiction in the plan |
| DATA | do not change - data for drop down lists |

	Jurisdiction	County of Jurisdiction (Select one from list)	Goal	Objectives	Description of Mitigation Measure	Mitigation Measure Category	Hazard Addressed (Select one from list)	Hazard Addressed (Select one from list)	Any Other Hazard Addressed	Funding Source(s)	Estimate Cost	Obstacles to Implementing this Measure
1	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Dispense educational materials to citizens	Public Education and Awareness	Thunderstorm and Lightning	Tornadoes	Most other hazards	Local, small grants	\$ 5,000.00	Time to complete and maintain educational materials
2	Murray	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Develop continuity of operations plans for each government agency	Prevention	Thunderstorm and Lightning	Tornadoes	Most other hazards	EDA, FEMA, RIO	\$ 10,000.00	Lack of local expertise, local interest varies
3	Murray	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Provide sustained public information beginning immediately after the plan is approved. Highlight successful early projects.	Designate community shelters	Public Education and Awareness	Severe Winter Storms	Energy Failure	Extreme heat	Local, small grants	\$ 500.00	If designated shelters not yet stocked/equipped
4	Murray	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Provide sustained public information beginning immediately after the plan is approved. Highlight successful early projects.	Maintain list of community warming/cooling shelters and inform public about facilities	Public Education and Awareness	Severe Winter Storms	Energy Failure	Extreme heat	Local, small grants	\$ 500.00	Who would maintain food, cots, medical equipment
5	Murray	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Provide sustained public information beginning immediately after the plan is approved. Highlight successful early projects.	Encourage citizen purchase/use of smoke detectors	Public Education and Awareness	Structural Fire			Local, DHS Fire Prev	\$ 1,000.00	Funding and firefighter time for year round event
6	Murray	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Update anti-virus software	Prevention	Terrorism	Communications Failure		Local, State, software suppliers	\$ 10,000.00	Expertise at local level to maintain/utilize systems
7	Murray	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance cross-agency, intra-county and inter-county communications and partnerships	Establish or improve mobile communications	Emergency Services	Communications Failure	Energy Failure	Most other hazards	Local, DHS, USDA, State	\$ 25,000.00	Local matching funds, ever-changing standards
8	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Improve countywide warning capacities against hazards	Promote NOAA weather radio/rebate program	Public Education and Awareness	Thunderstorm and Lightning	Tornadoes	Most other hazards	Local, USDA, FEMA	\$ 50,000.00	Local matching funds, delivery of large quantities
9	Murray	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Purchase/install backup power generators at all critical assets	Prevention	Energy Failure	Communications Failure		Local, USDA, FEMA	\$ 15,000.00	Maintenance cost of each generator, local match
10	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Improve, expand training to all first responders, increase # certifications	Emergency Services	Human Disease Incident	Human Disease Pandemic	Many other hazards	Local, CDC, State, small grants	\$ 1,000.00	Difficult to secure the staffing, especially volunteers
11	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Acquire ATVs, fire/rescue vehicles ambulances, and related vehicles and equipment	Emergency Services	Grass or Wild-land Fire	Structural Fire	Most other hazards	Local, FEMA, State, USDA, small grants	\$ 100,000.00	Local matching funds, insurance/maintenance cost
12	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Acquire and maintain warm-weather fire and rescue clothing	Emergency Services	Grass or Wild-land Fire	Structural Fire	Many other hazards	Local, FEMA, USDA, small grants	\$ 25,000.00	Local matching funds, need replaced often
13	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Purchase vehicle extrication equipment	Emergency Services	Highway Transportation Incident	Transportation Hazardous Materials	Some other hazards	Local, FEMA, USDA, small grants	\$ 25,000.00	Local matching funds, vehicles to haul equipment
14	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Construct shelters and other safe places to go to keep people safe in public areas	Construct community safe rooms for critical assets	Structural Projects	Tornadoes	Windstorms	Thunderstorm, lightning	Local, FEMA, small grants	\$ 500,000.00	Lack of public understanding, local match funds
15	Murray	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Backup govt/medical files and records electronically-store in alt. locations	Prevention	Structural Failure	Structural Fire	Most other hazards	Local, State, Small grants	\$ 25,000.00	Lack of secure locations for storage, lack of software
16	Murray	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Develop a water conservation plan	Natural Resource Protection	Drought	Windstorms	Several other hazards	Local, State, NRCS, USDA	\$ 10,000.00	Complicated issue: unsure who willing to manage
17	Murray	Clarke	Improve the quality of life in each jurisdiction	Promote the current infrastructure conditions and the need to improve them	Conduct sanitary sewer study	Prevention	Flash Flood	River Flooding		Local, IDNR, IFA, USDA	\$ 15,000.00	Local matching funds, don't want risk of IDNR action
18	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Develop full infrastructure and public services studies	Property Protection	Flash Flood	Structural Failure	Most other hazards	Local, IDNR, DOT, IFA, USDA	\$ 150,000.00	Local matching funds, lack of capital impr plans

19	Murray	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Ensure the mitigation plan is reviewed and updated as needed	Assure each jurisdiction annually maintains and updates its plan for 5 years	Prevention	Thunderstorm and Lightning	Tornadoes	All other hazards	Local, State TA	\$ 500.00	Plan needs buy-in before people will use is regularly
20	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Maintain protocols and exercises for human, animal, and plant disease incidents and pandemics	Prevention	Human Disease Incident	Animal/Crop/Plant Disease	Human disease pandemic	Local, State, CDC, USDA	\$ 2,000.00	Trained med staff limited, ever-changing regulations
21	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Construct shelters and other safe places to go to keep people safe in public areas	Integrate saferoom retrofits into existing critical assets	Structural Projects	Tornadoes	Windstorms	Thunderstorm, lightning	Local, FEMA, small grants	\$ 500,000.00	Lack of public understanding, local match funds
22	Murray	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Involve the community in high-profile projects	Promote landscaping practices	Natural Resource Protection	Flash Flood	Windstorms	Many other hazards	Local, Extension, Trees Forever, others	\$ 1,000.00	Lack of interest on private property, maintenance
23	Murray	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Involve the community in high-profile projects	Establish tree planting initiatives	Natural Resource Protection	Windstorms	Extreme heat	Many other hazards	Local, Extension, Trees Forever, others	\$ 5,000.00	Lack of interest on private property, maintenance
24	Murray	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Initiate tree trimming and maintenance program for public property	Natural Resource Protection	Windstorms	Severe Winter Storms	Many other hazards	Local, utilities	\$ 10,000.00	Lack of local funding, enforcement on private property
25	Murray	Clarke	Improve the quality of life in each jurisdiction	Promote the current infrastructure conditions and the need to improve them	Develop full inventory of storm water runoff problem areas and monitor them	Property Protection	Flash Flood			Local, State, small grants	\$ 2,000.00	Difficult to monitor numerous areas, local matching funds
26	Murray	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Include prioritized needs and mitigation ideas into budget requests	Engage public officials in the budgeting process to ensure long-term equipment needs are met over multiple budget cycles	Emergency Services	Thunderstorm and Lightning	Tornadoes	Most other hazards	Local, outside TA	\$ 500.00	Political bodies serve limited terms, legislation limits
27	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Construct shelters and other safe places to go to keep people safe in public areas	Promote construction of reinforced in-residence tornado safe rooms	Structural Projects	Tornadoes	Windstorms	Structural failure	Local, FEMA, small grants	\$ 50,000.00	Local governments rather stay out of private affairs
28	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Encourage housing codes requiring fire extinguishers in multi-family housing	Property Protection	Structural fire			Local, State TA, FEMA	\$ 5,000.00	Law already provides, but local unsure how to enforce
29	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Educate the public and hold periodic exercises concerning neighborhood saferooms	Public Education and Awareness	Tornadoes	Windstorms	Thunderstorm, lightning	Local, State TA, small grants	\$ 2,000.00	Would work only after a safe room is built
30	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Initiate/continue use of Operation Lifesaver Program	Public Education and Awareness	Highway Transportation Incident	Rail Transportation Incident	Transportation Hazardous Materials	Local, DOT, FHWA, corporate support	\$ 1,000.00	Unsure which schools use/schools not active in plan
31	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Establish Good Neighbor programs for winter storms	Public Education and Awareness	Severe Winter Storms			Local, State TA, small grants	\$ 1,000.00	Relies upon neighbors caring for neighbors
32	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Acquire sanders, graders, and other equipment to enable rapid response and highway safety during and after events	Emergency Services	Severe Winter Storms	Thunderstorm and Lightning	Many other hazards	Local, FEMA, DOT, USDA	\$ 25,000.00	Local matching funds, storage of equipment/vehicles
33	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Establish thermal imaging capacities in local fire depts	Emergency Services	Structural Failure	Grass or Wild-land Fire	Some other hazards	Local, DHS, USDA, small grants	\$ 10,000.00	Local matching funds
34	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Evaluate and, if necessary, improve the protection of tall structures from lightning	Property Protection	Thunderstorm and Lightning	Communications Failure		Local, utilities, USDA, DHS, small grants	\$ 10,000.00	Local matching funds, ownership of tall structures varies
35	Murray	Clarke	Increase the ability of each jurisdiction to reduce the risk of property loss to future properties due to hazards	Update maps and ordinances and educate the public on development policies that prevent development where it should not be located	Update flood maps and develop DFIRMs	Property Protection	River Flooding	Flash Flood	Possible other hazards	Local, FEMA, State TA	\$ 5,000.00	Timing of when FEMA will do local maps, if at all
36	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Provide training and education for property owners and first responders as to building protection	Determine level/type of suppression needed	Property Protection	Structural Fire	Grass or Wild-land Fire	Fixed/Trans Hazardous Materials	Local, FEMA, USDA, small grants	\$ 10,000.00	Equipment changes resulting from study may be costly
37	Murray	Clarke	Increase the ability of each jurisdiction to reduce the risk of property loss to future properties due to hazards	Increase stringency of building codes and add infrastructure to protect against hazards	Install new dry hydrants as needed	Property Protection	Grass or Wild-land Fire	Structural Fire	Possible other hazards	Local, USDA, DNR, small grants	\$ 5,000.00	Finding landowners allowing access could be problem

38	Murray	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Maintain and improve all jurisdictions' participation in NFIP	Property Protection	River Flooding	Flash Flood		Local, FEMA, DNR	\$ 500.00	Local willingness to maintain high level of involvement
39	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Adopt State Fire Codes and provide for inspections	Property Protection	Structural Fire			Local, State TA, small grants	\$ 10,000.00	Perception this is a state issue, fire depts are volunteer
40	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Develop/update/publicize city evacuation plans	Public Education and Awareness	Terrorism	Enemy attack	Some other hazards	Local, State TA, small grants	\$ 5,000.00	Local funding and political will to formalize, practice
41	Murray	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Remove asbestos from schools	Structural Projects	Structural Fire	Human Disease Incident		Local, State, Dept of Ed	\$ 50,000.00	Local funding and cost of testing all remaining facilities
42	Murray	Clarke	Increase the ability of each jurisdiction to reduce the risk of property loss to future properties due to hazards	Update maps and ordinances and educate the public on development policies that prevent development where it should not be located	Prohibit occupiable development in floodplain	Property Protection	River Flooding	Flash Flood		Local, State TA	\$ 10,000.00	Limited floodplain area means lack of political interest
43	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Dispense educational materials to citizens	Prevention	Thunderstorm and Lightning	Tornadoes	All other hazards	Local, small grants	\$ 5,000.00	Time to complete and maintain educational materials
44	Osceola	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Develop continuity of operations plans for each government agency	Prevention	Thunderstorm and Lightning	Tornadoes	Most other hazards	EDA, FEMA, RIO	\$ 10,000.00	Lack of local expertise, local interest varies
45	Osceola	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Provide sustained public information beginning immediately after the plan is approved. Highlight successful early projects.	Designate community shelters	Public Education and Awareness	Severe Winter Storms	Energy Failure	Extreme heat	Local, small grants	\$ 500.00	If designated shelters not yet stocked/equipped
46	Osceola	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Provide sustained public information beginning immediately after the plan is approved. Highlight successful early projects.	Maintain list of community warming/cooling shelters and inform public about facilities	Public Education and Awareness	Severe Winter Storms	Energy Failure	Extreme heat	Local, small grants	\$ 500.00	Who would maintain food, cots, medical equipment
47	Osceola	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Provide sustained public information beginning immediately after the plan is approved. Highlight successful early projects.	Encourage citizen purchase/use of smoke detectors	Public Education and Awareness	Structural Fire			Local, DHS Fire Prev	\$ 1,000.00	Funding and firefighter time for year round event
48	Osceola	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Update anti-virus software	Prevention	Terrorism	Communications Failure		Local, State, software suppliers	\$ 10,000.00	Expertise at local level to maintain/utilize systems
49	Osceola	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance cross-agency, intra-county and inter-county communications and partnerships	Establish or improve mobile communications	Emergency Services	Communications Failure	Energy Failure	Most other hazards	Local, DHS, USDA, State	\$ 25,000.00	Local matching funds, ever-changing standards
50	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Improve countywide warning capacities against hazards	Promote NOAA weather radio/rebate program	Public Education and Awareness	Thunderstorm and Lightning	Tornadoes	Most other hazards	Local, USDA, FEMA	\$ 50,000.00	Local matching funds, delivery of large quantities
51	Osceola	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Purchase/install backup power generators at all critical assets	Prevention	Energy Failure	Communications Failure		Local, USDA, FEMA	\$ 15,000.00	Maintenance cost of each generator, local match
52	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Improve, expand training to all first responders, increase # certifications	Emergency Services	Human Disease Incident	Human Disease Pandemic	Many other hazards	Local, CDC, State, small grants	\$ 1,000.00	Difficult to secure the staffing, especially volunteers
53	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Acquire ATVs, fire/rescue vehicles ambulances, and related vehicles and equipment	Emergency Services	Grass or Wild-land Fire	Structural Fire	Most other hazards	Local, FEMA, State, USDA, small grants	\$ 100,000.00	Local matching funds, insurance/maintenance cost
54	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Acquire and maintain warm-weather fire and rescue clothing	Emergency Services	Grass or Wild-land Fire	Structural Fire	Many other hazards	Local, FEMA, USDA, small grants	\$ 25,000.00	Local matching funds, need replaced often
55	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Purchase vehicle extrication equipment	Emergency Services	Highway Transportation Incident	Transportation Hazardous Materials	Some other hazards	Local, FEMA, USDA, small grants	\$ 25,000.00	Local matching funds, vehicles to haul equipment

56	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Construct shelters and other safe places to go to keep people safe in public areas	Construct community safe rooms for critical assets	Structural Projects	Tornadoes	Windstorms	Thunderstorm, lightning	Local, FEMA, small grants	\$ 500,000.00	Lack of public understanding, local match funds
57	Osceola	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Backup govt/medical files and records electronically-store in alt. locations	Prevention	Structural Failure	Structural Fire	Most other hazards	Local, State, Small grants	\$ 25,000.00	Lack of secure locations for storage, lack of software
58	Osceola	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Develop a water conservation plan	Natural Resource Protection	Drought	Windstorms	Several other hazards	Local, State, NRCS, USDA	\$ 10,000.00	Complicated issue: unsure who willing to manage
59	Osceola	Clarke	Improve the quality of life in each jurisdiction	Promote the current infrastructure conditions and the need to improve them	Conduct sanitary sewer study	Prevention	Flash Flood	River Flooding		Local, IDNR, IFA	\$ 50,000.00	Local matching funds, don't want risk of IDNR action
60	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Develop full infrastructure and public services studies	Property Protection	Flash Flood	Structural Failure	Most other hazards	Local, IDNR, DOT, IFA, USDA	\$ 150,000.00	Local matching funds, lack of capital impr plans
61	Osceola	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Ensure the mitigation plan is reviewed and updated as needed	Assure each jurisdiction annually maintains and updates its plan for 5 years	Prevention	Thunderstorm and Lightning	Tornadoes	All other hazards	Local, State TA	\$ 500.00	Plan needs buy-in before people will use is regularly
62	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Maintain protocols and exercises for human, animal, and plant disease incidents and pandemics	Prevention	Human Disease Incident	Animal/Crop/Plant Disease	Human disease pandemic	Local, State, CDC, USDA	\$ 2,000.00	Trained med staff limited, ever-changing regulations
63	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Construct shelters and other safe places to go to keep people safe in public areas	Integrate saferoom retrofits into existing critical assets	Structural Projects	Tornadoes	Windstorms	Thunderstorm, lightning	Local, FEMA, small grants		
64	Osceola	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Involve the community in high-profile projects	Promote landscaping practices	Natural Resource Protection	Flash Flood	Windstorms	Many other hazards	Local, Extension, Trees Forever, others	\$ 1,000.00	Lack of interest on private property, maintenance
65	Osceola	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Involve the community in high-profile projects	Establish tree planting initiatives	Natural Resource Protection	Windstorms	Extreme heat	Many other hazards	Local, Extension, Trees Forever, others	\$ 5,000.00	Lack of interest on private property, maintenance
66	Osceola	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Initiate tree trimming and maintenance program for public property	Natural Resource Protection	Windstorms	Severe Winter Storms	Many other hazards	Local, utilities	\$ 10,000.00	Lack of local funding, enforcement on private property
67	Osceola	Clarke	Improve the quality of life in each jurisdiction	Promote the current infrastructure conditions and the need to improve them	Develop full inventory of storm water runoff problem areas and monitor them	Property Protection	Flash Flood			Local, State, small grants	\$ 2,000.00	Difficult to monitor numerous areas, local matching funds
68	Osceola	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Include prioritized needs and mitigation ideas into budget requests	Engage public officials in the budgeting process to ensure long-term equipment needs are met over multiple budget cycles	Emergency Services	Thunderstorm and Lightning	Tornadoes	Most other hazards	Local, outside TA	\$ 500.00	Political bodies serve limited terms, legislation limits
69	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Construct shelters and other safe places to go to keep people safe in public areas	Promote construction of reinforced in-residence tornado safe rooms	Structural Projects	Tornadoes	Windstorms	Structural failure	Local, FEMA, small grants	\$ 50,000.00	Local governments rather stay out of private affairs
70	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Encourage housing codes requiring fire extinguishers in multi-family housing	Property Protection	Structural fire			Local, State TA, FEMA	\$ 5,000.00	Law already provides, but local unsure how to enforce
71	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Educate the public and hold periodic exercises concerning neighborhood saferooms	Public Education and Awareness	Tornadoes	Windstorms	Thunderstorm, lightning	Local, State TA, small grants	\$ 2,000.00	Would work only after a safe room is built
72	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Initiate/continue use of Operation Lifesaver Program	Public Education and Awareness	Highway Transportation Incident	Rail Transportation Incident	Transportation Hazardous Materials	Local, DOT, FHWA, corporate support	\$ 1,000.00	Unsure which schools use/schools not active in plan
73	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Establish Good Neighbor programs for winter storms	Public Education and Awareness	Severe Winter Storms			Local, State TA, small grants	\$ 1,000.00	Relies upon neighbors caring for neighbors
74	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Acquire sanders, graders, and other equipment to enable rapid response and highway safety during and after events	Emergency Services	Severe Winter Storms	Thunderstorm and Lightning	Many other hazards	Local, FEMA, DOT, USDA	\$ 25,000.00	Local matching funds, storage of equipment/vehicles
75	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Establish thermal imaging capacities in local fire depts	Emergency Services	Structural Failure	Grass or Wild-land Fire	Some other hazards	Local, DHS, USDA, small grants	\$ 10,000.00	Local matching funds

76	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Evaluate and, if necessary, improve the protection of tall structures from lightning	Property Protection	Thunderstorm and Lightning	Communications Failure		Local, utilities, USDA, DHS, small grants	\$ 10,000.00	Local matching funds, ownership of tall structures varies
77	Osceola	Clarke	Increase the ability of each jurisdiction to reduce the risk of property loss to future properties due to hazards	Update maps and ordinances and educate the public on development policies that prevent development where it should not be located	Update flood maps and develop DFIRMs	Property Protection	River Flooding	Flash Flood	Possible other hazards	Local, FEMA, State TA	\$ 5,000.00	Timing of when FEMA will do local maps, if at all
78	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Provide training and education for property owners and first responders as to building protection	Determine level/type of suppression needed	Property Protection	Structural Fire	Grass or Wild-land Fire	Fixed/Trans Hazardous Materials	Local, FEMA, USDA, small grants	\$ 10,000.00	Equipment changes resulting from study may be costly
79	Osceola	Clarke	Increase the ability of each jurisdiction to reduce the risk of property loss to future properties due to hazards	Increase stringency of building codes and add infrastructure to protect against hazards	Install new dry hydrants as needed	Property Protection	Grass or Wild-land Fire	Structural Fire	Possible other hazards	Local, USDA, DNR, small grants	\$ 5,000.00	Finding landowners allowing access could be problem
80	Osceola	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Maintain and improve all jurisdictions' participation in NFIP	Property Protection	River Flooding	Flash Flood		Local, FEMA, DNR	\$ 500.00	Local willingness to maintain high level of involvement
81	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Adopt State Fire Codes and provide for inspections	Property Protection	Structural Fire			Local, State TA, small grants	\$ 10,000.00	Perception this is a state issue, fire depts are volunteer
82	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Develop/update/publicize city evacuation plans	Public Education and Awareness	Terrorism	Energy attack	Some other hazards	Local, State TA, small grants	\$ 5,000.00	Local funding and political will to formalize, practice
83	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Remove asbestos from schools	Structural Projects	Structural Fire	Human Disease Incident		Local, State, Dept of Ed	\$ 50,000.00	Local funding and cost of testing all remaining facilities
84	Osceola	Clarke	Increase the ability of each jurisdiction to reduce the risk of property loss to future properties due to hazards	Update maps and ordinances and educate the public on development policies that prevent development where it should not be located	Prohibit occupiable development in floodplain	Property Protection	River Flooding	Flash Flood		Local, State TA	\$ 10,000.00	Limited floodplain area means lack of political interest
85	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Install riprap to control river shorelines adjacent to critical assets	Property Protection	River Flooding	Flash Flood		Local, CDBG, DNR, USDA, IFA, FEMA	\$ 250,000.00	Environmental impact on waterway
86	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Improve/begin building codes for new construction, rehabilitation, and manufactured homes to resist high winds	Property Protection	Tornadoes	Windstorms	Some other hazards	Local, State and FEMA TA	\$ 10,000.00	Limited interest in this level of zoning and inspections
87	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Construct shelters and other safe places to go to keep people safe in public areas	Encourage adoption of manufactured home building stability and safe room ordinances	Property Protection	Tornadoes	Windstorms	Some other hazards	Local, State, FEMA	\$ 10,000.00	Resistance possible by MH park owners
88	Osceola	Clarke	Increase the ability of each jurisdiction to reduce the risk of property loss to future properties due to hazards	Update maps and ordinances and educate the public on development policies that prevent development where it should not be located	Require buried power lines in new subdivisions	Structural Projects	Energy Failure	Communications Failure	Many other hazards	Local, utilities, FEMA, State	\$ 2,000.00	Utilities companies would have to support over long-term
89	Osceola	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Investigate alternative water sources for fire suppression	Emergency Services	Grass or Wild-land Fire	Structural Fire	Drought	Local, DNR, USDA, small grants	\$ 50,000.00	Controversy today over acquisition of land for lakes
90	Osceola	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Expand/upgrade fire stations to meet modern needs for vehicles/training	Emergency Services	Structural Fire	Grass or Wild-land Fire	Many other hazards	Local, USDA, DHS, small grants	\$ 2,000,000.00	Local matching funds
91	Osceola	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Maintain EOC with 24-hour capability that is able to withstand high wind events and other hazards	Emergency Services	Tornadoes	Windstorms	Most other hazards	Local, DHS, USDA, small grants	\$ 1,000,000.00	Local matching funds, limited ability to find other funds
92	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Install backflow devices where necessary to reduce building flooding	Property Protection	Flash Flood	River Flooding	Expansive Soils	Local, State, USDA, small grants	\$ 2,000.00	Property owner interest, local matching funds
93	Osceola	Clarke	Improve the quality of life in each jurisdiction	Promote the current infrastructure conditions and the need to improve them	Install guardrails where necessary to protect water sources and natural areas from chemical spills along highways	Natural Resource Protection	Transportation Hazardous Materials	Highway Transportation Incident		Local, DOT	\$ 50,000.00	IDOT interest and funding for the project
94	Osceola	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Build or repair/improve overpasses to reduce intersection accidents and allow access for emergency vehicles	Structural Projects	Highway Transportation Incident	Rail Transportation Incident	Some other hazards	Local, BNSF RR, DOT	\$ 50,000.00	IDOT and RR interest in partnership; studies needed

95	Osceola	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Develop retention ponds near larger industries that can use untreated water	Natural Resource Protection	Drought	Flash flooding	Fires of any type	Local, industries, utilities, DNR, State	\$ 50,000.00	Business owner/landowner support
96	Osceola	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Develop government data infrastructure to help agencies with hazard mitigation	Develop HAZMAT transportation routes in communities	Property Protection	Transportation Hazardous Materials			Local, State TA, DOT (signs)	\$ 5,000.00	Local matching funds, costs to enforce, NIMBY concern
97	Osceola	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Purchase standby pumps	Property Protection	Flash flood	Energy Failure	Pipeline failure	Local, USDA, FEMA, small grants	\$ 10,000.00	Local matching funds, maintenance
98	Osceola	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Develop a dam failure inundation study and map for each medium or high hazard dam	Property Protection	Dam Failure			Local, Corps of Engr, USDA, DNR, State	\$ 25,000.00	Local funding, local realization that the risk is real
99	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Dispense educational materials to citizens	Prevention	Thunderstorm and Lightning	Tornadoes	All other hazards	Local, small grants	\$ 5,000.00	Time to complete and maintain educational materials
100	Woodburn	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Develop continuity of operations plans for each government agency	Prevention	Thunderstorm and Lightning	Tornadoes	Most other hazards	EDA, FEMA, RIO	\$ 10,000.00	Lack of local expertise, local interest varies
101	Woodburn	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Provide sustained public information beginning immediately after the plan is approved. Highlight successful early projects.	Encourage citizen purchase/use of smoke detectors	Public Education and Awareness	Structural Fire			Local, DHS Fire Prev	\$ 1,000.00	Funding and firefighter time for year round event
102	Woodburn	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Update anti-virus software	Prevention	Terrorism	Communications Failure		Local, State, software suppliers	\$ 10,000.00	Expertise at local level to maintain/utilize systems
103	Woodburn	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance cross-agency, intra-county and inter-county communications and partnerships	Establish or improve mobile communications	Emergency Services	Communications Failure	Energy Failure	Most other hazards	Local, DHS, USDA, State	\$ 25,000.00	Local matching funds, ever-changing standards
104	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Improve countywide warning capacities against hazards	Promote NOAA weather radio/rebate program	Public Education and Awareness	Thunderstorm and Lightning	Tornadoes	Most other hazards	Local, USDA, FEMA	\$ 50,000.00	Local matching funds, delivery of large quantities
105	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Improve, expand training to all first responders, increase # certifications	Emergency Services	Human Disease Incident	Human Disease Pandemic	Many other hazards	Local, CDC, State, small grants	\$ 1,000.00	Difficult to secure the staffing, especially volunteers
106	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Acquire ATVs, fire/rescue vehicles ambulances, and related vehicles and equipment	Emergency Services	Grass or Wild-land Fire	Structural Fire	Most other hazards	Local, FEMA, State, USDA, small grants	\$ 100,000.00	Local matching funds, insurance/maintenance cost
107	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Acquire and maintain warm-weather fire and rescue clothing	Emergency Services	Grass or Wild-land Fire	Structural Fire	Many other hazards	Local, FEMA, USDA, small grants	\$ 25,000.00	Local matching funds, need replaced often
108	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Purchase vehicle extrication equipment	Emergency Services	Highway Transportation Incident	Transportation Hazardous Materials	Some other hazards	Local, FEMA, USDA, small grants	\$ 25,000.00	Local matching funds, vehicles to haul equipment
109	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Construct shelters and other safe places to go to keep people safe in public areas	Construct community safe rooms for critical assets	Structural Projects	Tornadoes	Windstorms	Thunderstorm, lightning	Local, FEMA, small grants	\$ 500,000.00	Lack of public understanding, local match funds
110	Woodburn	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Backup gov't/medical files and records electronically-store in alt. locations	Prevention	Structural Failure	Structural Fire	Most other hazards	Local, State, Small grants	\$ 25,000.00	Lack of secure locations for storage, lack of software
111	Woodburn	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Develop a water conservation plan	Natural Resource Protection	Drought	Windstorms	Several other hazards	Local, State, NRCS, USDA	\$ 10,000.00	Complicated issue: unsure who willing to manage
112	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Develop full infrastructure and public services studies	Property Protection	Flash Flood	Structural Failure	Most other hazards	Local, IDNR, DOT, IFA, USDA	\$ 150,000.00	Local matching funds, lack of capital impr plans
113	Woodburn	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Ensure the mitigation plan is reviewed and updated as needed	Assure each jurisdiction annually maintains and updates its plan for 5 years	Prevention	Thunderstorm and Lightning	Tornadoes	All other hazards	Local, State TA	\$ 500.00	Plan needs buy-in before people will use is regularly
114	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Maintain protocols and exercises for human, animal, and plant disease incidents and pandemics	Prevention	Human Disease Incident	Animal/Crop/Plant Disease	Human disease pandemic	Local, State, CDC, USDA	\$ 2,000.00	Trained med staff limited, ever-changing regulations

115	Woodburn	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Involve the community in high-profile projects	Promote landscaping practices	Natural Resource Protection	Flash Flood	Windstorms	Many other hazards	Local, Extension, Trees Forever, others	\$ 1,000.00	Lack of interest on private property, maintenance
116	Woodburn	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Initiate tree trimming and maintenance program for public property	Natural Resource Protection	Windstorms	Severe Winter Storms	Many other hazards	Local, utilities	\$ 10,000.00	Lack of local funding, enforcement on private property
117	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Construct shelters and other safe places to go to keep people safe in public areas	Promote construction of reinforced in-residence tornado safe rooms	Structural Projects	Tornadoes	Windstorms	Structural failure	Local, FEMA, small grants	\$ 50,000.00	Local governments rather stay out of private affairs
118	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards.	Reduce building vulnerability against hazards	Encourage housing codes requiring fire extinguishers in multi-family housing	Property Protection	Structural fire			Local, State TA, FEMA	\$ 5,000.00	Law already provides, but local unsure how to enforce
119	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Educate the public and hold periodic exercises concerning neighborhood saferooms	Public Education and Awareness	Tornadoes	Windstorms	Thunderstorm, lightning	Local, State TA, small grants	\$ 2,000.00	Would work only after a safe room is built
120	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Establish Good Neighbor programs for winter storms	Public Education and Awareness	Severe Winter Storms			Local, State TA, small grants	\$ 1,000.00	Relies upon neighbors caring for neighbors
121	Woodburn	Clarke	Increase the ability of each jurisdiction to reduce the risk of property loss to future properties due to hazards	Update maps and ordinances and educate the public on development policies that prevent development where it should not be located	Update flood maps and develop DFIRMs	Property Protection	River Flooding	Flash Flood	Possible other hazards	Local, FEMA, State TA	\$ 5,000.00	Timing of when FEMA will do local maps, if at all
122	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards.	Provide training and education for property owners and first responders as to building protection	Determine level/type of suppression needed	Property Protection	Structural Fire	Grass or Wild-land Fire	Fixed/Trans Hazardous Materials	Local, FEMA, USDA, small grants	\$ 10,000.00	Equipment changes resulting from study may be costly
123	Woodburn	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Maintain and improve all jurisdictions' participation in NFIP	Property Protection	River Flooding	Flash Flood		Local, FEMA, DNR	\$ 500.00	Local willingness to maintain high level of involvement
124	Woodburn	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Develop/update/publicize city evacuation plans	Public Education and Awareness	Terrorism	Enemy attack	Some other hazards	Local, State TA, small grants	\$ 5,000.00	Local funding and political will to formalize, practice
125	Woodburn	Clarke	Increase the ability of each jurisdiction to reduce the risk of property loss to future properties due to hazards	Update maps and ordinances and educate the public on development policies that prevent development where it should not be located	Prohibit occupiable development in floodplain	Property Protection	River Flooding	Flash Flood		Local, State TA	\$ 10,000.00	Floodplain area not likely to be developed with homes
126	Rural Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Dispense educational materials to citizens	Prevention	Thunderstorm and Lightning	Tornadoes	All other hazards	Local, small grants	\$ 5,000.00	Time to complete and maintain educational materials
127	Rural Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Develop continuity of operations plans for each government agency	Prevention	Thunderstorm and Lightning	Tornadoes	Most other hazards	EDA, FEMA, RIO	\$ 10,000.00	Lack of local expertise, local interest varies
128	Rural Clarke	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Provide sustained public information beginning immediately after the plan is approved. Highlight successful early projects.	Designate community shelters	Public Education and Awareness	Severe Winter Storms	Energy Failure	Extreme heat	Local, small grants	\$ 500.00	If designated shelters not yet stocked/equipped
129	Rural Clarke	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Provide sustained public information beginning immediately after the plan is approved. Highlight successful early projects.	Maintain list of community warming/cooling shelters and inform public about facilities	Public Education and Awareness	Severe Winter Storms	Energy Failure	Extreme heat	Local, small grants	\$ 500.00	Who would maintain food, cots, medical equipment
130	Rural Clarke	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Provide sustained public information beginning immediately after the plan is approved. Highlight successful early projects.	Encourage citizen purchase/use of smoke detectors	Public Education and Awareness	Structural Fire			Local, DHS Fire Prev	\$ 1,000.00	Funding and firefighter time for year round event
131	Rural Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Update anti-virus software	Prevention	Terrorism	Communications Failure		Local, State, software suppliers	\$ 10,000.00	Expertise at local level to maintain/utilize systems
132	Rural Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance cross-agency, intra-county and inter-county communications and partnerships	Establish or improve mobile communications	Emergency Services	Communications Failure	Energy Failure	Most other hazards	Local, DHS, USDA, State	\$ 25,000.00	Local matching funds, ever-changing standards

133	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Improve countywide warning capacities against hazards	Promote NOAA weather radio/rebate program	Public Education and Awareness	Thunderstorm and Lightning	Tornadoes	Most other hazards	Local, USDA, FEMA	\$ 50,000.00	Local matching funds, delivery of large quantities
134	Rural	Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Purchase/install backup power generators at all critical assets	Prevention	Energy Failure	Communications Failure		Local, USDA, FEMA	\$ 15,000.00	Maintenance cost of each generator, local match
135	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Improve, expand training to all first responders, increase # certifications	Emergency Services	Human Disease Incident	Human Disease Pandemic	Many other hazards	Local, CDC, State, small grants	\$ 1,000.00	Difficult to secure the staffing, especially volunteers
136	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Acquire ATVs, fire/rescue vehicles ambulances, and related vehicles and equipment	Emergency Services	Grass or Wild-land Fire	Structural Fire	Most other hazards	Local, FEMA, State, USDA, small grants	\$ 100,000.00	Local matching funds, insurance/maintenance cost
137	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Construct shelters and other safe places to go to keep people safe in public areas	Construct community safe rooms for critical assets	Structural Projects		Tornadoes	Thunderstorm, lightning	Local, FEMA, small grants	\$ 500,000.00	Lack of public understanding, local match funds
138	Rural	Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Backup govt/medical files and records electronically-store in alt. locations	Prevention	Structural Failure	Structural Fire	Most other hazards	Local, State, Small grants	\$ 25,000.00	Lack of secure locations for storage, lack of software
139	Rural	Clarke	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Develop a water conservation plan	Natural Resource Protection	Drought	Windstorms	Several other hazards	Local, State, NRCS, USDA	\$ 10,000.00	Complicated issue: unsure who willing to manage
140	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Develop full infrastructure and public services studies	Property Protection	Flash Flood	Structural Failure	Most other hazards	Local, IDNR, DOT, IFA, USDA	\$ 150,000.00	Local matching funds, lack of capital impr plans
141	Rural	Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Ensure the mitigation plan is reviewed and updated as needed	Assure each jurisdiction annually maintains and updates its plan for 5 years	Prevention	Thunderstorm and Lightning	Tornadoes	All other hazards	Local, State TA	\$ 500.00	Plan needs buy-in before people will use is regularly
142	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Maintain protocols and exercises for human, animal, and plant disease incidents and pandemics	Prevention	Human Disease Incident	Animal/Crop/Plant Disease	Human disease pandemic	Local, State, CDC, USDA	\$ 2,000.00	Trained med staff limited, ever-changing regulations
143	Rural	Clarke	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Involve the community in high-profile projects	Promote landscaping practices	Natural Resource Protection	Flash Flood	Windstorms	Many other hazards	Local, Extension, Trees Forever, others	\$ 1,000.00	Lack of interest on private property, maintenance
144	Rural	Clarke	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Involve the community in high-profile projects	Establish tree planting initiatives	Natural Resource Protection	Windstorms	Extreme heat	Many other hazards	Local, Extension, Trees Forever, others	\$ 5,000.00	Lack of interest on private property, maintenance
145	Rural	Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance continuity of government capabilities	Initiate tree trimming and maintenance program for public property	Natural Resource Protection	Windstorms	Severe Winter Storms	Many other hazards	Local, utilities	\$ 10,000.00	Lack of local funding, enforcement on private property
146	Rural	Clarke	Clarke	Improve the quality of life in each jurisdiction	Promote the current infrastructure conditions and the need to improve them	Develop full inventory of storm water runoff problem areas and monitor them	Property Protection	Flash Flood			Local, State, small grants	\$ 2,000.00	Difficult to monitor numerous areas, local matching funds
147	Rural	Clarke	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Include prioritized needs and mitigation ideas into budget requests	Engage public officials in the budgeting process to ensure long-term equipment needs are met over multiple budget cycles	Emergency Services	Thunderstorm and Lightning	Tornadoes	Most other hazards	Local, outside TA	\$ 500.00	Political bodies serve limited terms, legislation limits
148	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Construct shelters and other safe places to go to keep people safe in public areas	Promote construction of reinforced in-residence tornado safe rooms	Structural Projects	Tornadoes	Windstorms	Structural failure	Local, FEMA, small grants	\$ 50,000.00	Local governments rather stay out of private affairs
149	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards.	Reduce building vulnerability against hazards	Encourage housing codes requiring fire extinguishers in multi-family housing	Property Protection	Structural fire			Local, State TA, FEMA	\$ 5,000.00	Law already provides, but local unsure how to enforce
150	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Educate the public and hold periodic exercises concerning neighborhood saferooms	Public Education and Awareness	Tornadoes	Windstorms	Thunderstorm, lightning	Local, State TA, small grants	\$ 2,000.00	Would work only after a safe room is built
151	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Initiate/continue use of Operation Lifesaver Program	Public Education and Awareness	Highway Transportation Incident	Rail Transportation Incident	Transportation Hazardous Materials	Local, DOT, FHWA, corporate support	\$ 1,000.00	Unsure which schools use/schools not active in plan

152	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Establish Good Neighbor programs for winter storms	Public Education and Awareness	Severe Winter Storms				Local, State TA, small grants	\$ 1,000.00	Relies upon neighbors caring for neighbors
153	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Acquire sanders, graders, and other equipment to enable rapid response and highway safety during and after events	Emergency Services	Severe Winter Storms	Thunderstorm and Lightning	Many other hazards		Local, FEMA, DOT, USDA	\$ 25,000.00	Local matching funds, storage of equipment/vehicles
154	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Establish thermal imaging capacities in local fire depts	Emergency Services	Structural Failure	Grass or Wild-land Fire	Some other hazards		Local, DHS, USDA, small grants	\$ 10,000.00	Local matching funds
155	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Evaluate and, if necessary, improve the protection of tall structures from lightning	Property Protection	Thunderstorm and Lightning	Communications Failure			Local, utilities, USDA, DHS, small grants	\$ 10,000.00	Local matching funds, ownership of tall structures varies
156	Rural	Clarke	Clarke	Increase the ability of each jurisdiction to reduce the risk of property loss to future properties due to hazards	Update maps and ordinances and educate the public on development policies that prevent development where it should not be located	Update flood maps and develop DFIRMs	Property Protection	River Flooding	Flash Flood	Possible other hazards		Local, FEMA, State TA	\$ 5,000.00	Timing of when FEMA will do local maps, if at all
157	Rural	Clarke	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Maintain and improve all jurisdictions' participation in NFIP	Property Protection	River Flooding	Flash Flood			Local, FEMA, DNR	\$ 500.00	No flood areas mapped, so participation is valueless
158	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Adopt State Fire Codes and provide for inspections	Property Protection	Structural Fire				Local, State TA, small grants	\$ 10,000.00	Perception this is a state issue, fire depts are volunteer
159	Rural	Clarke	Clarke	Increase the ability of each jurisdiction to reduce the risk of property loss to future properties due to hazards	Update maps and ordinances and educate the public on development policies that prevent development where it should not be located	Prohibit occupiable development in floodplain	Property Protection	River Flooding	Flash Flood			Local, State TA	\$ 10,000.00	Floodplain is best farmland so not likely dev area
160	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Install riprap to control river shorelines adjacent to critical assets	Property Protection	River Flooding	Flash Flood			Local, CDBG, DNR, USDA, IFA, FEMA	\$ 250,000.00	Environmental impact on waterway
161	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Improve/begin building codes for new construction, rehabilitation, and manufactured homes to resist high winds	Property Protection	Tornadoes	Windstorms	Some other hazards		Local, State and FEMA TA	\$ 10,000.00	Limited interest in this level of zoning and inspections
162	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Construct shelters and other safe places to go to keep people safe in public areas	Encourage adoption of manufactured home building stability and safe room ordinances	Property Protection	Tornadoes	Windstorms	Some other hazards		Local, State, FEMA	\$ 10,000.00	Resistance possible by MH park owners
163	Rural	Clarke	Clarke	Increase the ability of each jurisdiction to reduce the risk of property loss to future properties due to hazards	Update maps and ordinances and educate the public on development policies that prevent development where it should not be located	Require buried power lines in new subdivisions	Structural Projects	Energy Failure	Communications Failure	Many other hazards		Local, utilities, FEMA, State	\$ 2,000.00	Utilities companies would have to support over long-term
164	Rural	Clarke	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Investigate alternative water sources for fire suppression	Emergency Services	Grass or Wild-land Fire	Structural Fire	Drought		Local, DNR USDA, small grants	\$ 50,000.00	Controversy today over acquisition of land for lakes
165	Rural	Clarke	Clarke	Improve the quality of life in each jurisdiction	Promote the current infrastructure conditions and the need to improve them	Install guardrails where necessary to protect water sources and natural areas from chemical spills along highways	Natural Resource Protection	Transportation Hazardous Materials	Highway Transportation Incident			Local, DOT	\$ 50,000.00	IDOT interest and funding for the project
166	Rural	Clarke	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Build or repair/improve overpasses to reduce intersection accidents and allow access for emergency vehicles	Structural Projects	Highway Transportation Incident	Rail Transportation Incident	Some other hazards		Local, BNSF RR, DOT	\$ 50,000.00	IDOT and RR interest in partnership; studies needed
167	Rural	Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Develop government data infrastructure to help agencies with hazard mitigation	Develop HAZMAT transportation routes in communities	Property Protection	Transportation Hazardous Materials				Local, State TA, DOT (signs)	\$ 5,000.00	Local matching funds, costs to enforce, NIMBY concern
168	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Develop a dam failure inundation study and map for each medium or high hazard dam	Property Protection	Dam Failure				Local, Corps of Engr, USDA, DNR, State	\$ 25,000.00	Local funding, local realization that the risk is real
169	Rural	Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Improve countywide warning capacities against hazards	Continue with proposed plans for countywide Code Red participation	Public Education and Awareness	Tornadoes	Thunderstorm and Lightning	Most other hazards		Local, SIRWA, small grants	\$ 7,500.00	Local matching funds

170	Rural Clarke	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Provide sustained public information beginning immediately after the plan is approved. Highlight successful early projects.	Continue and encourage public participation in storm spotter training	Public Education and Awareness	Tornadoes	Thunderstorm and Lightning	Hailstorms	Local, NWS, small grants	\$ 100.00	People don't see urgency and need to attend course
171	Rural Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Develop government data infrastructure to help agencies with hazard mitigation	Maintain list of people on oxygen	Emergency Services	Energy Failure	Structural fires	Communications failure	Local, utilities, small grants	\$ 500.00	HIPPA concern - would have to be voluntary
172	Rural Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Develop government data infrastructure to help agencies with hazard mitigation	Include Mutual Aid Compact and 28-E agreements in EOP	Emergency Services	Thunderstorm and Lightning	Tornadoes	Most other hazards	Local in-kind	\$ 100.00	Requires agreements to be updated and in one place
173	Rural Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance cross-agency, intra-county and inter-county communications and partnerships	Install repeaters and necessary for county dispatch and in rural areas	Emergency Services	Communications Failure			Local, FEMA, USDA, small grants	\$ 50,000.00	Local matching funds, studies needed to ID locations
174	Rural Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Ensure the mitigation plan is reviewed and updated as needed	Review/update the county EOP to include HMP issues/actions	Emergency Services	Thunderstorm and Lightning	Tornadoes	Most other hazards	Local in-kind	\$ 2,500.00	Time of staff to do annual review and updates
175	Rural Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Reduce building vulnerability against hazards	Retrofit or bury existing utility lines	Structural Projects	Energy Failure	Severe Winter Storms	Many other hazards	Local, FEMA, USDA, IUB, utilities	\$ 2,000,000.00	Local matching funds, limited grants compared to need
176	Rural Clarke	Clarke	Improve the quality of life in each jurisdiction	Use mitigation to improve public services, the environment, and recreation opportunities	Encourage vegetation management on public and private property	Natural Resource Protection	Grass or Wild-land Fire	Flash Flood	Some other hazards	Local, USDA, IDALS, DNR, small grants	\$ 25,000.00	Landowner support, local matching funds
177	Rural Clarke	Clarke	Improve the quality of life in each jurisdiction	Promote the current infrastructure conditions and the need to improve them	Maintain intra-county roads and bridges and pave streets and roads as needed	Structural Projects	Structural Failure	River Flooding	Many other hazards	Local, DOT, FHWA, FEMA	\$ 100,000.00	Local matching funds, limited grants compared to need
178	Rural Clarke	Clarke	Improve the quality of life in each jurisdiction	Promote the current infrastructure conditions and the need to improve them	Replace bridges and culverts	Structural Projects	Structural Failure	River Flooding	Many other hazards	Local, DOT, FHWA, FEMA	\$ 25,000.00	Local matching funds, limited grants compared to need
179	Rural Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Increase public awareness of household hazardous materials programs	Public Education and Awareness	Fixed Hazardous Materials	Transportation Hazardous Materials		Local, landfill, DNR	\$ 10,000.00	Program in early stages, could expand notice to public
180	Rural Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of property loss to existing properties due to hazards	Provide training and education for property owners and first responders as to building protection	Promote private insurance purchase	Public Education and Awareness	Structural fire	Hailstorm	Most other hazards	Local, corporate sponsors, small grants	\$ 2,500.00	Local governments rather stay out of private affairs
181	Rural Clarke	Clarke	Increase the ability of each jurisdiction to reduce the risk of property loss to future properties due to hazards	Increase stringency of building codes and add infrastructure to protect against hazards	Add dry hydrants	Emergency Services	Grass or Wild-land Fire	Structural Fire		Local, USDA, State, small grants	\$ 25,000.00	Local matching funds, maintenance
182	Rural Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance cross-agency, intra-county and inter-county communications and partnerships	Have fully institutionalized trainings and exercises for all applicable agencies and maintain records at the EMA office	Emergency Services	Grass or Wild-land Fire	Human Disease Pandemic	Most other hazards	Local in-kind, State TA	\$ 1,000.00	Agencies working together over long term
183	Rural Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Develop government data infrastructure to help agencies with hazard mitigation	Develop heat recovery plan and provide medical equipment due to extreme heat events	Emergency Services	Extreme heat			Local, IDPH, CDC, small grants	\$ 5,000.00	Local matching funds, storage and care of med equip
184	Rural Clarke	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Install new culverts	Structural Projects	Flash flood	River Flooding	Structural failure	Local, State, DOT, FHWA, FEMA	\$ 25,000.00	Local matching funds, limited grants compared to need
185	Rural Clarke	Clarke	Improve the quality of life in each jurisdiction	Use mitigation to improve public services, the environment, and recreation opportunities	Develop and implement watershed studies and projects	Natural Resource Protection	Flash flood	River Flooding	Drought	Local, State, USDA, small grants	\$ 25,000.00	Local SWCD not active in mitigation plan
186	Rural Clarke	Clarke	Improve the quality of life in each jurisdiction	Use mitigation to improve public services, the environment, and recreation opportunities	Install buffer strips against rivers/streams to reduce flash flooding	Natural Resource Protection	Flash flood	River Flooding	Drought	Local, State, USDA, small grants	\$ 25,000.00	Local SWCD not active in mitigation plan
187	Rural Clarke	Clarke	Increase Public understanding, support, and demand for hazard mitigation	Provide sustained public information beginning immediately after the plan is approved. Highlight successful early projects.	Educate the public using case studies, tours, and exercises of early mitigation projects arising from the plan	Public Education and Awareness	Tornadoes	Thunderstorm and Lightning	Many other hazards	Local, State TA, FEMA TA, small grants	\$ 1,000.00	Having enough projects done in a timely manner
188	Rural Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Provide education programs and exercises to first responders and general public about hazards that bring risk of fatalities	Develop system to make data available to the public	Public Education and Awareness	Tornadoes	Thunderstorm and Lightning	Most other hazards	Local, State and FEMA TA	\$ 5,000.00	Leadership and staff to start, maintain effort
189	Rural Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Enhance cross-agency, intra-county and inter-county communications and partnerships	Establish back-up communications center	Emergency Services	Communications Failure	Energy Failure	Most other hazards	Local, State, FEMA, other Fed	\$ 50,000.00	Good location, maintenance of equipment
190	Rural Clarke	Clarke	Improve the quality of life in each jurisdiction	Use mitigation to improve public services, the environment, and recreation opportunities	Develop soil stabilization projects of all types	Natural Resource Protection	Flash flood	River Flooding		Local, USDA, DNR, IDALS, small grants	\$ 50,000.00	Local SWCD not active in mitigation plan

191	Rural Clarke	Clarke	Maintain and enhance the ability of each jurisdiction to reduce the risk of fatalities and injuries due to the effects of hazards.	Ensure proper equipment for first responders	Purchase road closure barricades	Emergency Services	Highway Transportation Incident	Transportation Hazardous Materials	Several other hazards	Local, DOT, other Fed	\$ 10,000.00	Storage of equipment, use and sharing concerns/limits
192	Rural Clarke	Clarke	Increase the ability of each jurisdiction to reduce the risk of property loss to future properties due to hazards	Increase stringency of building codes and add infrastructure to protect against hazards	Initiate a tree windbreak buffer program	Structural Projects	Grass or Wild-land Fire	Windstorms	Severe winter storm	Local, DOT, Trees Forever, USDA, small grants	\$ 5,000.00	Enacting in zoning, concerns over private properties
193	Rural Clarke	Clarke	Ensure public funds are used in the most efficient manner in each jurisdiction	Plan for long-term needs and performance	Develop reservoirs/lakes	Structural Projects	Drought	River flood	Extreme heat	Local, DNR, USDA, other Fed	\$20,000,000.00	Opposition by private landowners for taking of land
194	Rural Clarke	Clarke	Improve the quality of life in each jurisdiction	Use mitigation to improve public services, the environment, and recreation opportunities	Post "no dumping" signs and enforce anti-dumping laws	Natural Resource Protection	Grass or Wild-land Fire	Fixed Hazardous Materials	Some other hazards	Local, DNR, DOT	\$ 10,000.00	Would need to study needs; enforcement costs money
195	Rural Clarke	Clarke	Maintain, enhance ability of each jurisdiction to continue operating during and after hazard events	Develop government data infrastructure to help agencies with hazard mitigation	Map past contamination sites from spills and monitor them	Natural Resource Protection	Fixed Hazardous Materials	Transportation Hazardous Materials	Fires of any type	Local, DNR, EPA, State TA	\$ 5,000.00	Lack of local interest and specialty in monitoring

1	Jurisdiction	County of Jurisdiction (Select one from list)	Completed (C) or in Progress (I) Mitigation Project/Activity Description (Measures that have been identified in the Local Hazard Mitigation Plan, when doing updated plans)	C or I (indicating type of project)	Mitigation Measure Category	Mitigation Measure Completion Date (or Estimated Date) of Completion	Primary Hazard Addressed (Select one from list)	Second Hazard Addressed (Select one from list)	Any Other Hazard Addressed	Funding Sources	Funding Amount	IF Applicable (post disaster): Description of Damages/Losses Avoided (Physical Damage, Economic Loss, Social Impacts)	Estimate Savings due to Avoided Damages/Losses	Describe the method used for calculating/estimating avoided losses	Description of hazard event that avoided losses are measured from
1	Murray	Clarke	Certain ordinances and plans are in place	C	Property Protection	2009, updated as needed	Flash Flood	Structural Failure	Most other hazards	Local, State TA	\$ 1,000.00	Unknown	\$ -	Unknown	Unknown
2	Murray	Clarke	Fire protection in place	C	Emergency Services	On-going	Structural Fire	Fixed Hazardous Materials	Most other hazards	Local, State TA	\$ 20,000.00	Fewer houses burned down, smaller wildfires	\$ 75,000.00	Estimated annual physical losses prevented by fire	Past fire department data on prevented losses
3	Murray	Clarke	Financial support for county water source lake	C	Structural Projects	Pre-2000	Drought	River Flooding	Several other hazards	Local, State, Federal	\$10,000,000.00	Less flooding losses, water available during drought	\$ -	Unknown - mostly economic (industry needs water)	Drought - difficult to measure prevented losses
4	Murray	Clarke	Police protection from county sheriff	C	Emergency Services	On-going	Highway Transportation Incident	Terrorism	Several other hazards	Local, State, Federal	\$ 10,000.00	Fewer crimes committed	\$ -	Unknown - no means to measure at this time	Unknown
5	Murray	Clarke	Warning Siren	C	Public Education and Awareness	Pre-2000	Tornadoes	Thunderstorm and Lightning	Most natural hazards	Local, State, USDA	\$ 15,000.00	People warned of severe weather (50 estimated outdoors)	\$ -	Unknown - city has not had deaths to these hazards	Number of warning sound, number of people outside warned
6	Murray	Clarke	Current in NFIP participation - city mapped	C	Property Protection	Pre-2000 and on-going	River Flooding	Flash Flood		Local, IDNR/FEM A	\$ 500.00	Reduced flooding losses in agricultural area	\$ 1,000.00	Estimate based on land use and size of flood hazard area	Observable effects of flooding in the county
7	Murray	Clarke	Railroad crossings signaled and signed	C	Public Education and Awareness	Pre-2000	Rail Transportation Incident	Highway Transportation Incident	Transportation HAZMAT	Local, DOT, BNSF Railroad	\$ 25,000.00	Fewer rail crossing accidents	\$ -	Unknown - we do not know how many were prevented	Observable effects - people do not cross in front of trains
8	Murray	Clarke	Road graders, sanders available	C	Prevention	On-going purchases	Severe Winter Storms	Highway Transportation Incident	Transportation HAZMAT	Local, DOT	\$ 50,000.00	Fewer accidents due to cleared roads	\$ -	Unknown - no means to know how many accidents prevented	More mobile traffic and generally fewer accidents over time
9	Murray	Clarke	First response EMS services	C	Emergency Services	On-going	Human Disease Incident	Highway Transportation Incident	Most other hazards	Local, IDPH, Federal	\$ 50,000.00	Fewer deaths due to various hazards that cause sickness and injury	\$ -	Unknown - no means to measure at this time	Observable - lives are saved at the scene, maybe a few a year
10	Murray	Clarke	Storm spotter training	C	Public Education and Awareness	Annually	Tornadoes	Thunderstorm and Lightning	Hailstorm	Local, State	\$ 250.00	Fewer deaths and injuries due to people being outside when severe storms strike	\$ -	Unknown - likely reduces people's exposure to storms	Past tornado warnings when people caught outside
11	Osceola	Clarke	Certain ordinances and plans are in place	C	Property Protection	2009, updated as needed	Flash Flood	Structural Failure	Most other hazards	Local, State TA	\$ 1,000.00	Unknown	\$ -	Unknown	Unknown
12	Osceola	Clarke	Fire protection in place	C	Emergency Services	On-going	Structural Fire	Highway Transportation Incident	Most other hazards	Local, State TA	\$ 100,000.00	Fewer houses burned down, smaller wildfires	\$ 250,000.00	Estimated annual physical losses prevented by fire	Past fire department data on prevented losses
13	Osceola	Clarke	Financial support for county water source lake	C	Structural Projects	Pre-2000	Drought	River Flooding	Several other hazards	Local, State, Federal	\$10,000,000.00	Less flooding losses, water available during drought	\$ -	Unknown - mostly economic (industry needs water)	Drought - difficult to measure prevented losses
14	Osceola	Clarke	Police protection	C	Emergency Services	On-going	Highway Transportation Incident	Terrorism	Several other hazards	Local, State, Federal	\$ 150,000.00	Fewer crimes committed	\$ -	Unknown - no means to measure at this time	Unknown
15	Osceola	Clarke	Warning Sirens	C	Public Education and Awareness	Pre-2000	Tornadoes	Thunderstorm and Lightning	Most natural hazards	Local, State, USDA	\$ 75,000.00	People warned of severe weather (250+ estimated outdoors)	\$ -	Unknown - city has not had deaths to these hazards	Number of warning sound, number of people outside warned
16	Osceola	Clarke	Current in NFIP participation - city mapped	C	Property Protection	Pre-2000 and on-going	River Flooding	Flash Flood		Local, IDNR/FEM A	\$ 500.00	Reduced flooding losses in agricultural area	\$ 2,500.00	Estimate based on land use and size of flood hazard area	Observable effects of flooding in the county
17	Osceola	Clarke	Railroad crossings signaled and signed	C	Public Education and Awareness	Pre-2000	Rail Transportation Incident	Highway Transportation Incident	Transportation HAZMAT	Local, DOT, BNSF Railroad	\$ 25,000.00	Fewer rail crossing accidents	\$ -	Unknown - we do not know how many were prevented	Observable effects - people do not cross in front of trains
18	Osceola	Clarke	Road graders, sanders available	C	Prevention	On-going purchases	Severe Winter Storms	Highway Transportation Incident	Transportation HAZMAT	Local, DOT	\$ 200,000.00	Fewer accidents due to cleared roads	\$ -	Unknown - no means to know how many accidents prevented	More mobile traffic and generally fewer accidents over time
19	Osceola	Clarke	Road closure barricades	C	Prevention	Pre-2000 and on-going	Highway Transportation Incident	Transportation Hazardous Materials		Local, DOT	\$ 10,000.00	Safer transportation routes near accident scenes	\$ -	Unknown - no means to know how many accidents prevented	Reports from other areas of accidents near emergency scenes
20	Osceola	Clarke	First response EMS services - hospital in town	C	Emergency Services	On-going	Human Disease Incident	Highway Transportation Incident	Most other hazards	Local, IDPH, Federal	\$ 250,000.00	Fewer deaths due to various hazards that cause sickness and injury	\$ -	Unknown - no means to measure at this time	Observable - lives are saved at the scene, maybe a few a year
21	Osceola	Clarke	Storm spotter training	C	Public Education and Awareness	Annually	Tornadoes	Thunderstorm and Lightning	Hailstorm	Local, State	\$ 250.00	Fewer deaths and injuries due to people being outside when severe storms strike	\$ -	Unknown - likely reduces people's exposure to storms	Past tornado warnings when people caught outside
22	Woodburn	Clarke	Certain ordinances and plans are in place	C	Property Protection	2009, updated as needed	Flash Flood	Structural Failure	Most other hazards	Local, State TA	\$ 1,000.00	Unknown	\$ -	Unknown	Unknown
23	Woodburn	Clarke	Fire protection in place	C	Emergency Services	On-going	Structural Fire	Highway Transportation Incident	Most other hazards	Local, State TA	\$ 20,000.00	Fewer houses burned down, crime reduced	\$ 50,000.00	Estimated annual physical losses prevented by police and fire	Past fire department data on prevented losses
24	Woodburn	Clarke	Financial support for county water source lake	C	Structural Projects	Pre-2000	Drought	River Flooding	Several other hazards	Local, State, Federal	\$10,000,000.00	Less flooding losses, water available during drought	\$ -	Unknown - mostly economic (industry needs water)	Drought - difficult to measure prevented losses
25	Woodburn	Clarke	Police protection from county sheriff	C	Emergency Services	On-going	Highway Transportation Incident	Terrorism	Several other hazards	Local, State, Federal	\$ 7,500.00	Fewer crimes committed	\$ -	Unknown - no means to measure at this time	Unknown
26	Woodburn	Clarke	Warning Siren	C	Public Education and Awareness	Pre-2000	Tornadoes	Thunderstorm and Lightning	Most natural hazards	Local, State, USDA	\$ 15,000.00	People warned of severe weather (15 estimated outdoors)	\$ -	Unknown - city has not had deaths to these hazards	Number of warning sound, number of people outside warned
27	Woodburn	Clarke	Current in NFIP participation - city mapped	C	Property Protection	Pre-2000 and on-going	River Flooding	Flash Flood		Local, IDNR/FEM A	\$ 500.00	Reduced flooding losses in agricultural area	\$ 15,000.00	Estimate based on land use and size of flood hazard area	Observable effects of flooding in the county
28	Woodburn	Clarke	Railroad crossings signaled and signed	C	Public Education and Awareness	Pre-2000	Rail Transportation Incident	Highway Transportation Incident	Transportation HAZMAT	Local, DOT, BNSF Railroad	\$ 25,000.00	Fewer rail crossing accidents	\$ -	Unknown - we do not know how many were prevented	Observable effects - people do not cross in front of trains
29	Woodburn	Clarke	Road graders, sanders available	C	Prevention	On-going purchases	Severe Winter Storms	Highway Transportation Incident	Transportation HAZMAT	Local, DOT	\$ 50,000.00	Fewer accidents due to cleared roads	\$ -	Unknown - no means to know how many accidents prevented	More mobile traffic and generally fewer accidents over time

30	Woodburn	Clarke	First response EMS services	C	Emergency Services	On-going	Human Disease Incident	Highway Transportation Incident	Most other hazards	Local, IDPH, Federal	\$ 50,000.00	Fewer deaths due to various hazards that cause sickness and injury	\$ -	Unknown - no means to measure at this time	Observable - lives are saved at the scene, maybe a few a year
31	Woodburn	Clarke	Storm spotter training	C	Public Education and Awareness	Annually	Tornadoes	Thunderstorm and Lightning	Hailstorm	Local, State	\$ 250.00	Fewer deaths and injuries due to people being outside when severe storms strike	\$ -	Unknown - likely reduces people's exposure to storms	Past tornado warnings when people caught outside
32	Rural County	Clarke	Certain ordinances and plans are in place	C	Property Protection	2009, updated as needed	Flash Flood	Structural Failure	Most other hazards	Local, State TA	\$ 1,000.00	Unknown	\$ -	Unknown	Unknown
33	Rural County	Clarke	Fire protection in place	C	Emergency Services	On-going	Structural Fire	Highway Transportation Incident	Most other hazards	Local, State TA	\$ 200,000.00	Fewer houses burned down, crime reduced	\$ 250,000.00	Estimated annual physical losses prevented by police and fire	Past fire department data on prevented losses
34	Rural County	Clarke	Financial support for county water source lake	C	Structural Projects	Pre-2000	Drought	River Flooding	Several other hazards	Local, State, Federal	\$10,000,000.00	Less flooding losses, water available during drought	\$ -	Unknown - mostly economic (industry needs water)	Drought - difficult to measure prevented losses
35	Rural County	Clarke	Police protection from county sheriff	C	Emergency Services	On-going	Highway Transportation Incident	Terrorism	Several other hazards	Local, State, Federal	\$ 250,000.00	Fewer crimes committed	\$ -	Unknown - no means to measure at this time	Unknown
36	Rural County	Clarke	No dumping signs	C	Natural Resource Protection	On-going	Human Disease Incident	Animal Disease Incident	Human Disease Pandemic	Local, IDNR	\$ 5,000.00	Reduced dumping that enters soil and water	\$ -	Unknown - dumping may be reduced but not sure how it affects human and animal health in a quantitative manner	Reports of dumping found by county officials
37	Rural County	Clarke	Railroad crossings signaled and signed	C	Public Education and Awareness	Pre-2000	Rail Transportation Incident	Highway Transportation Incident	Transportation HAZMAT	Local, DOT, BNSF Railroad	\$ 25,000.00	Fewer rail crossing accidents	\$ -	Unknown - we do not know how many were prevented	Observable effects - people do not cross in front of trains
38	Rural County	Clarke	Road graders, sanders available	C	Prevention	On-going purchases	Severe Winter Storms	Highway Transportation Incident	Transportation HAZMAT	Local, DOT	\$ 200,000.00	Fewer accidents due to cleared roads	\$ -	Unknown - no means to know how many accidents prevented	More mobile traffic and generally fewer accidents over time
39	Rural County	Clarke	Road closure barricades	C	Prevention	Pre-2000 and on-going	Highway Transportation Incident	Transportation Hazardous Materials		Local, DOT	\$ 10,000.00	Safer transportation routes near accident scenes	\$ -	Unknown - no means to know how many accidents prevented	Reports from other areas of accidents near emergency scenes
40	Rural County	Clarke	County public health and animal/crop health	C	Prevention	Pre-2000 and on-going	Human Disease Incident	Human Disease Pandemic	Animal/Crop Plant Disease	Local, IDPH, CDC	\$ 150,000.00	Reduced disease incidents due to prevention and response measures	\$ -	Unknown - no means to measure at this time	Statewide and county public health data and reports provide insight
41	Rural County	Clarke	First response EMS services	C	Emergency Services	On-going	Human Disease Incident	Highway Transportation Incident	Most other hazards	Local, IDPH, Federal	\$ 100,000.00	Fewer deaths due to various hazards that cause sickness and injury	\$ -	Unknown - no means to measure at this time	Observable - lives are saved at the scene, maybe a few a year
42	Rural County	Clarke	Storm spotter training	C	Public Education and Awareness	Annually	Tornadoes	Thunderstorm and Lightning	Hailstorm	Local, State	\$ 250.00	Fewer deaths and injuries due to people being outside when severe storms strike	\$ -	Unknown - likely reduces people's exposure to storms	Past tornado warnings when people caught outside

The above is a summary and is not all-inclusive.

DOCUMENTATION OF THE PLANNING PROCESS

(This relates directly to FEMA requirement §201.6(b) (3) Review and incorporation, if appropriate, of existing plans, reports, and technical information)

CAPABILITIES	COMMUNITIES	Method of incorporation into plan	Community	Method of incorporation into plan	Community	Method of incorporation into plan	Community	Method of incorporation into plan
Planning Capabilities	Clarke County		City of Murray		City of Osceola		City of Woodburn	
Comprehensive Plan	Yes - 1992	It is outdated and has little value	No		Yes - 2001	Reviewed for dev plans and goals	No	
Builder's Plan	No		No		No		No	
Capital Improvement Plan	Yes	Discussed at planning meeting	No		Partial	Revised for infrastructure plans	No	
Local Emergency Plan	No		No		No		No	
County Emergency Plan	Yes - 2007	Protocols discussed in actions section	Yes - 2007	Protocols discussed in actions section	Yes - 2007	Protocols discussed in actions section	Yes - 2007	Protocols discussed in actions section
Local Recovery Plan	No		No		No		No	
County Recovery Plan	Yes	Part C of EOP	Yes	Part C of EOP	Yes	Part C of EOP	Yes	Part C of EOP
Local Mitigation Plan	No		No		No		No	
County Mitigation Plan	Yes	Reviewed to compare with current HARA	Yes	Reviewed to compare with current HARA	Yes	Reviewed to compare with current HARA	Yes	Reviewed to compare with current HARA
Local Mitigation Plan (PDM)	No		No		No		No	
County Mitigation Plan (PDM)	No		No		No		No	
Economic Development Plan	Yes	Revised for economic data and goals	Yes	Revised for economic data and goals	Yes	Revised for economic data and goals	Yes	Revised for economic data and goals
Transportation Plan	Yes	Revised for transportation data and goals	Yes	Revised for transportation data and goals	Yes	Revised for transportation data and goals	Yes	Revised for transportation data and goals
Land-use Plan	Yes	Part of comprehensive plan - reviewed	No		Yes	Part of comprehensive plan - reviewed	No	
Flood Mitigation Assistance (FMA) Plan	No		No		No		No	
Watershed Plan	Yes	Limited to very small areas, reviewed	No		No		No	
Firewise or other fire mitigation plan	No		No		No		No	
School Mitigation Plan	No		No		No		No	
Critical Facilities Plan (Mitigation/Response/Recovery)	Yes	Revised when accessible	Yes	Revised when accessible	Yes	Revised when accessible	Yes	Revised when accessible
Policies/Ordinance								
Zoning Ordinance	Yes	Reviewed	No		Yes	Reviewed	No	
Building Code	No	Relies upon state code	No	Relies upon state code	No	Relies upon state code	No	Relies upon state code
Floodplain Ordinance	No		No		Yes	Reviewed FIRM and ordinance	Yes	Reviewed FIRM and ordinance
Subdivision Ordinance	Yes	Did not review	No		Yes	Did not review	No	
Tree Trimming Ordinance	Yes	Did not review	Yes	Did not review	Yes	Did not review	Yes	Did not review
Nuisance Ordinance	Yes	Did not review	Yes	Did not review	Yes	Did not review	Yes	Did not review
Storm Water Ordinance	Yes	Did not review	No		Yes	Did not review	No	
Drainage Ordinance	No		No		No		No	
Site Plan Review Requirements	Unknown		Unknown		Unknown		Unknown	

Historic Preservation Ordinance	Yes	Did not review - very limited	No		Yes	Did not review - very limited	No	
Landscape Ordinance	Yes	Part of zoning - did not review	No		No		No	
Iowa Wetlands and Riparian Areas Conservation Plan	Partial	No plan, but NRCS does activities	No		No		No	
Debris Management Plan Program	Unknown		Unknown		Unknown		Unknown	
Zoning/Land Use Restrictions	Yes	Reviewed for impact on mitigation actions	No		Yes	Reviewed for impact on mitigation actions	No	
Codes Building Site/Design	Yes	P/Z Commission approxes site plan	No		Yes	P/Z Commission approxes site plan	No	
National Flood Insurance Program (NFIP) Participant - Nondelegated	No		No		No		No	
NFIP Participant - Delegated	No		No		No		No	
NFIP Community Rating System (CRS) Participating Community	No		No		No		No	
Hazard Awareness Program	No		No		No		No	
National Weather Service (NWS) Storm Ready	No		No		No		No	
Building Code Effectiveness Grading (BCEGs)	No		No		No		No	
ISO Fire Rating	Yes	Fire department did not provide	Yes	Fire department did not provide	Yes	Fire department did not provide	Yes	Fire department did not provide
Economic Development Program	Yes	Reviwed plans and talked to director	Yes	Reviwed plans and talked to director	Yes	Reviwed plans and talked to director	Yes	Reviwed plans and talked to director
Land Use Program	No		No		No		No	
Public Education/Awareness	Yes	Talked to EMC and local print media	Yes	Talked to EMC and local print media	Yes	Talked to EMC and local print media	Yes	Talked to EMC and local print media
Property Acquisition	No		No		No		No	
Planning/Zoning Boards	Yes	Reviewed documents from board for plan	No		Yes	Reviewed documents from board for plan	No	
Stream Maintenance Program	No		No					
Tree Trimming Program	Yes	Via energy companies - talked to them	Yes	Via energy companies - talked to them	Yes	Via energy companies - talked to them	Yes	Via energy companies - talked to them
Engineering Studies for Streams (Local/County/Regional)	No		No		No		No	
Mutual Aid Agreements	Yes	Reviewed	Yes	Reviewed	Yes	Reviewed	Yes	Reviewed
Studies/Reports/Maps								
Hazard Analysis/Risk Assessment (Local)	No		No		No		No	
Hazard Analysis/Risk Assessment (County)	Yes	Reviewed to compare with current HARA	No		No		No	
Flood Insurance Maps	No		No		Yes	Reviewed and mapped in plan	Yes	Reviewed and mapped in plan

FEMA Flood Insurance Study (Detailed)	No		No		Yes	Not accessed - outdated	Yes	Not accessed - outdated
Evacuation Route Map	Yes	For courthouse only - did not incorporate	Unknown		Unknown		Unknown	
Critical Facilities Inventory	No		No		No		No	
Vulnerable Population Inventory	Yes	Discussed at planning meeting						
Land Use Map	Yes	Reviewed	No		Yes	Reviewed	No	
Staff/Department								
Building Code Official	No		No		No			
Building Inspector	No		No		No			
Mapping Specialist (GIS)	Yes	Contracted - contacted for shape files	No					
Engineer	Yes	Received maps - engineer part of team	Yes	Received maps - engineer part of team	Yes	Received maps - engineer part of team	Yes	Received maps - engineer part of team
Development Planner	Yes	Part of planning team						
Public Works Official	Yes	Secondary roads - part of planning team	Yes	City rep - part of planning team	Yes	Part of planning team	No	
Emergency Management Coordinator	Yes	Lead planning team						
NFIP Floodplain Administrator	No		No		No		No	
Bomb and/or Arson Squad	No		No		No			
Emergency Response Team	Yes	Part of planning team	Yes	Part of planning team	Yes	Part of planning team	Yes	Part of planning team
Hazardous Materials Expert	Contracted	Discussed arrangement for operations level						
Local Emergency Planning Committee	Yes	Part of planning team						
County Emergency Management Commission	Yes	Part of planning team						
Sanitation Department	Yes	Learned of sanitation issues	No		No		No	
Transportation Department	Yes	Part of planning team	No		Yes	Invited to be part of planning team	No	
Economic Development Department	Yes	Part of planning team	No		No		No	
Housing Department	No		No		No		No	
Planning Consultant	Yes	Hired to do mitigation plan						
Regional Planning Agencies	Yes	Hired to do mitigation plan						
Historic Preservation	Volunteers	Not incorporated						
Non-Governmental Organizations (NGOs)								
American Red Cross	No		No		No		No	
Salvation Army	No		No		No		No	
Veterans Groups	Yes	Not engaged	No		Yes	Not engaged	No	
Environmental Organization	Yes	Not engaged	No		No		No	
Utility Companies	Yes	Part of planning team	No		Yes	Part of planning team	No	

Homeowner Associations	No		No		No		No	
Neighborhood Associations	No		No		Yes	Not engaged	No	
Chamber of Commerce	No		No		Yes	Not engaged	No	
Community Organizations (Lions, Kiwanis, etc.)	Yes	Not engaged	Yes	Not engaged	Yes	Not engaged	No	
Other								
Local Funding Availability	Yes	Reviewed, recorded, and commented						
Churches	Yes	Discussed - they donate to causes	Yes	Discussed - they donate to causes	Yes	Discussed - they donate to causes	Yes	Discussed - they donate to causes

Assessing Vulnerability

Some hazards have different vulnerability areas, (i.e. the entire jurisdiction for tornadoes and only flood zone for river flooding.) A separate table should be filled out for each hazard if the area of vulnerability is different.

Hazard: Hazards that Affect all of Clarke County

Area of vulnerability: City of Murray

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	338	338	100%	\$ 14.2 M	\$ 14.2 M	100%	408	408	100%
Commercial	10	10	100%	\$ 1 M	\$ 1 M	100%	50	50	100%
Industrial	1	1	100%	\$ 0.4 M	\$ 0.4 M	100%	25	25	100%
Ag Structures	2	2	100%	\$53,000	\$53,000	100%	2	2	100%
Ag Land	249 ac	249 ac	100%	\$ 0.1 M	\$ 0.1 M	100%	--	--	--
Religious/ Non-profit	5	5	100%	\$ 1 M	\$ 1 M	100%	5	5	100%
Government	2	2	100%	\$ 2 M	\$ 2 M	100%	10	10	100%
Education	1	1	100%	\$ 5 M	\$ 5 M	100%	250	250	100%
Utilities	1	1	100%	\$ 0.5 M	\$ 0.5 M	100%	0	0	100%
Total	360	360	100%	\$24.25 M	\$24.25 M	100%	750	750	100%

M = Million

Hazards that affect all areas include: drought, earthquake, expansive soils, extreme heat, hailstorm, severe winter storm, thunderstorm and lightning, tornado, windstorm, air transportation incident, any disease events, communications failure, enemy attack, energy failure, and most forms of terrorism.

Hazard: Hazards that Affect all of Clarke County

Area of vulnerability: City of Osceola

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	2,118	2,118	100%	\$139.4 M	\$139.4 M	100%	2,500	2,500	100%
Commercial	225	225	100%	\$ 70.4 M	\$ 70.4 M	100%	1,300	1,300	100%
Industrial	19	19	100%	\$ 24.9 M	\$ 24.9 M	100%	1,225	1,225	100%
Ag Structures	4	4	100%	\$ 0.2 M	\$ 0.2 M	100%	2	2	100%
Ag Land	488 ac	488 ac	100%	\$546,000	\$546,000	100%	--	--	--
Religious/ Non-profit	30	30	100%	\$ 32 M	\$ 32 M	100%	475	475	100%
Government	40	40	100%	\$ 75 M	\$ 75 M	100%	486	486	100%
Education	3	3	100%	\$ 15 M	\$ 15 M	100%	1,250	1,250	100%
Utilities	5	5	100%	\$ 3.3 M	\$ 3.3 M	100%	10	10	100%
Total	2,444	2,444	100%	\$360.75M	360.75M	100%	7,248	7,248	100%

Hazard: Hazards that Affect all of Clarke County

Area of vulnerability: City of Woodburn

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	99	99	100%	\$ 2.4 M	\$ 2.4 M	100%	130	130	100%
Commercial	5	5	100%	\$ 0.3 M	\$ 0.3 M	100%	15	15	100%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Land	228 ac	228 ac	100%	\$74,000	\$74,000	100%	--	--	--
Religious/ Non-profit	3	3	100%	\$ 0.3 M	\$ 0.3 M	100%	3	3	100%
Government	2	2	100%	\$ 0.3 M	\$ 0.3 M	100%	1	1	100%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	1	1	100%	\$ 0.1 M	\$ 0.1 M	100%	0	0	100%
Total	110	110	100%	\$3.47 M	\$3.47 M	100%	149	149	100%

Hazard: Hazards that Affect all of Clarke County

Area of vulnerability: Rural Clarke County

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	1,379	1,379	100%	\$130.7 M	\$130.7 M	100%	1,602	1,602	100%
Commercial	10	10	100%	\$ 2.8 M	\$ 2.8 M	100%	135	135	100%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	194	194	100%	\$ 9.75 M	\$ 9.75 M	100%	96	96	100%
Ag Land	249,035 ac	249,035 ac	100%	\$85.18 M	\$85.18 M	100%	--	--	--
Religious/ Non-profit	2	2	100%	\$ 1.7 M	\$ 1.7 M	100%	17	17	100%
Government	6	6	100%	\$ 7.7 M	\$ 7.7 M	100%	3	3	100%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	3	3	100%	\$ 5.4 M	\$ 5.4 M	100%	0	0	100%
Total	1,594	1,594	100%	\$243.23M	\$243.23M	100%	1,853	1,853	100%

Hazard: Hazards that Affect all of Clarke County

of vulnerability: Total for all of Clarke County (All Jurisdic

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	3,934	3,934	100%	\$286.7 M	\$286.7 M	100%	4,640	4,640	100%
Commercial	250	250	100%	\$ 74.5 M	\$ 74.5 M	100%	1,500	1,500	100%
Industrial	20	20	100%	\$ 25.3 M	\$ 25.3 M	100%	1,250	1,250	100%
Ag Structures	200	200	100%	\$ 10 M	\$ 10 M	100%	100	100	100%
Ag Land	250,000 ac	250,000 ac	100%	\$ 85.9 M	\$ 85.9 M	100%	--	--	--
Religious/ Non-profit	40	40	100%	\$ 35 M	\$ 35 M	100%	500	500	100%
Government	50	50	100%	\$ 85 M	\$ 85 M	100%	500	500	100%
Education	4	4	100%	\$ 20 M	\$ 20 M	100%	1,500	1,500	100%
Utilities	10	10	100%	\$ 9.3 M	\$ 9.3 M	100%	10	10	100%
Total	4,508	4,508	100%	\$631.7 M	\$631.7 M	100%	10,000	10,000	100%

Hazard: Dam Failure

Area of vulnerability: City of Osceola

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	2,118	0	0%	\$139.4 M	\$0	0%	2,500	5	0.20%
Commercial	225	1	0.40%	\$ 70.4 M	\$ 5 M	7.10%	1,300	250	19.20%
Industrial	19	0	0%	\$ 24.9 M	\$0	0%	1,225	0	0%
Ag Structures	4	0	0%	\$ 0.2 M	\$0	0%	2	0	0%
Ag Land	488 ac	50 ac	10.20%	\$546,000	\$55,692	10.20%	--	--	--
Religious/ Non-profit	30	0	0%	\$ 32 M	\$0	0%	475	0	0%
Government	40	2	5%	\$ 75 M	\$ 9 M	12%	486	2	0.40%
Education	3	0	0%	\$ 15 M	\$0	0%	1,250	0	0%
Utilities	5	0	0%	\$ 3.3 M	\$ 0.1 M	3.00%	10	0	0%
Total	2,444	3	0.10%	\$360.75M	\$14.16 M	3.90%	7,248	257	3.50%

Hazard: Dam Failure

Area of vulnerability: Rural Clarke County

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	1,379	2	0.10%	\$130.7 M	\$ 0.2 M	0.20%	1,602	15	0.90%
Commercial	10	0	0%	\$ 2.8 M	\$0	0%	135	0	0%
Industrial	0	0	0%	\$0	\$0	0%	0	0	0%
Ag Structures	194	1	0.50%	\$ 9.75 M	\$ 1.0 M	0%	96	1	1.00%
Ag Land	249,035 ac	10,000 ac	4.00%	\$85.18 M	\$ 3.4 M	4.00%	--	--	--
Religious/ Non-profit	2	0	0%	\$ 1.7 M	\$0	0%	17	0	0%
Government	6	0	0%	\$ 7.7 M	\$0	0%	3	0	0%
Education	0	0	0%	\$0	\$0	0%	0	0	0%
Utilities	3	0	0%	\$ 5.4 M	\$ 0.4 M	7.40%	0	0	0%
Total	1,594	3	0.20%	\$243.23M	\$ 4.1 M	1.70%	1,853	16	0.90%

Hazard: Dam Failure

of vulnerability: Total for all of Clarke County (All Jurisdic

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	3,934	2	0.10%	\$286.7 M	\$ 0.2 M	0.10%	4,640	20	0.40%
Commercial	250	1	0.40%	\$ 74.5 M	\$ 5 M	6.70%	1,500	250	16.70%
Industrial	20	0	0%	\$ 25.3 M	\$0	0%	1,250	0	0%
Ag Structures	200	1	0.50%	\$ 10 M	\$ 0.1 M	1.00%	100	1	1.00%
Ag Land	250,000 ac	10,050 ac	4.00%	\$ 85.9 M	\$ 3.5 M	4.10%	--	--	--
Religious/ Non-profit	40	0	0%	\$ 35 M	\$0	0%	500	0	0%
Government	50	2	4%	\$ 85 M	\$ 9 M	11.80%	500	2	0.40%
Education	4	0	0%	\$ 20 M	\$0	0%	1,500	0	0%
Utilities	10	0	0%	\$ 9.3 M	\$ 0.5 M	5.40%	10	10	0%
Total	4,508	5	0.10%	\$631.7 M	\$ 18.3 M	2.90%	10,000	273	2.70%

Hazard: Flash Flooding

Area of vulnerability: City of Murray

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	338	100	29.60%	\$ 14.2 M	\$ 4.5 M	31.70%	408	121	29.60%
Commercial	10	5	50%	\$ 1 M	\$ 0.5 M	50%	50	25	50%
Industrial	1	1	100%	\$ 0.4 M	\$ 0.4 M	100%	25	25	100%
Ag Structures	2	2	100%	\$53,000	\$53,000	100%	2	2	100%
Ag Land	249 ac	100 ac	40%	\$ 0.1 M	\$40,000	40%	--	--	--
Religious/ Non-profit	5	2	40%	\$ 1 M	\$ 0.4 M	40%	5	2	40%
Government	2	0	0%	\$ 2 M	\$0	0%	10	0	0%

Education	1	1	100%	\$ 5 M	\$ 5 M	100%	250	250	100%
Utilities	1	0	100%	\$ 0.5 M	\$0	0%	0	0	0%
Total	360	111	30.80%	\$24.25 M	\$ 10.89 M	44.90%	750	425	56.70%

Hazard: Flash Flooding

Area of vulnerability: City of Osceola

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	2,118	1,059	50%	\$139.4 M	\$ 69.7 M	50%	2,500	1,250	50%
Commercial	225	200	88.90%	\$ 70.4 M	\$ 63.0 M	89.50%	1,300	1,200	92.30%
Industrial	19	19	100%	\$ 24.9 M	\$ 24.9 M	100%	1,225	1,225	100%
Ag Structures	4	2	50%	\$ 0.2 M	\$ 0.1 M	50%	2	1	50%
Ag Land	488 ac	200 ac	41%	\$546,000	\$250,000	45.80%	--	--	--
Religious/ Non-profit	30	25	83%	\$ 32 M	\$ 29 M	90.60%	475	400	84.20%
Government	40	30	75%	\$ 75 M	\$ 70 M	93.30%	486	400	82.30%
Education	3	3	100%	\$ 15 M	\$ 15 M	100%	1,250	1,250	100%
Utilities	5	3	60%	\$ 3.3 M	\$ 2.5 M	75.80%	10	8	80%
Total	2,444	1,341	54.90%	\$360.75M	\$273.95M	75.90%	7,248	5,734	79.10%

Hazard: Flash Flooding

Area of vulnerability: City of Woodburn

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	99	75	75.80%	\$ 2.4 M	\$ 1.7 M	70.80%	130	95	73.10%
Commercial	5	5	100%	\$ 0.3 M	\$ 0.3 M	100%	15	15	100%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Land	228 ac	150 ac	65.80%	\$74,000	\$50,000	67.60%	--	--	--
Religious/ Non-profit	3	2	66.70%	\$ 0.3 M	\$ 0.2 M	66.70%	3	2	66.70%
Government	2	2	100%	\$ 0.3 M	\$ 0.3 M	100%	1	1	100%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	1	0	100%	\$ 0.1 M	\$0	0%	0	0	100%
Total	110	84	76.40%	\$ 3.47 M	\$ 2.55 M	73.50%	149	113	75.80%

Hazard: Flash Flooding

Area of vulnerability:

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	1,379	500	36.30%	\$130.7 M	\$ 47.4 M	36.30%	1,602	600	37.50%
Commercial	10	3	30.00%	\$ 2.8 M	\$ 0.8 M	28.60%	135	40	29.60%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	194	75	38.70%	\$ 9.75 M	\$ 3.8 M	39.00%	96	36	37.50%
Ag Land	249,035 ac	25,000 ac	10.00%	\$ 85.18 M	\$ 8.5 M	10.00%	--	--	--
Religious/ Non-profit	2	0	0%	\$ 1.7 M	\$0	0%	17	0	0%
Government	6	0	0%	\$ 7.7 M	\$0	0%	3	0	0%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	3	0	0%	\$ 5.4 M	\$0	0%	0	0	100%
Total	1,594	578	36.30%	\$243.23M	\$ 60.5M	24.90%	1,853	676	36.50%

Hazard: Flash Flooding

of vulnerability: Total for all of Clarke County (All Jurisdic

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	3,934	1,734	44.10%	\$286.7 M	\$123.3 M	43%	4,640	2,066	44.50%
Commercial	250	213	85.20%	\$ 74.5 M	\$ 64.6 M	86.70%	1,500	1,280	85.30%
Industrial	20	20	100%	\$ 25.3 M	\$ 25.3 M	100%	1,250	1,250	100%
Ag Structures	200	79	39.50%	\$ 10 M	\$ 3.95 M	39.50%	100	39	39%
Ag Land	250,000 ac	25,450 ac	10.10%	\$ 85.9 M	\$ 8.84 M	10.30%	--	--	--
Religious/ Non-profit	40	29	72.50%	\$ 35 M	\$ 29.6 M	84.60%	500	404	80.80%
Government	50	32	64.00%	\$ 85 M	\$ 70.3 M	82.70%	500	401	80.20%
Education	4	4	100%	\$ 20 M	\$ 20 M	100%	1,500	1,500	100%
Utilities	10	3	30%	\$ 9.3 M	\$ 2.5 M	2.70%	10	8	80%
Total	4,508	2,114	46.90%	\$631.7 M	\$348.39M	55.20%	10,000	6,948	69.50%

Hazard: Grass and Wildland Fire

Area of vulnerability: City of Murray

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area

Residential	338	10	3%	\$ 14.2 M	\$ 0.8 M	5.60%	408	12	2.90%
Commercial	10	2	20%	\$ 1 M	\$ 0.2 M	20%	50	10	20%
Industrial	1	1	100%	\$ 0.4 M	\$ 0.4 M	100%	25	25	100%
Ag Structures	2	2	100%	\$53,000	\$53,000	100%	2	2	100%
Ag Land	249 ac	249 ac	100%	\$ 0.1 M	\$ 0.1 M	100%	--	--	--
Religious/ Non-profit	5	0	0%	\$ 1 M	\$0	0%	5	0	0%
Government	2	0	0%	\$ 2 M	\$0	0%	10	0	0%
Education	1	0	0%	\$ 5 M	\$0	0%	250	0	0%
Utilities	1	0	0%	\$ 0.5 M	\$50,000	10%	0	0	0%
Total	360	15	4.20%	\$24.25 M	\$ 1.603 M	6.60%	750	49	6.50%

Hazard: Grass and Wildland Fire

Area of vulnerability: City of Osceola

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	2,118	150	7.10%	\$139.4 M	\$ 15 M	10.80%	2,500	175	7%
Commercial	225	10	4.40%	\$ 70.4 M	\$ 8 M	11.40%	1,300	100	7.70%
Industrial	19	10	52.60%	\$ 24.9 M	\$ 18 M	72.30%	1,225	750	61.20%
Ag Structures	4	4	100%	\$ 0.2 M	\$ 0.2 M	100%	2	2	100%
Ag Land	488 ac	488 ac	100%	\$546,000	\$546,000	100%	--	--	--
Religious/ Non-profit	30	5	16.70%	\$ 32 M	\$ 3 M	9.40%	475	50	10.50%
Government	40	5	12.50%	\$ 75 M	\$ 10 M	13.30%	486	25	5.10%
Education	3	1	33.30%	\$ 15 M	\$ 2 M	13.30%	1,250	100	8.00%
Utilities	5	0	0%	\$ 3.3 M	\$ 1 M	30.30%	10	0	0%
Total	2,444	185	7.60%	\$360.75M	\$ 57.75 M	16.00%	7,248	1,202	16.60%

Hazard: Grass and Wildland Fire

Area of vulnerability: City of Woodburn

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	99	10	10.10%	\$ 2.4 M	\$ 0.5 M	20.80%	130	13	10.00%
Commercial	5	0	0%	\$ 0.3 M	\$0	0%	15	0	0%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Land	228 ac	228 ac	100%	\$74,000	\$74,000	100%	--	--	--
Religious/ Non-profit	3	0	0%	\$ 0.3 M	\$0	0%	3	0	0%
Government	2	0	0%	\$ 0.3 M	\$0	0%	1	0	0%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	1	0	0%	\$ 0.1 M	\$10,000	10%	0	0	100%
Total	110	10	9.10%	\$3.47 M	\$584,000	16.80%	149	13	8.70%

Hazard: Grass and Wildland Fire

Area of vulnerability: Rural Clarke County

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	1,379	1,000	72.50%	\$130.7 M	\$ 95 M	72.70%	1,602	1,161	72.50%
Commercial	10	5	50.00%	\$ 2.8 M	\$ 1.4 M	50%	135	68	50.40%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	194	175	90.20%	\$ 9.75 M	\$ 8.8 M	90.30%	96	87	90.60%
Ag Land	249,035 ac	249,035 ac	100%	\$85.18 M	\$ 85.18 M	100%	--	--	--
Religious/ Non-profit	2	0	0%	\$ 1.7 M	\$0	0%	17	0	0%
Government	6	2	33.30%	\$ 7.7 M	\$ 2 M	26%	3	1	33.30%
Education	0	0	100%	\$0	\$0	100%	0	0	0%
Utilities	3	2	66.70%	\$ 5.4 M	\$ 4 M	74.10%	0	0	66.70%
Total	1,594	1,182	74.20%	\$243.23M	\$192.38M	79.10%	1,853	1,317	36.50%

Hazard: Grass and Wildland Fire

of vulnerability: Total for all of Clarke County (All Jurisdic

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	3,934	1,170	29.70%	\$286.7 M	\$111.3 M	38.90%	4,640	1,361	29.30%
Commercial	250	17	6.80%	\$ 74.5 M	\$ 9.6 M	12.90%	1,500	178	11.90%
Industrial	20	11	55%	\$ 25.3 M	\$ 18.4 M	72.70%	1,250	775	62.00%
Ag Structures	200	181	90.50%	\$ 10 M	\$ 9.05 M	90.50%	100	91	91.00%
Ag Land	250,000 ac	250,000 ac	100%	\$ 85.9 M	\$ 85.9 M	100%	--	--	--
Religious/ Non-profit	40	5	12.50%	\$ 35 M	\$ 3 M	8.60%	500	50	10.00%
Government	50	7	14%	\$ 85 M	\$ 12 M	14.10%	500	26	5.20%
Education	4	1	25%	\$ 20 M	\$ 2 M	10%	1,500	100	6.70%
Utilities	10	2	20%	\$ 9.3 M	\$ 5.06 M	54.40%	10	0	0.00%
Total	4,508	1,395	30.90%	\$631.7 M	\$256.31	40.60%	10,000	2,581	25.80%

Hazard: Landslide

Area of vulnerability: City of Murray

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	338	0	0%	\$ 14.2 M	\$0	5.60%	408	0	0%
Commercial	10	0	0%	\$ 1 M	\$0	0%	50	0	0%
Industrial	1	0	0%	\$ 0.4 M	\$0	0%	25	0	0%
Ag Structures	2	0	0%	\$53,000	\$0	0%	2	0	0%
Ag Land	249 ac	1 ac	0.40%	\$ 0.1 M	\$1,000	1%	--	--	--
Religious/ Non-profit	5	0	0%	\$ 1 M	\$0	0%	5	0	0%
Government	2	0	0%	\$ 2 M	\$0	0%	10	0	0%
Education	1	0	0%	\$ 5 M	\$0	0%	250	0	0%
Utilities	1	0	0%	\$ 0.5 M	\$0	0%	0	0	0%
Total	360	0	0%	\$24.25 M	\$1,000	0.00%	750	0	0%

Hazard: Landslide

Area of vulnerability: City of Osceola

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	2,118	2	0.10%	\$139.4 M	\$ 0.1 M	0.10%	2,500	3	0.10%
Commercial	225	0	0%	\$ 70.4 M	\$0	0%	1,300	0	0%
Industrial	19	0	0%	\$ 24.9 M	\$0	0%	1,225	0	0%
Ag Structures	4	0	0%	\$ 0.2 M	\$0	0%	2	0	0%
Ag Land	488 ac	2 ac	0.40%	\$546,000	\$2,500	0.50%	--	--	--
Religious/ Non-profit	30	0	0%	\$ 32 M	\$0	0%	475	0	0%
Government	40	0	0%	\$ 75 M	\$0	0%	486	0	0%
Education	3	0	0%	\$ 15 M	\$0	0%	1,250	0	0%
Utilities	5	0	0%	\$ 3.3 M	\$5,000	0.20%	10	0	0%
Total	2,444	2	0.10%	\$360.75M	\$ 0.108 M	0.03%	7,248	3	0.04%

Hazard: Landslide

Area of vulnerability: City of Woodburn

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	99	5	5.00%	\$ 2.4 M	\$ 0.2 M	8.30%	130	7	5.40%
Commercial	5	0	0%	\$ 0.3 M	\$0	0%	15	0	0%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Land	228 ac	2 ac	0.90%	\$74,000	\$2,000	2.70%	--	--	--
Religious/ Non-profit	3	0	0%	\$ 0.3 M	\$0	0%	3	0	0%
Government	2	0	0%	\$ 0.3 M	\$0	0%	1	0	0%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	1	0	0%	\$ 0.1 M	\$5,000	5%	0	0	100%
Total	110	5	9.10%	\$3.47 M	\$0.207M	6%	149	7	4.70%

Hazard: Landslide

Area of vulnerability: Rural Clarke County

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	1,379	2	0.10%	\$130.7 M	\$ 0.2 M	0.20%	1,602	2	0.10%
Commercial	10	0	0%	\$ 2.8 M	\$0	0%	135	0	0%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	194	2	1%	\$ 9.75 M	\$ 0.1 M	1%	96	1	1%
Ag Land	249,035 ac	10 ac	0.00%	\$85.18 M	\$10,000	0.01%	--	--	--
Religious/ Non-profit	2	0	0%	\$ 1.7 M	\$0	0%	17	0	0%
Government	6	0	0%	\$ 7.7 M	\$0	0%	3	0	33.30%
Education	0	0	100%	\$0	\$0	100%	0	0	0%
Utilities	3	0	0%	\$ 5.4 M	\$50,000	0.90%	0	0	66.70%
Total	1,594	4	0.30%	\$243.23M	\$360,000	0.10%	1,853	3	0.20%

Hazard: Landslide

of vulnerability: Total for all of Clarke County (All Jurisdic

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	3,934	9	0.20%	\$286.7 M	\$ 0.5 M	0.20%	4,640	12	0.30%
Commercial	250	0	0%	\$ 74.5 M	\$0	0%	1,500	0	0%
Industrial	20	0	0%	\$ 25.3 M	\$0	0%	1,250	0	0%
Ag Structures	200	2	1%	\$ 10 M	\$ 0.1 M	1%	100	1	1%
Ag Land	250,000 ac	15 ac	0.01%	\$ 85.9 M	\$10,500	0.01%	--	--	--

Religious/ Non-profit	40	0	0%	\$ 35 M	\$0	0%	500	0	0%
Government	50	0	0%	\$ 85 M	\$0	0%	500	0	0%
Education	4	0	0%	\$ 20 M	\$0	0%	1,500	0	0%
Utilities	10	0	0%	\$ 9.3 M	\$60,000	0.60%	10	0	0%
Total	4,508	11	0.20%	\$631.7 M	\$ 0.67 M	0.10%	10,000	13	0.10%

Hazard: River Flood

Area of vulnerability: City of Osceola

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	2,118	5	0.20%	\$139.4 M	\$ 0.3 M	0.20%	2,500	6	0.20%
Commercial	225	0	0%	\$ 70.4 M	\$0	0%	1,300	0	0%
Industrial	19	0	0%	\$ 24.9 M	\$0	0%	1,225	0	0%
Ag Structures	4	0	0%	\$ 0.2 M	\$0	0%	2	0	0%
Ag Land	488 ac	25 ac	0.50%	\$546,000	\$30,000	5.50%	--	--	--
Religious/ Non-profit	30	0	0%	\$ 32 M	\$0	0%	475	0	0%
Government	40	2	5%	\$ 75 M	\$ 8 M	10.70%	486	3	0.60%
Education	3	0	0%	\$ 15 M	\$0	0%	1,250	0	0%
Utilities	5	0	0%	\$ 3.3 M	\$1,000	0.03%	10	0	0%
Total	2,444	7	0.30%	\$360.75M	\$ 8.33 M	2.30%	7,248	9	0.10%

Hazard: River Flood

Area of vulnerability: City of Woodburn

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	99	10	10.10%	\$ 2.4 M	\$ 0.4 M	16.70%	130	13	10%
Commercial	5	5	100%	\$ 0.3 M	\$ 0.3 M	100%	15	15	100%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Land	228 ac	30 ac	13.20%	\$74,000	\$10,000	13.50%	--	--	--
Religious/ Non-profit	3	0	0%	\$ 0.3 M	\$0	0%	3	0	0%
Government	2	2	100%	\$ 0.3 M	\$ 0.3 M	100%	1	1	100%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	1	0	0%	\$ 0.1 M	\$5,000	5%	0	0	100%
Total	110	17	15.50%	\$3.47 M	\$1.015M	29.30%	149	29	19.50%

Hazard: River Flood

Area of vulnerability: Rural Clarke County

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	1,379	2	0.10%	\$130.7 M	\$ 0.2 M	0.20%	1,602	2	0.10%
Commercial	10	0	0%	\$ 2.8 M	\$0	0%	135	0	0%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	194	5	2.60%	\$ 9.75 M	\$ 0.3 M	3.10%	96	3	3.10%
Ag Land	249,035 ac	5,000 ac	2.00%	\$85.18 M	\$ 2 M	2.30%	--	--	--
Religious/ Non-profit	2	0	0%	\$ 1.7 M	\$0	0%	17	0	0%
Government	6	0	0%	\$ 7.7 M	\$0	0%	3	0	33.30%
Education	0	0	100%	\$0	\$0	100%	0	0	0%
Utilities	3	0	0%	\$ 5.4 M	\$ 1 M	18.50%	0	0	66.70%
Total	1,594	7	0.40%	\$243.23M	\$ 3.5 M	14.40%	1,853	5	0.30%

Hazard: River Flood

of vulnerability: Total for all of Clarke County (All Jurisdic

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	3,934	17	0.40%	\$286.7 M	\$ 0.9 M	0.30%	4,640	21	0.50%
Commercial	250	5	2%	\$ 74.5 M	\$ 0.3 M	0.40%	1,500	15	1%
Industrial	20	0	0%	\$ 25.3 M	\$0	0%	1,250	0	0%
Ag Structures	200	5	2.50%	\$ 10 M	\$ 0.3 M	3%	100	3	3%
Ag Land	250,000 ac	5,055 ac	2%	\$ 85.9 M	\$ 2.04 M	2.40%	--	--	--
Religious/ Non-profit	40	0	0%	\$ 35 M	\$0	0%	500	0	0%
Government	50	4	8%	\$ 85 M	\$ 8.3 M	0%	500	4	0.80%
Education	4	0	0%	\$ 20 M	\$0	0%	1,500	0	0%
Utilities	10	0	0%	\$ 9.3 M	\$ 1.06 M	11.40%	10	0	0%
Total	4,508	31	0.70%	\$631.7 M	\$ 12.85M	2%	10,000	43	0.43%

Hazard: Fixed Hazardous Materials Incident

Area of vulnerability: City of Murray

Number of Structures	Value of Structures	Number of People
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Type of Structures	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	338	175	51.80%	\$ 14.2 M	\$ 7.2 M	50.70%	408	210	51.50%
Commercial	10	7	70%	\$ 1 M	\$ 0.7 M	70%	50	35	70%
Industrial	1	0	0%	\$ 0.4 M	\$0	0%	25	0	0%
Ag Structures	2	0	0%	\$53,000	\$0	0%	2	0	0%
Ag Land	249 ac	75 ac	30.10%	\$ 0.1 M	\$30,000	30%	--	--	--
Religious/ Non-profit	5	3	60%	\$ 1 M	\$ 0.6 M	60%	5	3	60%
Government	2	2	100%	\$ 2 M	\$ 2 M	100%	10	10	100%
Education	1	1	100%	\$ 5 M	\$ 5 M	100%	250	250	100%
Utilities	1	1	100%	\$ 0.5 M	\$ 0.5 M	100%	0	0	100%
Total	360	189	52.50%	\$24.25 M	\$ 16.04 M	66.14%	750	508	67.70%

Hazard: Fixed Hazardous Materials Incident

Area of vulnerability: City of Osceola

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	2,118	1,200	56.70%	\$139.4 M	\$ 73 M	52.40%	2,500	1,450	58%
Commercial	225	200	88.90%	\$ 70.4 M	\$ 50 M	71.00%	1,300	1,000	76.90%
Industrial	19	15	79.00%	\$ 24.9 M	\$ 22 M	88.40%	1,225	1,100	89.80%
Ag Structures	4	2	50%	\$ 0.2 M	\$ 0.1 M	50%	2	1	50%
Ag Land	488 ac	100 ac	20.50%	\$546,000	\$120,000	22.00%	--	--	--
Religious/ Non-profit	30	15	50%	\$ 32 M	\$ 12 M	37.50%	475	150	31.60%
Government	40	30	75%	\$ 75 M	\$ 60 M	80%	486	375	77.20%
Education	3	1	33.30%	\$ 15 M	\$ 9 M	60%	1,250	625	50%
Utilities	5	4	80%	\$ 3.3 M	\$ 2.6 M	78.80%	10	7	70%
Total	2,444	1,467	60%	\$360.75M	\$228.82M	63.40%	7,248	4,708	65%

Hazard: Fixed Hazardous Materials Incident

Area of vulnerability: City of Woodburn

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	99	0	0%	\$ 2.4 M	\$0	0%	130	0	0%
Commercial	5	0	0%	\$ 0.3 M	\$0	0%	15	0	0%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Land	228 ac	50 ac	21.90%	\$74,000	\$16,000	21.60%	--	--	--
Religious/ Non-profit	3	0	0%	\$ 0.3 M	\$0	0%	3	0	0%
Government	2	0	0%	\$ 0.3 M	\$50,000	16.60%	1	0	0%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	1	0	0%	\$ 0.1 M	\$0	0%	0	0	100%
Total	110	0	0%	\$3.47 M	\$66,000	1.90%	149	0	0

Hazard: Fixed Hazardous Materials Incident

Area of vulnerability: Rural Clarke County

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	1,379	5	0.40%	\$130.7 M	\$ 0.5 M	0.40%	1,602	7	0.40%
Commercial	10	0	0%	\$ 2.8 M	\$0	0%	135	0	0%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	194	2	1%	\$ 9.75 M	\$ 0.1 M	1%	96	1	1%
Ag Land	249,035 ac	1,000 ac	0.40%	\$85.18 M	\$ 0.5 M	0.60%	--	--	--
Religious/ Non-profit	2	0	0%	\$ 1.7 M	\$0	0%	17	0	0%
Government	6	1	16.70%	\$ 7.7 M	\$ 1.5 M	19.50%	3	1	33.30%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	3	1	33.30%	\$ 5.4 M	\$ 1.5 M	2.80%	0	0	100%
Total	1,594	9	0.60%	\$243.23M	\$ 4.1 M	1.70%	1,853	9	0.50%

Hazard: Fixed Hazardous Materials Incident

of vulnerability: Total for all of Clarke County (All Jurisdic

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	3,934	1,380	35.10%	\$286.7 M	\$ 80.7 M	28.10%	4,640	1,667	35.90%
Commercial	250	207	82.80%	\$ 74.5 M	\$ 50.7 M	68.10%	1,500	1,035	69%
Industrial	20	15	75%	\$ 25.3 M	\$ 22.0 M	87%	1,250	1,100	88%
Ag Structures	200	4	2%	\$ 10 M	\$ 0.2 M	2%	100	2	2%
Ag Land	250,000 ac	1,225 ac	0.50%	\$ 85.9 M	\$ 2 M	2.30%	--	--	--
Religious/ Non-profit	40	18	45%	\$ 35 M	\$ 6.7 M	19.10%	500	153	30.60%
Government	50	33	66%	\$ 85 M	\$ 63.6 M	74.80%	500	386	77.20%
Education	4	2	50%	\$ 20 M	\$ 14 M	70%	1,500	875	58.30%
Utilities	10	6	60%	\$ 9.3 M	\$ 4.6 M	49.50%	10	7	70%

Total	4,508	1,665	36.90%	\$631.7 M	\$ 249 M	39.40%	10,000	5225	52.30%
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Hazard: Pipeline Transportation Incident

Area of vulnerability: City of Murray

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	338	2	0.60%	\$ 14.2 M	\$ 0.1 M	0.70%	408	3	0.70%
Commercial	10	0	0%	\$ 1 M	\$0	0%	50	0	0%
Industrial	1	0	0%	\$ 0.4 M	\$0	0%	25	0	0%
Ag Structures	2	0	0%	\$53,000	\$0	0%	2	0	0%
Ag Land	249 ac	5 ac	2%	\$ 0.1 M	\$5,000	5%	--	--	--
Religious/ Non-profit	5	0	0%	\$ 1 M	\$0	0%	5	0	0%
Government	2	0	0%	\$ 2 M	\$0	0%	10	0	0%
Education	1	0	0%	\$ 5 M	\$0	0%	250	0	0%
Utilities	1	0	0%	\$ 0.5 M	\$ 0.1 M	20%	0	0	100%
Total	360	2	0.60%	\$24.25 M	\$205,000	0.80%	750	3	0.40%

Hazard: Pipeline Transportation Incident

Area of vulnerability: City of Osceola

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	2,118	2,000	94.40%	\$139.4 M	\$125 M	89.70%	2,500	2,350	94%
Commercial	225	200	88.90%	\$ 70.4 M	\$ 62 M	88.10%	1,300	1,000	76.90%
Industrial	19	16	84.20%	\$ 24.9 M	\$ 22 M	88.40%	1,225	1,000	81.60%
Ag Structures	4	0	0%	\$ 0.2 M	\$0	0%	2	0	0%
Ag Land	488 ac	100 ac	20.50%	\$546,000	\$120,000	22%	--	--	--
Religious/ Non-profit	30	25	83.30%	\$ 32 M	\$ 28 M	87.50%	475	400	84.20%
Government	40	35	87.50%	\$ 75 M	\$ 70 M	93.30%	486	425	87.40%
Education	3	2	66.70%	\$ 15 M	\$ 14 M	93.30%	1,250	1,150	92%
Utilities	5	4	80%	\$ 3.3 M	\$ 2.7 M	81.80%	10	8	80%
Total	2,444	2,282	93.40%	\$360.75M	303.82M	84.20%	7,248	6,333	87.40%

Hazard: Pipeline Transportation Incident

Area of vulnerability: Rural Clarke County

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	1,379	60	4.40%	\$130.7 M	\$ 5.8 M	0.40%	1,602	75	4.70%
Commercial	10	2	20%	\$ 2.8 M	\$ 0.5 M	17.90%	135	25	18.50%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	194	10	5.20%	\$ 9.75 M	\$ 0.5 M	5.10%	96	5	5.20%
Ag Land	249,035 ac	13,000 ac	5.20%	\$85.18 M	\$ 4.4 M	5.20%	--	--	--
Religious/ Non-profit	2	0	0%	\$ 1.7 M	\$0	0%	17	0	0%
Government	6	0	0%	\$ 7.7 M	\$0	19.50%	3	0	0%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	3	1	33.30%	\$ 5.4 M	\$ 1 M	18.50%	0	0	100%
Total	1,594	73	4.60%	\$243.23M	\$ 12.2M	5%	1,853	105	5.70%

Hazard: Pipeline Transportation Incident

of vulnerability: Total for all of Clarke County (All Jurisdic

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	3,934	2,062	52.40%	\$286.7 M	\$130.9 M	45.70%	4,640	2,428	52.30%
Commercial	250	202	80.80%	\$ 74.5 M	\$ 62.5 M	70.50%	1,500	1,025	68.30%
Industrial	20	16	80%	\$ 25.3 M	\$ 22.0 M	87%	1,250	1,000	80%
Ag Structures	200	10	5%	\$ 10 M	\$50,000	0.50%	100	5	5%
Ag Land	250,000 ac	13,105 ac	5.20%	\$ 85.9 M	\$ 4.5 M	5.20%	--	--	--
Religious/ Non-profit	40	25	62.50%	\$ 35 M	\$ 28 M	80%	500	400	80%
Government	50	35	70%	\$ 85 M	\$ 70 M	82.40%	500	425	85%
Education	4	2	50%	\$ 20 M	\$ 14 M	70%	1,500	1,150	76.70%
Utilities	10	5	50%	\$ 9.3 M	\$ 3.8 M	40.90%	10	8	80%
Total	4,508	2,357	52.30%	\$631.7 M	\$ 316.2 M	50.10%	10,000	6,441	64.40%

Hazard: Rail Transportation Incident

Area of vulnerability: City of Murray

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	338	150	44.40%	\$ 14.2 M	\$ 6.2 M	43.70%	408	181	44.40%
Commercial	10	6	60%	\$ 1 M	\$ 0.6 M	60%	50	30	60%
Industrial	1	0	0%	\$ 0.4 M	\$0	0%	25	0	0%

Ag Structures	2	1	50%	\$53,000	\$26.00	49.10%	2	1	50%
Ag Land	249 ac	100 ac	40.20%	\$ 0.1 M	\$40,000	40%	--	--	--
Religious/ Non-profit	5	3	60%	\$ 1 M	\$ 0.6 M	60%	5	3	60%
Government	2	2	100%	\$ 2 M	\$ 2 M	100%	10	10	100%
Education	1	0	0%	\$ 5 M	\$0	0%	250	0	0%
Utilities	1	1	100%	\$ 0.5 M	\$ 0.4 M	80%	0	0	100%
Total	360	163	45.30%	\$24.25 M	\$ 9.87 M	40.70%	750	245	32.70%

Hazard: Rail Transportation Incident

Area of vulnerability: City of Osceola

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	2,118	700	33.10%	\$139.4 M	\$ 40 M	28.70%	2,500	850	34%
Commercial	225	150	66.70%	\$ 70.4 M	\$ 60 M	85.20%	1,300	1,000	76.90%
Industrial	19	15	78.90%	\$ 24.9 M	\$ 20 M	80.30%	1,225	850	69.40%
Ag Structures	4	1	25%	\$ 0.2 M	\$50,000	25%	2	1	50%
Ag Land	488 ac	50 ac	10.20%	\$546,000	\$60,000	22%	--	--	--
Religious/ Non-profit	30	15	50%	\$ 32 M	\$ 16 M	50%	475	225	47.40%
Government	40	25	62.50%	\$ 75 M	\$ 45 M	60%	486	350	72%
Education	3	1	33.30%	\$ 15 M	\$ 1 M	6.70%	1,250	100	8%
Utilities	5	2	40%	\$ 3.3 M	\$ 1.5 M	45.50%	10	4	40%
Total	2,444	909	37.20%	\$360.75M	\$ 183.6 M	50.90%	7,248	3,376	46.60%

Hazard: Rail Transportation Incident

Area of vulnerability: City of Woodburn

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	99	60	60.60%	\$ 2.4 M	\$ 1.4 M	58.30%	130	80	61.50%
Commercial	5	5	100%	\$ 0.3 M	\$ 0.3 M	100%	15	15	100%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Land	228 ac	50 ac	21.90%	\$74,000	\$16,000	21.60%	--	--	--
Religious/ Non-profit	3	2	66.70%	\$0.3 M	\$ 0.2 M	66.70%	3	2	66.70%
Government	2	2	100%	\$ 0.3 M	\$ 0.3 M	100%	1	1	100%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	1	1	100%	\$ 0.1 M	\$ 0.1 M	100%	0	0	100%
Total	110	70	63.60%	\$ 3.47 M	\$ 2.32M	66.90%	149	98	65.80%

Hazard: Rail Transportation Incident

Area of vulnerability: Rural Clarke County

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	1,379	40	2.90%	\$130.7 M	\$ 4 M	3.10%	1,602	50	3.10%
Commercial	10	1	10%	\$ 2.8 M	\$ 0.2 M	7.10%	135	5	3.70%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	194	5	2.60%	\$ 9.75 M	\$ 0.3 M	3.10%	96	3	3.10%
Ag Land	249,035 ac	6,000 ac	2.40%	\$85.18 M	\$ 2 M	2.30%	--	--	--
Religious/ Non-profit	2	0	0%	\$ 1.7 M	\$0	0%	17	0	0%
Government	6	1	16.70%	\$ 7.7 M	\$ 1 M	13%	3	1	33.30%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	3	0	0%	\$ 5.4 M	\$0	0%	0	0	100%
Total	1,594	47	2.90%	\$243.23M	\$ 7.5 M	3.10%	1,853	59	3.20%

Hazard: Rail Transportation Incident

of vulnerability: Total for all of Clarke County (All Jurisdic

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	3,934	950	24.10%	\$286.7 M	\$ 51.6 M	18%	4,640	1,161	25%
Commercial	250	162	64.80%	\$ 74.5 M	\$ 61.1 M	82%	1,500	1,050	70%
Industrial	20	15	75%	\$ 25.3 M	\$ 20 M	79.10%	1,250	1,000	68%
Ag Structures	200	7	3.50%	\$ 10 M	\$610,000	6.10%	100	5	5%
Ag Land	250,000 ac	6,200 ac	2.50%	\$ 85.9 M	\$ 2.1 M	2.50%	--	--	--
Religious/ Non-profit	40	20	50%	\$ 35 M	\$ 16.8 M	48%	500	230	46%
Government	50	30	60%	\$ 85 M	\$ 48.3 M	56.80%	500	362	72.40%
Education	4	1	25%	\$ 20 M	\$ 1 M	5%	1,500	100	6.70%
Utilities	10	4	40%	\$ 9.3 M	\$ 2 M	21.50%	10	4	40%
Total	4,508	1,189	26.40%	\$631.7 M	\$ 203.3 M	32.20%	10,000	3,778	37.80%

Hazard: Structural Fires and Failures

Area of vulnerability: City of Murray

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	338	338	100%	\$ 14.2 M	\$ 14.2 M	100%	408	408	100%
Commercial	10	10	100%	\$ 1 M	\$ 1 M	100%	50	50	100%
Industrial	1	1	100%	\$ 0.4 M	\$ 0.4 M	100%	25	25	100%
Ag Structures	2	2	100%	\$53,000	\$53,000	100%	2	2	100%
Ag Land	249 ac	0 ac	0%	\$ 0.1 M	\$0	0%	--	--	0%
Religious/ Non-profit	5	5	100%	\$ 1 M	\$ 1 M	100%	5	5	100%
Government	2	2	100%	\$ 2 M	\$ 2 M	100%	10	10	100%
Education	1	1	100%	\$ 5 M	\$ 5 M	100%	250	250	100%
Utilities	1	1	100%	\$ 0.5 M	\$ 0.4 M	80%	0	0	100%
Total	360	360	45.30%	\$24.25 M	\$ 24.05 M	99.20%	750	750	100%

Hazard: Structural Fires and Failures

Area of vulnerability: City of Osceola

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	2,118	2,118	100%	\$139.4 M	\$139.4 M	100%	2,500	2,500	100%
Commercial	225	225	100%	\$ 70.4 M	\$ 70.4 M	100%	1,300	1,300	100%
Industrial	19	19	100%	\$ 24.9 M	\$ 24.9 M	100%	1,225	1,225	100%
Ag Structures	4	4	100%	\$ 0.2 M	\$ 0.2 M	100%	2	2	100%
Ag Land	488 ac	0 ac	0%	\$546,000	\$0	0%	--	--	0%
Religious/ Non-profit	30	30	100%	\$ 32 M	\$ 32 M	100%	475	475	100%
Government	40	40	100%	\$ 75 M	\$ 75 M	100%	486	486	100%
Education	3	3	100%	\$ 15 M	\$ 15 M	100%	1,250	1,250	100%
Utilities	5	5	100%	\$ 3.3 M	\$ 2.5 M	75.80%	10	10	100%
Total	2,444	2,444	100%	\$360.75M	\$359.40M	99.60%	7,248	7,248	100%

Hazard: Structural Fires and Failures

Area of vulnerability: City of Woodburn

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	99	99	100%	\$ 2.4 M	\$ 2.4 M	100%	130	130	100%
Commercial	5	5	100%	\$ 0.3 M	\$ 0.3 M	100%	15	15	100%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Land	228 ac	0 ac	0%	\$74,000	\$0	0%	--	--	0%
Religious/ Non-profit	3	3	100%	\$ 0.3 M	\$ 0.3 M	100%	3	3	100%
Government	2	2	100%	\$ 0.3 M	\$ 0.3 M	100%	1	1	100%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	1	1	100%	\$ 0.1 M	\$ 0.1 M	100%	0	0	100%
Total	110	110	100%	\$3.47 M	\$3.4 M	98%	149	149	100%

Hazard: Structural Fires and Failures

Area of vulnerability: Rural Clarke County

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	1,379	1,379	100%	\$130.7 M	\$130.7 M	100%	1,602	1,602	100%
Commercial	10	10	100%	\$ 2.8 M	\$ 2.8 M	100%	135	135	100%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	194	194	100%	\$ 9.75 M	\$ 9.75 M	100%	96	96	100%
Ag Land	249,035 ac	0 ac	0%	\$ 85.18 M	\$0	0%	--	--	0%
Religious/ Non-profit	2	2	100%	\$ 1.7 M	\$ 1.7 M	100%	17	17	100%
Government	6	6	100%	\$ 7.7 M	\$ 7.7 M	100%	3	3	100%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	3	3	100%	\$ 5.4 M	\$ 2 M	37%	0	0	100%
Total	1,594	1,594	100%	\$243.23M	\$154.65M	63.60%	1,853	1,853	100%

Hazard: Structural Fires and Failures

of vulnerability: Total for all of Clarke County (All Jurisdic

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	3,934	3,934	100%	\$286.7 M	\$286.7 M	100%	4,640	4,640	100%
Commercial	250	250	100%	\$ 74.5 M	\$ 74.5 M	100%	1,500	1,500	100%
Industrial	20	20	100%	\$ 25.3 M	\$ 25.3 M	100%	1,250	1,250	100%
Ag Structures	200	200	100%	\$ 10 M	\$ 10 M	100%	100	100	100%
Ag Land	250,000 ac	0 ac	0%	\$ 85.9 M	\$0	0%	--	--	0%
Religious/ Non-profit	40	40	100%	\$ 35 M	\$ 35 M	100%	500	500	100%
Government	50	50	100%	\$ 85 M	\$ 85 M	100%	500	500	100%
Education	4	4	100%	\$ 20 M	\$ 20 M	100%	1,500	1,500	100%

Utilities	10	10	100%	\$ 9.3 M	\$ 5 M	53.80%	10	10	100%
Total	4,508	4,508	100%	\$631.7 M	\$541.5 M	85.70%	10,000	10,000	100%

Hazard: Transportation Hazardous Materials Incident

Area of vulnerability: City of Murray

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	338	275	81.40%	\$ 14.2 M	\$ 11.6 M	81.70%	408	332	81.40%
Commercial	10	10	100%	\$ 1 M	\$ 1 M	100%	50	50	100%
Industrial	1	1	100%	\$ 0.4 M	\$ 0.4 M	100%	25	25	100%
Ag Structures	2	2	100%	\$53,000	\$53,000	100%	2	2	100%
Ag Land	249 ac	150 ac	60.20%	\$ 0.1 M	\$60,000	60%	--	--	0%
Religious/ Non-profit	5	5	100%	\$ 1 M	\$ 1 M	100%	5	5	100%
Government	2	2	100%	\$ 2 M	\$ 2 M	100%	10	10	100%
Education	1	1	100%	\$ 5 M	\$ 5 M	100%	250	250	100%
Utilities	1	1	100%	\$ 0.5 M	\$ 0.5 M	100%	0	0	100%
Total	360	297	82.50%	\$ 24.25 M	\$ 21.61M	89.10%	750	674	89.90%

Hazard: Transportation Hazardous Materials Incident

Area of vulnerability: City of Osceola

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	2,118	2,000	94.40%	\$139.4 M	\$131.6 M	94.40%	2,500	2,360	94.40%
Commercial	225	225	100%	\$ 70.4 M	\$ 70.4 M	100%	1,300	1,300	100%
Industrial	19	19	100%	\$ 24.9 M	\$ 24.9 M	100%	1,225	1,225	100%
Ag Structures	4	3	75%	\$ 0.2 M	\$ 0.15 M	75%	2	2	100%
Ag Land	488 ac	250 ac	51.20%	\$546,000	\$ 0.28 M	51.30%	--	--	0%
Religious/ Non-profit	30	29	96.70%	\$ 32 M	\$ 25 M	78.10%	475	250	52.60%
Government	40	40	100%	\$ 75 M	\$ 75 M	100%	486	486	100%
Education	3	2	33.30%	\$ 15 M	\$ 7 M	46.70%	1,250	600	48%
Utilities	5	5	100%	\$ 3.3 M	\$ 3.2 M	97.00%	10	10	100%
Total	2,444	2,323	95%	\$360.75M	\$337.53M	93.60%	7,248	6,233	86%

Hazard: Transportation Hazardous Materials Incident

Area of vulnerability: City of Woodburn

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	99	80	80.80%	\$ 2.4 M	\$ 1.9 M	79.20%	130	103	79.20%
Commercial	5	5	100%	\$ 0.3 M	\$ 0.3 M	100%	15	15	100%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Land	228 ac	125 ac	54.80%	\$74,000	\$40,000	54.10%	--	--	0%
Religious/ Non-profit	3	2	66.70%	\$ 0.3 M	\$ 0.2 M	66.70%	3	2	66.70%
Government	2	2	100%	\$ 0.3 M	\$ 0.3 M	100%	1	1	100%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	1	1	100%	\$ 0.1 M	\$ 0.1 M	100%	0	0	100%
Total	110	100	90.90%	\$ 3.47 M	\$ 2.87 M	82.70%	149	121	81.20%

Hazard: Transportation Hazardous Materials Incident

Area of vulnerability: Rural Clarke County

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	1,379	200	14.50%	\$130.7 M	\$ 19 M	14.50%	1,602	240	15%
Commercial	10	5	50%	\$ 2.8 M	\$ 1.4 M	50%	135	68	50.40%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	194	25	12.90%	\$ 9.75 M	\$ 1.3 M	13.30%	96	12	12.50%
Ag Land	249,035 ac	40,000 ac	16.10%	\$ 85.18 M	\$ 12 M	14.10%	--	--	0%
Religious/ Non-profit	2	2	100%	\$ 1.7 M	\$ 1.7 M	100%	17	17	100%
Government	6	5	83.30%	\$ 7.7 M	\$ 6 M	77.90%	3	2	66.70%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	3	2	66.70%	\$ 5.4 M	\$ 2 M	37%	0	0	100%
Total	1,594	239	15.00%	\$243.23M	\$ 43.4M	17.80%	1,853	339	18.30%

Hazard: Transportation Hazardous Materials Incident

of vulnerability: Total for all of Clarke County (All Jurisdic

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	3,934	2,555	64.90%	\$286.7 M	\$164.1 M	57.20%	4,640	3,035	65.40%
Commercial	250	245	95%	\$ 74.5 M	\$ 73.1 M	98.10%	1,500	1,433	95.50%

Industrial	20	20	100%	\$ 25.3 M	\$ 25.3 M	100%	1,250	1,250	100%
Ag Structures	200	30	15%	\$ 10 M	\$ 1.5 M	15%	100	16	16%
Ag Land	250,000 ac	40,525 ac	16.20%	\$ 85.9 M	\$ 12.38M	14.40%	--	--	0%
Religious/ Non-profit	40	39	97.50%	\$ 35 M	\$ 34.9 M	99.70%	500	499	99.80%
Government	50	49	98%	\$ 85 M	\$ 83.3 M	98%	500	499	99.80%
Education	4	3	75%	\$ 20 M	\$ 12 M	60%	1,500	850	56.70%
Utilities	10	9	90%	\$ 9.3 M	\$ 5.8 M	62.40%	10	10	100%
Total	4,508	2,950	65.40%	\$631.7 M	\$412.4 M	65.30%	10,000	7,612	76.10%

Hazard: Transportation Radiological Incidents

Area of vulnerability: City of Osceola

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	2,118	700	33.10%	\$139.4 M	\$ 46.1 M	33.10%	2,500	828	33.10%
Commercial	225	175	77.80%	\$ 70.4 M	\$ 54.7 M	77.80%	1,300	1,100	84.60%
Industrial	19	12	63.20%	\$ 24.9 M	\$ 15.7 M	63.20%	1,225	1,100	89.80%
Ag Structures	4	0	0%	\$ 0.2 M	\$0	0%	2	0	0%
Ag Land	488 ac	75 ac	15.40%	\$546,000	\$84,000	15.40%	--	--	0%
Religious/ Non-profit	30	15	50%	\$ 32 M	\$ 16 M	50%	475	225	47.40%
Government	40	20	50%	\$ 75 M	\$ 37.5 M	50%	486	200	41.10%
Education	3	2	66.70%	\$ 15 M	\$ 7 M	46.70%	1,250	600	48%
Utilities	5	2	40%	\$ 3.3 M	\$ 1.2 M	36.40%	10	4	40%
Total	2,444	926	37.90%	\$360.75M	\$178.28M	49.40%	7,248	4,054	56%

Hazard: Transportation Radiological Incidents

Area of vulnerability: Rural Clarke County

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	1,379	50	3.60%	\$130.7 M	\$ 4.7 M	3.60%	1,602	50	3.10%
Commercial	10	3	30%	\$ 2.8 M	\$ 0.8 M	28.60%	135	40	29.60%
Industrial	0	0	100%	\$0	\$0	100%	0	0	100%
Ag Structures	194	5	2.60%	\$ 9.75 M	\$ 0.3 M	3.10%	96	3	3.10%
Ag Land	249,035 ac	12,000 ac	4.80%	\$ 85.18 M	\$ 4.1 M	4.80%	--	--	0%
Religious/ Non-profit	2	1	50%	\$ 1.7 M	\$ 0.8 M	47.50%	17	8	47.50%
Government	6	1	16.70%	\$ 7.7 M	\$ 1 M	13%	3	0	0%
Education	0	0	100%	\$0	\$0	100%	0	0	100%
Utilities	3	2	66.70%	\$ 5.4 M	\$ 2 M	37%	0	0	100%
Total	1,594	62	3.90%	\$243.23M	\$ 13.7 M	5.60%	1,853	101	5.50%

Hazard: Transportation Radiological Incidents

of vulnerability: Total for all of Clarke County (All Jurisdic

Type of Structures	Number of Structures			Value of Structures			Number of People		
	# in Community	# in Hazard Area	% in Hazard Area	\$ Value in Community	\$ Value in Hazard Area	% in Hazard Area	# in Community	# in Hazard Area	% in Hazard Area
Residential	3,934	750	19.10%	\$286.7 M	\$ 50.8 M	17.70%	4,640	878	18.90%
Commercial	250	178	71.20%	\$ 74.5 M	\$ 55.5 M	74.50%	1,500	1,140	76%
Industrial	20	12	60%	\$ 25.3 M	\$ 15.7 M	62.10%	1,250	1,100	88%
Ag Structures	200	5	2.50%	\$ 10 M	\$ 0.3 M	3%	100	3	3%
Ag Land	250,000 ac	12,075 ac	4.80%	\$ 85.9 M	\$ 4.9 M	5.70%	--	--	0%
Religious/ Non-profit	40	16	40%	\$ 35 M	\$ 16.8 M	48%	500	233	46.60%
Government	50	21	42%	\$ 85 M	\$ 38.5 M	45.30%	500	200	40%
Education	4	2	50%	\$ 20 M	\$ 12 M	60%	1,500	600	40%
Utilities	10	4	40%	\$ 9.3 M	\$ 3.2 M	34.40%	10	4	40%
Total	4,508	988	21.90%	\$631.7 M	\$197.7 M	31.30%	10,000	4,155	41.60%

Note: See Chapter 6 of Clarke County Hazard Mitigation Plan for notes, comments, and details on vulnerable assets in the county.

ASSESSING CRITICAL FACILITIES

Some hazards have different vulnerability areas, (i.e. the entire jurisdiction for tornadoes and only flood zone for river flooding.) A separate table should be filled out for each hazard if the area of vulnerability is different.

Hazard: Hazards that Affect all of Clarke County

Area of vulnerability: City of Murray

Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
City Hall	X					1,500	\$100 K	\$25 K	10
Fire Station	X					1,000	\$200 K	\$500 K	20
Small Wonders Childcare Center		X	X			3,968	\$400 K	\$100 K	30
Murray WWT lagoons	X					0	\$750 K	\$0	0
Murray Schools		X	X			50 K	\$5 M	\$5 M	500
Wastewater collection pipes	X					0	\$750 K	\$0	0
Church of Christ				X	X	3,000	\$500 K	\$150 K	200
Dekko Mfg.			X			30,000	\$1 M	\$1 M	50
BNSF Railroad			X	X		0	\$200 K	\$0	N/A

M = Million

K = Thousand

Hazards that affect all Murray Critical Assets include: drought, earthquake, expansive soils, extreme heat, hailstorm, severe winter storm, thunderstorm and lightning, tornado, windstorm, air transportation incident, any disease events, communications failure, enemy attack, energy failure, fixed hazardous materials incidents, and most forms of terrorism.

Hazard: Hazards that Affect all of Clarke County

Area of vulnerability: City of Osceola

Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
County Courthouse	X		X	X		20,000	\$5 M	\$3 M	200
City Hall	X					3,000	\$500 K	\$250 K	50
Fire Station **	X					6,000	\$2.2 M	\$2 M	25
Clarke Co. Hospital	X	X	X			40,000	\$10 M	\$15 M	500
Osceola Library					X	5,000	\$2 M	\$1 M	50
SWCC Osceola Campus			X			5,000	\$2 M	\$3 M	100
The Village Childcare Center		X	X			17,185	\$2 M	\$2 M	100
Osceola WTP	X					2,500	\$3 M	\$3 M	25
Osceola WWTP	X					2,500	\$3 M	\$3 M	25
West Lake and Dam	X		X			0	\$10 M	\$0	0
Alliant Energy Service Center	X					13,979	\$2 M	\$2 M	100
County Law Center	X			X		10,000	\$5 M	\$5 M	100
Clarke Elementary School		X	X			60,000	\$6 M	\$6 M	750
Clarke Jr/Sr High School		X	X			75,000	\$9 M	\$9 M	750
Wastewater collection pipes	X					0	\$10 M	\$10 K	0

Water towers	X					0	\$2 M	\$10 K	0
Amtrak Station			X	X		2,000	\$250 K	\$250 K	0
Electric substations	X					0	\$5 M	\$0	0
Casino and hotel		X	X	X		49,499	\$5 M	\$5 M	750
North Main Manor		X				16,422	\$2 M	\$1 M	100
Full Harvest		X				22,293	\$2 M	\$1 M	100
Southern Hills specialty Care		X				50,000	\$5.5 M	\$3.5 M	100
Clarke Co. Hist. Museum					X	5,000	\$500 K	\$500 K	50
Mosaic, Inc., facility		X				10,000	\$1 M	\$500 K	50
Osceola Methodist Church				X		5,000	\$500 K	\$500 K	200
Arbor Valley Lake			X			0	\$1 M	\$0	0
Clarke County Fairground		X	X			38,862	\$5 M	\$5 M	1,000
Hy-Vee Food Store			X	X		27,632	\$5 M	\$5 M	150
Fareway Food Store			X	X		24,278	\$5 M	\$5 M	150
Wal-mart Store			X	X		99,594	\$8 M	\$8 M	300
Osceola Foods			X	X		590,842	\$10 M	\$15 M	750
Mueller Industries			X			212,800	\$5 M	\$7.5 M	250
Miller Industries			X			23,160	\$5 M	\$7.5 M	250
Majona Corp.			X			55,046	\$5 M	\$7.5 M	250
Simco Mfg.			X			26,300	\$5 M	\$7.5 M	250
Astoria Industries			X			135,971	\$5 M	\$7.5 M	250
Boyt Harness – Warehouse			X			35,169	\$2 M	\$2 M	50
Salford – MacLander Inc.			X			55,434	\$2 M	\$2 M	50
Clarke Electric Co-op	X		X			26,506	\$2 M	\$2 M	50
Gas border station	X		X			0	\$2 M	\$0	0
Assisted Living Project		X				20,000	\$2 M	\$1 M	100
BNSF Railroad			X	X		0	\$1 M	\$0	Varies
Natural Gas Pipeline	X			X		0	\$1 M	\$0	0
US 34/I-35 bridge				X		0	\$5 M	\$0	Varies
BNSF/I-35 bridge				X		0	\$3 M	\$0	Varies
I-35 Exit 34 bridge				X		0	\$2.5 M	\$0	Varies
Fillmore and Lincoln Sts. RR Underpasses				X		0	\$2 M	\$0	Varies

Hazards that affect all Osceola Critical Assets include: drought, earthquake, expansive soils, extreme heat, hailstorm, severe winter storm, thunderstorm and lightning, tornado, windstorm, air transportation incident, any disease events, communications failure, enemy attack, energy failure, and most forms of terrorism.

Hazard: Hazards that Affect all of Clarke County **Area of vulnerability: City of Woodburn**

Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
City Hall/Fire Station	X			X		3,200	\$300 K	\$500 K	25
Woodburn WWT lagoons	X					0	\$750 K	\$0	0
Wastewater collection pipes	X					0	\$750 K	\$0	0
BNSF Railroad			X	X		0	\$200 K	\$0	Varies
Two small creek bridges					X	0	\$500 K	\$0	Varies

Hazards that affect all Wodburn Critical Assets include: drought, earthquake, expansive soils, extreme heat, flash flooding, hailstorm, river flooding, severe winter storm, thunderstorm and lightning, tornado, windstorm, air transportation incident, any disease events, communications failure, enemy attack, energy failure, rail transportation incidents, and most forms of terrorism.

Hazard: Hazards that Affect all of Clarke County **Area of vulnerability: Rural Clarke County**

Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
Iowa State Patrol Office	X					5,000	\$1 M	\$1 M	50
Clarke County Landfill				X		1,000	\$2 M	\$500 K	5
Water towers (SIRWA)	X					0	\$4 M	\$20 K	0
Electric substations	X					0	\$5 M	\$0	0
East Lake Park facilities - dam		X	X			Misc. bldgs.	\$6 M	\$ 2 M	100 campers
Osceola Airport	X		X			10,000	\$5 M	\$ 1 M	25
Magellan pipeline pumping station	X					1,000	\$ 5 M	\$1 M	1
Swine Graphics & Iowa Select hog facilities			X			Multiple bldgs	\$5 M+	\$5 M	50
BNSF Railroad			X	X		0	\$10 M	\$0	N/A
Natural gas pipeline	X			X		0	\$5 M	\$0	0
US 34/BNSF RR bridge				X		0	\$3 M	\$0	Varies
Exit 29 bridge				X		0	\$2 M	\$0	Varies
Exit 36 bridge				X		0	\$2 M	\$0	Varies
H48 bridge over I-35				X		0	\$2 M	\$0	Varies
H50 bridge over I-35				X		0	\$2 M	\$0	Varies
Robin St. bridge over I-35				X		0	\$2 M	\$0	Varies
I-35 bridge over S. Squaw Cr.				X		0	\$3 M	\$0	Varies
I-35 bridge over Squaw Cr.				X		0	\$3 M	\$0	Varies
I-35 bridge over White Breast Cr.				X		0	\$3 M	\$0	Varies
R35 bridge over S. Squaw Cr.				X		0	\$2 M	\$0	Varies
R35 bridge over Squaw Cr.				X		0	\$2 M	\$0	Varies
R45 bridge over Squaw Cr.				X		0	\$2 M	\$0	Varies
US 69 Bridge over White Breast Cr.				X		0	\$2 M	\$0	Varies
R59 bridge over Otter Cr.				X		0	\$2 M	\$0	Varies
R15 bridge over Long Cr.				X		0	\$2 M	\$0	Varies
BNSF bridge over Kansas St.				X		0	\$3 M	\$0	Varies
BNSF bridge over 288 th St.				X		0	\$3 M	\$0	Varies
BNSF bridge over 300 th St.				X		0	\$3 M	\$0	Varies
SIRWA Trunk water line	X					0	\$5 M	\$100 K	0

Hazards that affect all Rural County Critical Assets include: drought, earthquake, expansive soils, extreme heat, hailstorm, severe winter storm, thunderstorm and lightning, tornado, windstorm, air transportation incident, any disease events, communications failure, enemy attack, energy failure, and most forms of terrorism.

Hazard: Dam Failure	Area of vulnerability: City of Osceola
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
Osceola WTP	X					2,500	\$3 M	\$3 M	25
Osceola WWTP	X					2,500	\$3 M	\$3 M	25
West Lake and dam	X		X			0	\$10 M	\$0	0
Casino and hotel		X	X	X		49,499	\$5 M	\$5 M	750

Hazard: Dam Failure	Area of vulnerability: Rural Clarke County
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
East Lake Park and dam		X	X			Misc. bldgs.	\$6 M	\$ 2 M	100 campers
Natural gas pipeline	X			X		0	\$5 M	\$0	0
I-35 bridge over S. Squaw Cr.				X		0	\$3 M	\$0	Varies
R35 bridge over S. Squaw Cr.				X		0	\$2 M	\$0	Varies
R45 bridge over Squaw Cr.				X		0	\$2 M	\$0	Varies
US 69 Bridge over White Breast Cr.				X		0	\$2 M	\$0	Varies
SIRWA trunk water line	X					0	\$5 M	\$100 K	0

Hazard: Flash Flooding	Area of vulnerability: City of Murray
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
Murray WWT lagoons	X					0	\$750 K	\$0	0
Murray Schools		X	X			50,000	\$5 M	\$5 M	500
Wastewater collection pipes	X					0	\$750 K	\$0	0
Dekko Mfg.			X			30,000	\$1 M	\$1 M	50

BNSF Railroad			X	X		0	\$200 K	\$0	N/A
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Hazard: Flash Flooding	Area of vulnerability: City of Osceola
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
County Courthouse	X		X	X		20,000	\$5 M	\$3 M	200
City Hall	X					3,000	\$500 K	\$250 K	50
Fire Station ***	X					6,000	\$2.2 M	\$2 M	25
Clarke County Hospital	X	X	X			40,000	\$10 M	\$15 M	500
Osceola WTP	X					2,500	\$3 M	\$3 M	25
Osceola WWTP	X					2,500	\$3 M	\$3 M	25
West Lake and dam	X		X			0	\$10 M	\$0	0
Clarke Elementary School		X	X			60,000	\$6 M	\$6 M	750
Clarke Jr/Sr High School		X	X			75,000	\$9 M	\$9 M	750
Wastewater collection pipes	X					0	\$10 M	\$10 K	0
Casino and hotel		X	X	X		50,000	\$5 M	\$5 M	750
North Main Manor		X				20,000	\$2 M	\$1 M	100
Full Harvest		X				20,000	\$2 M	\$1 M	100
Southern Hills Specialty Care		X				50,000	\$5.5 M	\$3.5 M	100
Mosaic, Inc., facility		X				10,000	\$1 M	\$500 K	50
Osceola Methodist Church				X		5,000	\$500 K	\$500 K	200
Clarke County Fairground		X	X			38,862	\$5 M	\$5 M **	1,000
Hy-Vee Food Store			X	X		27,632	\$5 M	\$5 M	150
Fareway Food Store			X	X		24,278	\$5 M	\$5 M	150
Wal-mart Store			X	X		99,594	\$8 M	\$8 M	300
Osceola Foods complex			X	X		590,842	\$10 M	\$15 M	750
Mueller Industries			X			212,800	\$5 M	\$7.5 M	250
Miller Industries			X			23,160	\$5 M	\$7.5 M	250
Majona Corp.			X			55,046	\$5 M	\$7.5 M	250
Simco Mfg.			X			26,300	\$5 M	\$7.5 M	250
Astoria Industries			X			135,971	\$5 M	\$7.5 M	250
Boyt Harness – Warehouse			X			35,169	\$2 M	\$2 M	50
Salford – MacLander Inc.			X			55,434	\$2 M	\$2 M	50
Clarke Electric Co-op	X		X			26,506	\$2 M	\$2 M	50
Assisted Living Project		X				20,000	\$2 M	\$1 M	100
BNSF Railroad			X	X		0	\$1 M	\$0	Varies
Fillmore and Lincoln Sts. RR Underpasses				X		0	\$2 M	\$0	Varies

Hazard: Hazards that Affect all of Clarke County	Area of vulnerability: Rural Clarke County
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
Clarke County Landfill				X		1,000	\$2 M	\$500 K	5
East Lake Park and dam		X	X			Misc. bldgs.	\$6 M	\$ 2 M	100 campers
Swine Graphics & Iowa Select			X			Multiple bldgs	\$5 M+	\$ 5 M	50
BNSF Railroad			X	X		0	\$10 M	\$0	N/A
US 34/BNSF RR bridge				X		0	\$3 M	\$0	Varies
I-35 bridge over S. Squaw Cr.				X		0	\$3 M	\$0	Varies
I-35 bridge over Squaw Cr.				X		0	\$3 M	\$0	Varies
I-35 bridge over White Breast Cr.				X		0	\$3 M	\$0	Varies
R35 bridge over S. Squaw Cr.				X		0	\$2 M	\$0	Varies
R35 bridge over Squaw Cr.				X		0	\$2 M	\$0	Varies
R45 bridge over Squaw Cr.				X		0	\$2 M	\$0	Varies
US 69 Bridge over White Breast Cr.				X		0	\$2 M	\$0	Varies
R59 bridge over Otter Cr.				X		0	\$2 M	\$0	Varies
R15 bridge over Long Cr.				X		0	\$2 M	\$0	Varies
SIRWA Trunk water line	X					0	\$5 M	\$100 K	0

Hazard: Grass and Wildland Fire Area of vulnerability: City of Osceola

Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
SWCC Osceola Campus			X			5,000	\$2 M	\$3 M	100
The Village Childcare Center		X	X			17,185	\$2 M	\$2 M	100
Osceola WTP	X					2,500	\$3 M	\$3 M	25
Osceola WWTP	X					2,500	\$3 M	\$3 M	25
Alliant Energy Service Center	X					13,979	\$2 M	\$2 M	100
Electric Substations	X					0	\$5 M	\$0	0
Casino and hotel		X	X	X		49,499	\$5 M	\$5 M	750
Clarke County Fairground		X	X			38,862	\$5 M	\$5 M	1,000
Wal-mart store			X	X		99,594	\$8 M	\$8 M	300
Osceola Foods			X	X		590,842	\$10 M	\$15 M	750
Mueller Industries			X			212,800	\$5 M	\$7.5 M	250
Majona Corp.			X			55,046	\$5 M	\$7.5 M	250
Simco Mfg.			X			26,300	\$5 M	\$7.5 M	250
Astoria Industries			X			135,971	\$5 M	\$7.5 M	250
Boyt Harness – Warehouse			X			35,169	\$2 M	\$2 M	50

Salford – MacLander Inc.			X			55,434	\$2 M	\$2 M	50
Gas border station	X		X			0	\$2 M	\$0	0
Natural gas pipeline	X			X		0	\$1 M	\$0	0

Hazard: Grass and Wildland Fire	Area of vulnerability: Rural Clarke County
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
Iowa State Patrol Office	X					5,000	\$1 M	\$1 M	50
Clarke County Landfill				X		1,000	\$2 M	\$500 K	5
Electric substations	X					0	\$5 M	\$0	0
Osceola Airport	X		X			10,000	\$5 M	\$1 M	25
Magellan Pipeline pumping station	X					1,000	\$5 M	\$1 M	1
Swine Graphics & Iowa Select			X			Multiple bldgs	\$5 M+	\$5 M	50
Natural gas pipeline	X			X		0	\$5 M	\$0	0

Landslide events are not projected to affect any critical assets identified in this plan.

Hazard: River Floods	Area of vulnerability: City of Osceola
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
Osceola WTP	X					2,500	\$3 M	\$3 M	25
Osceola WWTP	X					2,500	\$3 M	\$3 M	25
West Lake and dam	X		X			0	\$10 M	\$0	0
Wastewater collection pipes	X					0	\$10 M	\$10 K	0
Casino and hotel		X	X	X		49,499	\$5 M	\$5 M	750

Hazard: River Flooding	Area of vulnerability: Rural Clarke County
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
East Lake Park and dam		X	X			Misc. bldgs.	\$6 M	\$ 2 M	100 campers
BNSF Railroad			X	X		0	\$10 M	\$0	N/A
Natural gas pipeline	X			X		0	\$5 M	\$0	0
I-35 bridge over S. Squaw Cr.				X		0	\$3 M	\$0	Varies
I-35 bridge over Squaw Cr.				X		0	\$3 M	\$0	Varies
I-35 bridge over White Breast Cr.				X		0	\$3 M	\$0	Varies
R35 bridge over S. Squaw Cr.				X		0	\$2 M	\$0	Varies
R35 bridge over Squaw Cr.				X		0	\$2 M	\$0	Varies
R45 bridge over Squaw Cr.				X		0	\$2 M	\$0	Varies
US 69 Bridge over White Breast Cr.				X		0	\$2 M	\$0	Varies
R59 bridge over Otter Cr.				X		0	\$2 M	\$0	Varies
R15 bridge over Long Cr.				X		0	\$2 M	\$0	Varies
SIRWA trunk water line	X					0	\$5 M	\$100 K	0

Hazard: Fixed Hazardous Materials Incidents	Area of vulnerability: City of Osceola
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
County Courthouse	X		X	X		20,000	\$5 M	\$3 M	200
City Hall	X					3,000	\$500 K	\$250 K	50
Fire Station ***	X					6,000	\$2.2 M	\$2 M	25
Osceola Library					X	5,000	\$2 M	\$1 M	50
Osceola WTP	X					2,500	\$3 M	\$3 M	25
Osceola WWTP	X					2,500	\$3 M	\$3 M	25
West Lake and dam	X		X			0	\$10 M	\$0	0
County Law Center	X			X		10,000	\$5 M	\$5 M	100
Clarke Elementary School		X	X			60,000	\$6 M	\$6 M	750
Clarke Jr/Sr High School		X	X			75,000	\$9 M	\$9 M	750
Wastewater collection pipes	X					0	\$10 M	\$10 K	0
Amtrak Station			X	X		2,000	\$250 K	\$250 K	0
Electric substations	X					0	\$5 M	\$0	0
Casino and hotel		X	X	X		49,499	\$5 M	\$5 M	750
North Main Manor		X				16,422	\$2 M	\$1 M	100
Mosaic, Inc., facility		X				10,000	\$1 M	\$500 K	50
Osceola Methodist Church				X		5,000	\$500 K	\$500 K	200

Hy-Vee Food Store			X	X		27,632	\$5 M	\$5 M	150
Fareway Food Store			X	X		24,278	\$5 M	\$5 M	150
Osceola Foods			X	X		590,842	\$10 M	\$15 M	750
Mueller Industries			X			212,800	\$5 M	\$7.5 M	250
Miller Industries			X			23,160	\$5 M	\$7.5 M	250
Majona Corp.			X			55,046	\$5 M	\$7.5 M	250
Simco Mfg.			X			26,300	\$5 M	\$7.5 M	250
Astoria Industries			X			135,971	\$5 M	\$7.5 M	250
Salford – MacLander Inc.			X			55,434	\$2 M	\$2 M	50
Clarke Electric Co-op	X		X			26,506	\$2 M	\$2 M	50
Gas border station	X		X			0	\$2 M	\$0	0
Assisted Living Project		X				20,000	\$2 M	\$1 M	100
BNSF Railroad			X	X		0	\$1 M	\$0	Varies
Natural gas pipeline	X			X		0	\$1 M	\$0	0
Fillmore and Lincoln Sts. RR Underpasses				X		0	\$2 M	\$0	Varies

Hazard: Fixed Hazardous Materials Incidents	Area of vulnerability: City of Woodburn
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	Woodburn WWT lagoons	X	X	X	X				

Hazard: Fixed Hazardous Materials Incidents	Area of vulnerability: Rural Clarke County
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	Clarke County Landfill	X	X	X	X				

Hazard: Pipeline Transportation Incident	Area of vulnerability: City of Osceola
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
County Courthouse	X		X	X		20,000	\$5 M	\$3 M	200
City Hall	X					3,000	\$500 K	\$250 K	50
Fire Station ***	X					6,000	\$2.2 M	\$2 M	25
Clarke County Hospital	X	X	X			40,000	\$10 M	\$15 M	500
Osceola Library					X	5,000	\$2 M	\$1 M	50
Osceola WWTP	X					2,500	\$3 M	\$3 M	25
County Law Center	X			X		10,000	\$5 M	\$5 M	100
Clarke Elementary School		X	X			60,000	\$6 M	\$6 M	750
Clarke Jr/Sr High School		X	X			75,000	\$9 M	\$9 M	750
Wastewater collection pipes	X					0	\$10 M	\$10 K	0
Water towers	X					0	\$2 M	\$10 K	0
Amtrak Station			X	X		2,000	\$250 K	\$250 K	0
Electric substations	X					0	\$5 M	\$0	0
Casino and hotel		X	X	X		49,499	\$5 M	\$5 M	750
North Main Manor		X				16,422	\$2 M	\$1 M	100
Full Harvest		X				22,293	\$2 M	\$1 M	100
Southern Hills Specialty Care		X				50,000	\$5.5 M	\$3.5 M	100
Clarke Co. Hist. Museum					X	5,000	\$500 K	\$500 K	50
Mosaic, Inc., facility		X				10,000	\$1 M	\$500 K	50
Osceola Methodist Church				X		5,000	\$500 K	\$500 K	200
Hy-Vee Food Store			X	X		27,632	\$5 M	\$5 M	150
Fareway Food Store			X	X		24,278	\$5 M	\$5 M	150
Osceola Foods			X	X		590,842	\$10 M	\$15 M	750
Mueller Industries			X			212,800	\$5 M	\$7.5 M	250
Miller Industries			X			23,160	\$5 M	\$7.5 M	250
Majona Corp.			X			55,046	\$5 M	\$7.5 M	250
Simco Mfg.			X			26,300	\$5 M	\$7.5 M	250
Astoria Industries			X			135,971	\$5 M	\$7.5 M	250
Salford – MacLander Inc.			X			55,434	\$2 M	\$2 M	50
Clarke Electric Co-op	X		X			26,506	\$2 M	\$2 M	50
Gas border station	X		X			0	\$2 M	\$0	0
Assisted living project		X				20,000	\$2 M	\$1 M	100
BNSF Railroad			X	X		0	\$1 M	\$0	Varies
Natural gas pipeline	X			X		0	\$1 M	\$0	0
Fillmore and Lincoln Sts. RR Underpasses				X		0	\$2 M	\$0	Varies

Hazard: Railroad Transportation Incidents	Area of vulnerability: City of Murray
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
City Hall	X					1,000	\$100 K	\$25 K	10
Fire Station	X					1,000	\$200 K	\$500 K	20
Wastewater collection pipes	X					0	\$750 K	\$0	0
BNSF Railroad			X	X		0	\$200 K	\$0	N/A

Hazard: Rail Transportation Incidents Area of vulnerability: City of Osceola

Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
County Courthouse	X		X	X		20,000	\$5 M	\$3 M	200
City Hall	X					3,000	\$500 K	\$250 K	50
Fire Station ***	X					6,000	\$2.2 M	\$2 M	25
Osceola Library					X	5,000	\$2 M	\$1 M	50
SWCC Osceola Campus			X			5,000	\$2 M	\$3 M	100
The Village Childcare Center		X	X			17,185	\$2 M	\$2 M	100
County Law Center	X			X		10,000	\$5 M	\$5 M	100
Wastewater collection pipes	X					0	\$10 M	\$10 K	0
Water towers	X					0	\$2 M	\$10 K	0
Amtrak Station			X	X		2,000	\$250 K	\$250 K	0
Electric substations	X					0	\$5 M	\$0	0
North Main Manor		X				16,422	\$2 M	\$1 M	100
Osceola Methodist Church				X		5,000	\$500 K	\$500 K	200
Clarke County Fairground		X	X			38,862	\$5 M	\$5 M	1,000
Wal-mart store			X	X		99,594	\$8 M	\$8 M	300
Osceola Foods			X	X		590,842	\$10 M	\$15 M	750
Mueller Industries			X			212,800	\$5 M	\$7.5 M	250
Miller Industries			X			23,160	\$5 M	\$7.5 M	250
Majona Corp.			X			55,046	\$5 M	\$7.5 M	250
Simco Mfg.			X			26,300	\$5 M	\$7.5 M	250
Astoria Industries			X			135,971	\$5 M	\$7.5 M	250
Boyt Harness – Warehouse			X			35,169	\$2 M	\$2 M	50
Salford – MacLander Inc.			X			55,434	\$2 M	\$2 M	50
Clarke Electric Co-op	X		X			26,506	\$2 M	\$2 M	50
Gas border station	X		X			0	\$2 M	\$0	0
BNSF Railroad			X	X		0	\$1 M	\$0	Varies
Natural gas pipeline	X			X		0	\$1 M	\$0	0
US 34/I-35 bridge				X		0	\$5 M	\$0	Varies

BNSF/I-35 bridge				X		0	\$3 M	\$0	Varies
Fillmore and Lincoln Sts. RR Underpasses				X		0	\$2 M	\$0	Varies

Hazard: Rail Transportation Incidents	Area of vulnerability: Rural Clarke County
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
Clarke County Landfill				X		1,000	\$2 M	\$500 K	5
BNSF Railroad			X	X		0	\$10 M	\$0	N/A
Natural gas pipeline	X			X		0	\$5 M	\$0	0
US 34/BNSF RR bridge				X		0	\$3 M	\$0	Varies
Exit 29 bridge				X		0	\$2 M	\$0	Varies
BNSF bridge over Kansas St.				X		0	\$3 M	\$0	Varies
BNSF bridge over 288 th St.				X		0	\$3 M	\$0	Varies
BNSF bridge over 300 th St.				X		0	\$3 M	\$0	Varies
SIRWA trunk water line	X					0	\$5 M	\$100 K	0

Hazard: Structural Fires and Failures	Area of vulnerability: City of Murray
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
City Hall	X					1,500	\$100 K	\$25 K	10
Fire Station	X					1,000	\$200 K	\$500 K	20
Small Wonders Childcare Center		X	X			3,968	\$400 K	\$100 K	30
Murray Schools		X	X			50 K	\$5 M	\$5 M	500
Church of Christ				X	X	3,000	\$500 K	\$150 K	200
Dekko Mfg.			X			30,000	\$1 M	\$1 M	50
BNSF Railroad			X	X		0	\$200 K	\$0	N/A

Hazard: Structural Fires and Failures	Area of vulnerability: City of Osceola
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
County Courthouse	X		X	X		20,000	\$5 M	\$3 M	200
City Hall	X					3,000	\$500 K	\$250 K	50
Fire Station ***	X					6,000	\$2.2 M	\$2 M	25
Clarke County Hospital	X	X	X			40,000	\$10 M	\$15 M	500
Osceola Library					X	5,000	\$2 M	\$1 M	50
SWCC Osceola Campus			X			5,000	\$2 M	\$3 M	100
The Village Childcare Center		X	X			17,185	\$2 M	\$2 M	100
Osceola WTP	X					2,500	\$3 M	\$3 M	25
Osceola WWTP	X					2,500	\$3 M	\$3 M	25
Alliant Energy Service Center	X					13,979	\$2 M	\$2 M	100
County Law Center	X			X		10,000	\$5 M	\$5 M	100
Clarke Elementary School		X	X			60,000	\$6 M	\$6 M	750
Clarke Jr/Sr High School		X	X			75,000	\$9 M	\$9 M	750
Amtrak Station			X	X		2,000	\$250 K	\$250 K	0
Electric substations	X					0	\$5 M	\$0	0
Casino and hotel		X	X	X		49,499	\$5 M	\$5 M	750
North Main Manor		X				16,422	\$2 M	\$1 M	100
Full Harvest		X				22,293	\$2 M	\$1 M	100
Southern Hills Specialty Care		X				50,000	\$5.5 M	\$3.5 M	100
Clarke Co. Hist. Museum					X	5,000	\$500 K	\$500 K	50
Mosaic, Inc., facility		X				10,000	\$1 M	\$500 K	50
Osceola Methodist Church				X		5,000	\$500 K	\$500 K	200
Clarke County Fairground		X	X			38,862	\$5 M	\$5 M **	1,000
Hy-Vee Food Store			X	X		27,632	\$5 M	\$5 M	150
Fareway Food Store			X	X		24,278	\$5 M	\$5 M	150
Wal-mart store			X	X		99,594	\$8 M	\$8 M	300
Osceola Foods			X	X		590,842	\$10 M	\$15 M	750
Mueller Industries			X			212,800	\$5 M	\$7.5 M	250
Miller Industries			X			23,160	\$5 M	\$7.5 M	250
Majona Corp.			X			55,046	\$5 M	\$7.5 M	250
Simco Mfg.			X			26,300	\$5 M	\$7.5 M	250
Astoria Industries			X			135,971	\$5 M	\$7.5 M	250
Boyt Harness – warehouse			X			35,169	\$2 M	\$2 M	50
Salford – MacLander Inc.			X			55,434	\$2 M	\$2 M	50
Clarke Electric Co-op	X		X			26,506	\$2 M	\$2 M	50
Gas border station	X		X			0	\$2 M	\$0	0
Assisted living project		X				20,000	\$2 M	\$1 M	100
US 34/I-35 bridge				X		0	\$5 M	\$0	Varies
BNSF/I-35 bridge				X		0	\$3 M	\$0	Varies
I-35 Exit 34 bridge				X		0	\$2.5 M	\$0	Varies
BNSF Railroad			X	X		0	\$1 M	\$0	Varies
Natural gas pipeline	X			X		0	\$1 M	\$0	0

Hazard: Structural Fires and Failures	Area of vulnerability: City of Woodburn
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
City Hall/Fire Station	X					3,200	\$300 K	\$500 K	25
BNSF Railroad			X	X		0	\$200 K	\$0	Varies
Two small creek bridges					X	0	\$500 K	\$0	Varies

Hazard: Structural Fires and Failures Area of vulnerability: Rural Clarke County

Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
Iowa State Patrol office	X					5,000	\$1 M	\$1 M	50
Clarke County Landfill				X		1,000	\$2 M	\$500 K	5
Electric substations	X					0	\$5 M	\$0	0
Osceola Airport	X		X			10,000	\$5 M	\$1 M	25
Magellan Pipeline pumping station	X					1,000	\$5 M	\$1 M	1
Swine Graphics & Iowa Select			X			Multiple bldgs	\$5 M+	\$5 M	50
BNSF Railroad			X	X		0	\$10 M	\$0	N/A
Natural gas pipeline	X			X		0	\$5 M	\$0	0
Exit 29 bridge				X		0	\$2 M	\$0	Varies
Exit 36 bridge				X		0	\$2 M	\$0	Varies
H48 bridge over I-35				X		0	\$2 M	\$0	Varies
H50 bridge over I-35				X		0	\$2 M	\$0	Varies
Robin St. bridge over I-35				X		0	\$2 M	\$0	Varies
I-35 bridge over S. Squaw Cr.				X		0	\$3 M	\$0	Varies
I-35 bridge over Squaw Cr.				X		0	\$3 M	\$0	Varies
I-35 bridge over White Breast Cr.				X		0	\$3 M	\$0	Varies
R35 bridge over S. Squaw Cr.				X		0	\$2 M	\$0	Varies
R35 bridge over Squaw Cr.				X		0	\$2 M	\$0	Varies
R45 bridge over Squaw Cr.				X		0	\$2 M	\$0	Varies
US 69 Bridge over White Breast Cr.				X		0	\$2 M	\$0	Varies
R59 bridge over Otter Cr.				X		0	\$2 M	\$0	Varies
R15 bridge over Long Cr.				X		0	\$2 M	\$0	Varies
BNSF bridge over Kansas St.				X		0	\$3 M	\$0	Varies
BNSF bridge over 288 th St.				X		0	\$3 M	\$0	Varies
BNSF bridge over 300 th St.				X		0	\$3 M	\$0	Varies

Hazard: Hazards that Affect all of Clarke County	Area of vulnerability: City of Murray
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
City Hall	X					1,500	\$100 K	\$25 K	10
Fire Station	X					1,000	\$200 K	\$500 K	20
Small Wonders Childcare Center		X	X			3,968	\$400 K	\$100 K	30
Murray Schools		X	X			50 K	\$5 M	\$5 M	500
Church of Christ				X	X	3,000	\$500 K	\$150 K	200
Dekko Mfg.			X			30,000	\$1 M	\$1 M	50
BNSF Railroad			X	X		0	\$200 K	\$0	N/A

Hazard: Transportation Hazardous Materials Incidents	Area of vulnerability: City of Osceola
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
County Courthouse	X		X	X		20,000	\$5 M	\$3 M	200
City Hall	X					3,000	\$500 K	\$250 K	50
Fire Station ***	X					6,000	\$2.2 M	\$2 M	25
Osceola Library					X	5,000	\$2 M	\$1 M	50
SWCC Osceola Campus			X			5,000	\$2 M	\$3 M	100
The Village Childcare Center		X	X			17,185	\$2 M	\$2 M	100
Osceola WTP	X					2,500	\$3 M	\$3 M	25
Osceola WWTP	X					2,500	\$3 M	\$3 M	25
West Lake and dam	X		X			0	\$10 M	\$0	0
County Law Center	X			X		10,000	\$5 M	\$5 M	100
Clarke Elementary School		X	X			60,000	\$6 M	\$6 M	750
Amtrak Station			X	X		2,000	\$250 K	\$250 K	0
Electric substations	X					0	\$5 M	\$0	0
Casino and hotel		X	X	X		49,499	\$5 M	\$5 M	750
North Main Manor		X				16,422	\$2 M	\$1 M	100
Full Harvest		X				22,293	\$2 M	\$1 M	100
Southern Hills Specialty Care		X				50,000	\$5.5 M	\$3.5 M	100
Clarke Co. Hist. Museum					X	5,000	\$500 K	\$500 K	50
Mosaic, Inc., facility		X				10,000	\$1 M	\$500 K	50
Osceola Methodist Church				X		5,000	\$500 K	\$500 K	200
Clarke County Fairground		X	X			38,862	\$5 M	\$5 M **	1,000

Hy-Vee Food Store			X	X		27,632	\$5 M	\$5 M	150
Fareway Food Store			X	X		24,278	\$5 M	\$5 M	150
Wal-mart store			X	X		99,594	\$8 M	\$8 M	300
Osceola Foods			X	X		590,842	\$10 M	\$15 M	750
Mueller Industries			X			212,800	\$5 M	\$7.5 M	250
Miller Industries			X			23,160	\$5 M	\$7.5 M	250
Majona Corp.			X			55,046	\$5 M	\$7.5 M	250
Simco Mfg.			X			26,300	\$5 M	\$7.5 M	250
Astoria Industries			X			135,971	\$5 M	\$7.5 M	250
Boyt Harness – Warehouse			X			35,169	\$2 M	\$2 M	50
Salford – MacLander Inc.			X			55,434	\$2 M	\$2 M	50
Clarke Electric Co-op	X		X			26,506	\$2 M	\$2 M	50
Gas border station	X		X			0	\$2 M	\$0	0
Assisted living project		X				20,000	\$2 M	\$1 M	100
BNSF Railroad			X	X		0	\$1 M	\$0	Varies

Hazard: Transportation Hazardous Materials Incidents	Area of vulnerability: City of Woodburn
------------------------------------------------------	-----------------------------------------

Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
		X	X	X	X	X			
City Hall/Fire Station	X					3,200	\$300 K	\$500 K	25
BNSF Railroad			X	X		0	\$200 K	\$0	Varies

Hazard: Transportation Hazardous Materials Incidents	Area of vulnerability: Rural Clarke County
------------------------------------------------------	--------------------------------------------

Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
		X	X	X	X	X			
Iowa State Patrol Office	X					5,000	\$1 M	\$1 M	50
Clarke County Landfill				X		1,000	\$2 M	\$500 K	5
Osceola Airport	X		X			10,000	\$5 M	\$1 M	25
Magellan Pipeline pumping station	X					1,000	\$5 M	\$1 M	1
Swine Graphics & Iowa Select hog facilities			X			Multiple bldgs.	\$5 M+	\$5 M	50
BNSF Railroad			X	X		0	\$10 M	\$0	N/A

Hazard: Transportation Radiological Incidents	Area of vulnerability: City of Osceola
-----------------------------------------------	----------------------------------------

Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
Osceola Library					X	5,000	\$2 M	\$1 M	50
SWCC Osceola Campus			X			5,000	\$2 M	\$3 M	100
The Village Childcare Center		X	X			17,185	\$2 M	\$2 M	100
Clarke Elementary School		X	X			60,000	\$6 M	\$6 M	750
Wastewater collection pipes	X					0	\$10 M	\$10 K	0
Water towers	X					0	\$2 M	\$10 K	0
Amtrak Station			X	X		2,000	\$250 K	\$250 K	0
Electric substations	X					0	\$5 M	\$0	0
Southern Hills Specialty Care		X				50,000	\$5.5 M	\$3.5 M	100
Mosaic, Inc., facility		X				10,000	\$1 M	\$500 K	50
Osceola Methodist Church				X		5,000	\$500 K	\$500 K	200
Clarke County Fairground		X	X			38,862	\$5 M	\$5 M **	1,000
Hy-Vee Food Store			X	X		27,632	\$5 M	\$5 M	150
Fareway Food Store			X	X		24,278	\$5 M	\$5 M	150
Wal-mart store			X	X		99,594	\$8 M	\$8 M	300
Osceola Foods complex			X	X		590,842	\$10 M	\$15 M	750
Mueller Industries			X			212,800	\$5 M	\$7.5 M	250
Majona Corp.			X			55,046	\$5 M	\$7.5 M	250
Simco Mfg.			X			26,300	\$5 M	\$7.5 M	250
Astoria Industries			X			135,971	\$5 M	\$7.5 M	250
Boyt Harness – warehouse			X			35,169	\$2 M	\$2 M	50
Salford – MacLander Inc.			X			55,434	\$2 M	\$2 M	50
BNSF Railroad			X	X		0	\$1 M	\$0	Varies
Natural gas pipeline	X			X		0	\$1 M	\$0	0
US 34/I-35 bridge				X		0	\$5 M	\$0	Varies
BNSF/I-35 bridge				X		0	\$3 M	\$0	Varies

Hazard: Transportation Radiological Incident	Area of vulnerability: Rural Clarke County
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Name or Description of Asset	Critical Facilities	Vulnerable Populations	Economic Assets	Social Considerations	Historic/Other Considerations	Size of Building (Sq. Ft.)	Replacement Value(\$)	Contents Value (\$)	Occupancy (#)
	X	X	X	X	X				
Iowa State Patrol office	X					5,000	\$1 M	\$1 M	50
Clarke County Landfill				X		1,000	\$2 M	\$500 K	5
Water towers (SIRWA)	X					0	\$4 M	\$20 K	0
BNSF Railroad			X	X		0	\$10 M	\$0	N/A
US 34/BNSF RR bridge				X		0	\$3 M	\$0	Varies

Exit 29 bridge				X		0	\$2 M	\$0	Varies
Exit 36 bridge				X		0	\$2 M	\$0	Varies
H48 bridge over I-35				X		0	\$2 M	\$0	Varies
H50 bridge over I-35				X		0	\$2 M	\$0	Varies
Robin St. bridge over I-35				X		0	\$2 M	\$0	Varies
I-35 bridge over S. Squaw Cr.				X		0	\$3 M	\$0	Varies
I-35 bridge over Squaw Cr.				X		0	\$3 M	\$0	Varies
I-35 bridge over White Breast Cr.				X		0	\$3 M	\$0	Varies
SIRWA trunk water line	X					0	\$5 M	\$100 K	0

Hazard Ranking (Please list the Hazard Ranking for each jurisdiction if a multi-jurisdictional plan)

Please pick from the dropdown list (a list by rank of the statewide hazards). If you determined a hazard that was not on the state list

Jurisdiction name	# 1 Hazard	# 2 Hazard	# 3 Hazard	# 4 Hazard	# 5 Hazard	# 6 Hazard	# 7 Hazard	# 8 Hazard	# 9 Hazard	# 10 Hazard
Clarke County	Thunderstorm and Lightning	Windstorms	Flash Flood	Tornadoes	Structural Fire	Energy Failure	Drought	Grass or Wild-land Fire	Severe Winter Storms	Extreme Heat
City of Murray	Thunderstorm and Lightning	Windstorms	Flash Flood	Tornadoes	Structural Fire	Energy Failure	Drought	Extreme Heat	Severe Winter Storms	Transportation Hazardous Materials
City of Osceola	Thunderstorm and Lightning	Windstorms	Flash Flood	Tornadoes	Structural Fire	Energy Failure	Drought	Extreme Heat	Severe Winter Storms	Transportation Hazardous Materials
City of Woodburn	Thunderstorm and Lightning	Windstorms	Flash Flood	Tornadoes	Structural Fire	Energy Failure	Drought	Extreme Heat	Severe Winter Storms	Transportation Hazardous Materials

Adair	Animal/Crop/Plant Disease	Prevention
Adams	Thunderstorm and Lightning	Property Protection
Allamakee	Human Disease Pandemic	Public Education and Awareness
Appanoose	Flash Flood	Natural Resource Protection
Audubon	Tornadoes	Emergency Services
Benton	Fixed Hazardous Materials	Structural Projects
Black Hawk	Transportation Hazardous Materials	
Boone	Structural Fire	
Bremer	Windstorms	
Buchanan	Highway Transportation Incident	
Buena Vista	Rail Transportation Incident	
Butler	Terrorism	
Calhoun	Air Transportation Incident	
Carroll	Extreme Heat	
Cass	Hailstorms	
Cedar	Grass or Wild-land Fire	
Cerro Gordo	Fixed Radiological	
Cherokee	Pipeline Transportation Incident	
Chickasaw	Sinkholes	
Clarke	Human Disease Incident	
Clay	River Flooding	
Clayton	Waterway Incident	
Clinton	Severe Winter Storms	
Crawford	Energy Failure	
Dallas	Levee Failure	
Davis	Drought	
Decatur	Structural Failure	
Delaware	Public Disorder	
Des Moines	Earthquakes	
Dickinson	Communications Failure	
Dubuque	Radiological Transportation Incident	
Emmet	Landslide	
Fayette	Dam Failure	
Floyd	Expansive Soils	
Franklin		
Fremont		
Greene		
Grundy		
Guthrie		
Hamilton		
Hancock		
Hardin		
Harrison		
Henry		
Howard		
Humboldt		
Ida		
Iowa		
Jackson		
Jasper		
Jefferson		
Johnson		
Jones		
Keokuk		
Kossuth		
Lee		
Linn		
Louisa		
Lucas		
Lyon		
Madison		
Mahaska		
Marion		
Marshall		
Mills		
Mitchell		
Monona		
Monroe		
Montgomery		
Muscatine		
O'Brien		
Osceola		
Page		
Palo Alto		
Plymouth		
Pocahontas		
Polk		
Pottawattamie		
Poweshiek		
Ringgold		
Sac		
Scott		
Shelby		
Sioux		
Story		
Tama		
Taylor		
Union		
Van Buren		
Wapello		
Warren		
Washington		
Wayne		
Webster		
Winnebago		
Winneshiek		
Woodbury		
Worth		
Wright		



OFFICE OF AUDITOR OF STATE
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NEWS RELEASE

FOR RELEASE _____ July 13, 2009

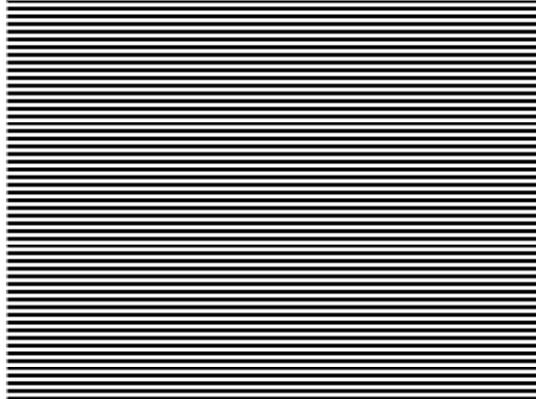
Contact: Andy Nielsen
515/281-5834

Auditor of State David A. Vaudt today released a report on the Iowa Department of Public Defense for the year ended June 30, 2008.

The Iowa Department of Public Defense is composed of the Military Division and the Homeland Security and Emergency Management Division. The main responsibilities of the Military Division are to protect the citizens of the state, recruit and train military personnel and maintain the National Guard armories throughout the state. The Homeland Security and Emergency Management Division is responsible for disaster preparedness and relief coordination throughout the state.

A copy of the report is available for review at the Iowa Department of Public Defense, in the Office of Auditor of State and on the Auditor of State's web site at <http://auditor.iowa.gov/reports/reports.htm>.

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**REPORT OF RECOMMENDATIONS TO THE
IOWA DEPARTMENT OF PUBLIC DEFENSE**

JUNE 30, 2008

Office of
**AUDITOR
OF STATE**
State Capitol Building • Des Moines, Iowa



David A. Vaudt, CPA
Auditor of State





OFFICE OF AUDITOR OF STATE
STATE OF IOWA

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July 7, 2009

To Brigadier General Timothy Orr, Adjutant General
of the Iowa Department of Public Defense:

The Iowa Department of Public Defense is part of the State of Iowa and, as such, has been included in our audits of the State's Comprehensive Annual Financial Report (CAFR) and the State's Single Audit Report for the year ended June 30, 2008.

In conducting our audits, we became aware of certain aspects concerning the Department's operations for which we believe corrective action is necessary. As a result, we have developed recommendations which are reported on the following pages. We believe you should be aware of these recommendations, which include those reported in the State's Single Audit Report and the State's Report on Internal Control. These recommendations have been discussed with Department personnel and their responses to these recommendations are included in this report.

The Iowa Department of Public Defense's responses to the findings identified in our audit are included in this report. While we have expressed our conclusions on the Department's responses, we did not audit the Iowa Department of Public Defense's responses and, accordingly, we express no opinion on them.

This report, a public record by law, is intended solely for the information and use of the officials and employees of the Iowa Department of Public Defense, citizens of the State of Iowa and other parties to whom the Iowa Department of Public Defense may report. This report is not intended to be and should not be used by anyone other than these specified parties.

We would like to acknowledge the many courtesies and assistance extended to us by personnel of the Department during the course of our audits. Should you have questions concerning any of the above matters, we shall be pleased to discuss them with you at your convenience. Individuals who participated in our audits of the Department are listed on page 12 and they are available to discuss these matters with you.

DAVID A. VAUDT, CPA
Auditor of State

WARREN G. JENKINS, CPA
Chief Deputy Auditor of State

cc: Honorable Chester J. Culver, Governor
Director, Department of Management
Glen Dickinson, Director, Legislative Services Agency

June 30, 2008

Findings Reported in the State's Single Audit Report:

CFDA Number: 12.401 – National Guard Military Operations and Maintenance (O&M) Projects

Agency Number: W912LP-05-2-1000

Federal Award Year: 2007, 2008

State of Iowa Single Audit Report Comment: 08-III-DOD-582-1

- (1) Cash Management – Effective cash management procedures provide for minimizing the amount of time between the drawdown/request for federal funds and the disbursement of those funds. As stated in the Cash Management Improvement Act (CMIA) Agreement, the National Guard Military Operations and Maintenance (O&M) Projects program is funded on a pre-issuance basis. This means federal draws are to be requested so they are not deposited more than three days prior to the date of disbursement.

A review of the Department's ledgers and cash management system identified draws are made on a reimbursement basis rather than a pre-issuance basis.

Recommendation – The Department should develop and implement procedures to ensure federal funds are requested on a pre-issuance basis rather than a reimbursement basis.

Response and Corrective Action Planned – The Department's Comptroller is working with the United States Property and Fiscal Officer (USPFO) to resolve this issue. The USPFO currently does not have a system in place to effectively make payments to the Military Division on a pre-issuance basis. There is a system through federal resources for the USPFO to establish a pre-issuance system. Implementation of this system is being discussed and negotiated by the two offices. It is the goal of the State Comptroller to have this system in place by October 1, 2010.

Conclusion – Response accepted.

CFDA Number: 97.036 – Disaster Grants – Public Assistance (Presidentially Declared Disasters)

Agency Number: FEMA-1688-DR, FEMA-1705-DR, FEMA-1727-DR, FEMA-1737-DR, FEMA-1763-DR, FEMA-3275-EM

Federal Award Year: 2007, 2008

State of Iowa Single Audit Report Comment: 08-III-DHS-583-1

- (2) Cash Management – Effective cash management procedures provide for minimizing the amount of time between the drawdown/request for federal funds and the disbursement of those funds. They also minimize the amount of state and other federal funds used to supplant programs until federal funds are received.

A review of the Department's ledgers and cash management system identified nine instances where the cash balance was in excess of \$100,000 for four to twelve days.

Report of Recommendations to the Iowa Department of Public Defense

June 30, 2008

Recommendation – The Department should monitor cash balances to ensure balances on hand are sufficient to cover current needs and are disbursed in a timely manner without carrying excessive daily balances.

Response and Corrective Action Planned – The Department has established an automated draw system for federal grants. This system will request funds once an expense is entered into the Department’s accounting system. The Department will monitor the receipt of federal dollars more closely to ensure claims are sent to the Iowa Department of Administrative Services – State Accounting Enterprise in a more efficient manner, thus reducing the time federal funds are in the state’s account.

Conclusion – Response accepted.

CFDA Number: 97.036 – Disaster Grants – Public Assistance (Presidentially Declared Disasters)

Agency Number: FEMA-1688-DR, FEMA-1705-DR, FEMA-1727-DR, FEMA-1737-DR, FEMA-1763-DR, FEMA-3275-EM

Federal Award Year: 2007, 2008

State of Iowa Single Audit Report Comment: 08-III-DHS-583-2

- (3) Subrecipient Monitoring – The Department has established a goal of performing monitoring reviews of ten percent of completed small projects. These projects should be reviewed for proper scope and allowability of project costs.

Department personnel assert the assignment of monitoring reviews for small project closeouts are done through e-mail communications. There was no documentation available to support the selection of ten percent of completed small projects or the monitoring reviews performed.

Recommendation – The Department should establish written procedures for the ten percent goal of completed small project monitoring reviews and ensure the reviews are performed and documented. Procedures should include, but not be limited to, the method used to establish the selection process, the projects selected and the results of the monitoring reviews.

Response and Corrective Action Planned – The Department is in the process of establishing a written standard and procedure through the development and implementation of a Division Monitoring Plan. The following components are currently a part of the Plan and will be implemented as a corrective action directly related to this single audit comment.

100% of small projects are currently reviewed by the Iowa Homeland Security and Emergency Management Division (HSEMD) in the pre-obligation grant monitoring period. This applicable monitoring data, pulled from the applicable grant management system (NEMIS/EMMIE), will be included in and tracked by HSEMD as part of reporting required within the Division’s Monitoring Plan.

An undetermined percentage of small projects are monitored by HSEMD during the project performance period due to required versions or amendments to projects leading to closeout. This applicable monitoring data will be included in and tracked by HSEMD as part of reporting required within the Division’s Monitoring Plan.

Report of Recommendations to the Iowa Department of Public Defense

June 30, 2008

Monitoring reviews conducted as a part of the closeout of small projects will be documented along with the final closeout report (P.4 documentation) through the development of a small project applicant site visit form. This applicable monitoring data will be included in future applicant files and tracked by HSEMD as part of reporting required within the Division's Monitoring Plan.

Conclusion – Response accepted.

CFDA Number: 97.036 – Disaster Grants – Public Assistance (Presidentially Declared Disasters)

Agency Number: FEMA-1688-DR, FEMA-1705-DR, FEMA-1727-DR, FEMA-1737-DR, FEMA-1763-DR, FEMA-3275-EM

Federal Award Year: 2007, 2008

State of Iowa Single Audit Report Comment: 08-III-DHS-583-3

- (4) Subrecipient Monitoring – OMB Circular A-133 requires a pass-through entity to be responsible for monitoring the activities of the subrecipients, as necessary, to ensure federal awards are used for authorized purposes and in compliance with laws, regulations and provisions of the contract or grant. The Circular also requires each state to ensure required audit reports of subrecipients are completed within nine months of the end of the subrecipient's audit period, issue a management decision on audit findings within six months of receipt of the subrecipient's audit report and ensure the subrecipient takes timely and appropriate action on all findings.

The State of Iowa Single Audit Report for the year ended June 30, 2007 included a finding for the Iowa Department of Transportation related to allowable cost principles, including questioned costs. The report was issued by March 31, 2008 and was distributed to all State Agencies receiving federal funds. The Department has not issued a management decision on the audit findings and ensured the subrecipient has taken timely and appropriate action on the finding. Department personnel assert the Iowa Department of Transportation has not submitted its audit report and the management decision is not required until six months after receipt of the audit report. However, since the Iowa Department of Transportation is included in the State of Iowa Single Audit report, the distribution of the report to the Iowa Department of Public Defense, Iowa Homeland Security and Emergency Management Division constitutes receipt of the required audit report and a management decision should have been issued by September 30, 2008.

Recommendation – The Department should ensure policies and procedures are followed, even when the subrecipient is another State Agency and management decisions are issued within six months of receipt of the audit report.

Response and Corrective Action Planned – The Department's Comptroller has established procedures to review the State of Iowa Single Audit Report for findings relating to the Department's subrecipients that are State of Iowa Agencies. Findings will be reported to the Iowa Homeland Security and Emergency Management Division (HSEMD) Administrator for his action. The Department's Comptroller's Office will establish timelines for the HSEMD's Administrator's corrective actions.

Conclusion – Response accepted.

June 30, 2008

CFDA Number: 97.036 – Disaster Grants – Public Assistance (Presidentially Declared Disasters)

Agency Number: FEMA-1688-DR, FEMA-1705-DR, FEMA-1727-DR, FEMA-1737-DR, FEMA-1763-DR, FEMA-3275-EM

Federal Award Year: 2007, 2008

State of Iowa Single Audit Report Comment: 08-III-DHS-583-4

- (5) Subrecipient Monitoring – OMB Circular A-133 requires a pass-through entity to be responsible for monitoring the activities of the subrecipients, as necessary, to ensure federal awards are used for authorized purposes and in compliance with laws, regulations and provisions of the contract or grant. The Circular also requires each state to ensure required audit reports of subrecipients are completed within nine months of the end of the subrecipient's audit period, issue management decisions on audit findings within six months of receipt of the subrecipient's audit report and ensure the subrecipient takes timely and appropriate corrective action on all audit findings.

The Department has established policies and procedures to be followed in the performance of subrecipient monitoring. However, the following items were noted during testing:

- (a) When an entity receives more than \$500,000 from the Department, a single audit was not always performed. The Department does not analyze detailed information in the accounting system to determine whether the funds received by the entity were federal, requiring a single audit.
- (b) The subrecipient audit report review documentation maintained by the Department contained errors or inconsistencies with information reported within the subrecipient audit reports.
- (c) The Department's review of subrecipient audit reports identified two entities with significant deficiencies noted, but subsequent follow-up and resolution of the findings was not noted.

Recommendation –

- (a) The Department should analyze information within the accounting system to ensure audit reports are received and reviewed for all subrecipients which receive \$500,000 or more in federal awards each year. The Department should also follow-up with the entity if a single audit appears to be required but was not performed.
- (b) The Department should ensure documentation maintained as part of the audit report review process is consistent with information contained within the subrecipient audit reports.
- (c) For subrecipient audit reports which contain significant deficiencies, appropriate follow-up and resolution of the findings should be documented.

Report of Recommendations to the Iowa Department of Public Defense

June 30, 2008

Response and Corrective Action Planned –

- (a) The Department's Comptroller's Office has established a report that lists all subrecipients who have received more than \$300,000 from the Department. This report is then compared to the audit reports received to ensure all subrecipients who are required to submit a single audit report have done so. If a discrepancy is found a letter is mailed to the subrecipient requesting a single audit report.
- (b) The Department's Comptroller's Office has established procedures to review the subrecipients' single audit reports. Information concerning federal dollars received by the subrecipient will be reviewed in conjunction with Iowa Homeland Security and Emergency Management Division records to verify amounts reported are correct. Discrepancies will be investigated and communication with the subrecipient will be established to reconcile the discrepancy.
- (c) The Department will now modify the monitoring process to ensure review of all required audit reports is conducted to ensure findings specific to subrecipients that may involve pass-through funding provided by HSEMD are identified. The specific corrective action will be that audit related management decisions for subrecipients will now be triggered by the Department's receipt of the report and will be issued within six months of that time, effective March 1, 2009.

Conclusion – Response accepted.

June 30, 2008

Findings Reported in the State's Report on Internal Control:

- (1) Financial Reporting – The Department records receipts and disbursements on the Integrated Information for Iowa (I/3) system throughout the year, including the accrual period. Activity not recorded on the I/3 system is reported to the Iowa Department of Administrative Services – State Accounting Enterprise (DAS – SAE) on a GAAP package. The GAAP package is to be submitted to DAS – SAE by the first week of September each year. The following were noted:
- (a) Certain revenues considered deferred revenue were excluded from the unearned revenue page of the GAAP package.
 - (b) Several miscalculations were noted with the unearned revenue reported in the GAAP package.
 - (c) Operating leases were not reported in the GAAP package.

Recommendation – The Department should ensure the GAAP package information reported is complete and accurate.

Response – Clarification from the Auditors has resolved the misunderstanding in reporting of unearned revenue and operating leases.

Conclusion – Response accepted.

- (2) Capital Assets – Chapter 7A.30 of the Code of Iowa requires each department of the state to maintain a written, detailed and up-to-date inventory of property under its charge and control. The following were noted:

Military Division

- (a) The Department did not perform a reconciliation of capital asset additions to I/3 system expenditures. The following items were noted:
 - (1) Two asset additions were assets previously included as buildings and building improvements.
 - (2) Three asset additions were assets previously included on the equipment listing.
 - (3) Three additions did not meet the capitalization threshold and should not have been included on the capital asset listing.
 - (4) Supporting documentation could not be located for two additions to validate asset cost.
 - (5) Two capital asset purchases were not included as additions to the asset listing.
 - (6) The capitalized cost did not equal actual asset acquisition cost for three asset additions.
 - (7) One capital asset purchased in fiscal year 2009 was incorrectly included as an addition in fiscal year 2008.
- (b) Two assets deleted were still in the possession of the Department.
- (c) Two assets transferred to another Department prior to June 30, 2008 were not removed from the listing.

Report of Recommendations to the Iowa Department of Public Defense

June 30, 2008

- (d) Adequate supporting documentation was not maintained for five assets deleted.
- (e) One of five assets tested for existence was no longer in the possession of the Department at June 30, 2008.
- (f) Amounts reported in the GAAP package for disposal of assets and the associated accumulated depreciation were understated.
- (g) Accumulated depreciation was calculated incorrectly, resulting in an overstatement of depreciation expense and accumulated depreciation.

Homeland Security and Emergency Management Division

- (a) The Department did not perform a reconciliation of capital asset additions to I/3 system expenditures. One asset addition was not included on the asset listing.
- (b) Six asset additions tested did not include the proper State identification tag.
- (c) Accumulated depreciation was calculated incorrectly, resulting in an overstatement of depreciation expense and accumulated depreciation.

Recommendation – The Department should develop written procedures to ensure a detailed, up-to-date capital asset listing is maintained. Procedures should include, but not be limited to, ensuring capital asset additions are reconciled to I/3 asset purchases, depreciation expense is properly calculated and recorded and asset deletions are properly authorized, supported and promptly removed from the capital asset listing. The Department should also ensure proper State identification tags are included on all asset additions. Amounts should be accurately reported on the GAAP package.

Response – The Department has implemented a capital assets tracking procedure (copy furnished to the Office of Auditor of State), which will ensure a current updated listing is maintained and reconciled to I/3 and supporting documentation is maintained and GAAP package reporting is accurate.

Conclusion – Response accepted.

- (3) Payroll – The Department processes and records payroll and personnel information on the Human Resources Information System (HRIS). The Human Resources Associates utilize an online P-1 document to initiate and approve payroll actions, such as adding new employees and recording pay raises. Several individuals within the Department have the ability to initiate and approve timesheets.

Recommendation – To strengthen controls, the Department should develop and implement procedures to segregate the duties of the Human Resources Associates from the duties of payroll.

Response – The Department has reduced the number of employees with full approval level by 2. The Department is implementing an approval process by the Deputy Comptroller of all P-1 transactions. The Iowa Department of Administrative Services will provide a quarterly report of all approved P-1's, the Deputy Comptroller will review and approve (initial). Reports will be kept and filed by Deputy Comptroller.

Conclusion – Response accepted.

Report of Recommendations to the Iowa Department of Public Defense

June 30, 2008

Other Findings Related to Internal Control:

No matters were noted.

Findings Related to Statutory Requirements and Other Matters

No matters were noted.

Report of Recommendations to the Iowa Department of Public Defense

June 30, 2008

Staff:

Questions or requests for further assistance should be directed to:

Pamela J. Bormann, CPA, Manager
Lesley R. Geary, CPA, Senior Auditor II
Andrew E. Nielsen, CPA, Deputy Auditor of State

Other individuals who participated on the audits include:

Brett C. Conner, Staff Auditor
Gelu Sherpa, Staff Auditor
Marta M. Sobieszkoda, Staff Auditor
Dorothy O. Stover, Staff Auditor
Michael F. Conroy, Assistant Auditor