



Source: BPS

CRAWFORD COUNTY HAZARD MITIGATION PLAN

October 2019

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Appendices

Appendix A: Historical Hazard Events

APPENDIX A: HISTORICAL HAZARD EVENTS

Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
1	Flood	Flash Flood	3/31/1996	N/A	0	0	\$0.00	\$0.00
1	Flood	Flash Flood	5/25/1997	N/A	0	0	\$0.00	\$0.00
1	Flood	Flash Flood	5/25/1997	N/A	0	0	\$0.00	\$0.00
1	Flood	Flash Flood	6/1/1997	N/A	0	0	\$60,000.00	\$20,000.00
1	Flood	Flash Flood	5/4/1998	N/A	0	0	\$0.00	\$0.00
1	Flood	Flash Flood	6/28/1998	N/A	0	0	\$50,000.00	\$0.00
1	Flood	Flash Flood	6/28/1998	N/A	0	0	\$100,000.00	\$50,000.00
1	Flood	Flood	6/12/1999	N/A	0	0	\$0.00	\$0.00
1	Flood	Flash Flood	4/8/2000	N/A	0	0	\$0.00	\$0.00
1	Flood	Flood	8/23/2000	N/A	0	0	\$0.00	\$0.00
1	Flood	Flash Flood	6/3/2002	N/A	0	0	\$50,000.00	\$0.00
1	Flood	Flash Flood	5/7/2003	N/A	0	0	\$100,000.00	\$0.00
1	Flood	Flash Flood	7/8/2003	N/A	0	0	\$250,000.00	\$600,000.00
1	Flood	Flash Flood	5/21/2004	N/A	0	0	\$500,000.00	\$0.00
1	Flood	Flash Flood	6/13/2004	N/A	0	0	\$550,000.00	\$0.00
1	Flood	Flood	6/14/2004	N/A	0	0	\$0.00	\$0.00
1	Flood	Flood	6/15/2004	N/A	0	0	\$0.00	\$0.00
1	Flood	Flood	1/1/2005	N/A	0	0	\$400,000.00	\$0.00
1	Flood	Flash Flood	6/8/2006	N/A	0	0	\$25,000.00	\$0.00
1	Flood	Flash Flood	6/21/2006	N/A	0	0	\$400,000.00	\$0.00
1	Flood	Flash Flood	6/21/2006	N/A	0	0	\$500,000.00	\$600,000.00
1	Flood	Flash Flood	7/12/2006	N/A	0	0	\$250,000.00	\$0.00
1	Flood	Flash Flood	8/21/2007	N/A	0	0	\$62,000,000.00	\$3,000,000.00
1	Flood	Flood	8/21/2007	N/A	0	0	\$0.00	\$0.00
1	Flood	Flash Flood	5/31/2010	N/A	0	0	\$200,000.00	\$0.00
1	Flood	Flood	2/28/2011	N/A	0	0	\$1,500,000.00	\$0.00
1	Flood	Flash Flood	2/28/2011	N/A	0	0	\$0.00	\$0.00
1	Flood	Flash Flood	5/25/2011	N/A	0	0	\$1,000.00	\$0.00
1	Flood	Flash Flood	6/12/2013	N/A	0	0	\$200,000.00	\$0.00
1	Flood	Flood	7/9/2013	N/A	0	0	\$35,000.00	\$0.00
1	Flood	Flood	7/9/2013	N/A	0	0	\$80,000.00	\$0.00
1	Flood	Flash Flood	7/10/2013	N/A	0	0	\$250,000.00	\$0.00
1	Flood	Flood	7/10/2013	N/A	0	0	\$200,000.00	\$0.00
1	Flood	Flash Flood	12/22/2013	N/A	0	0	\$0.00	\$0.00
1	Flood	Flood	1/12/2017	N/A	0	0	\$1,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/6/1971	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/4/1973	65	0	0	\$0.00	\$0.00

APPENDIX A: HISTORICAL HAZARD EVENTS

Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
2	Severe Storm	Thunderstorm Wind	7/3/1973	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/11/1973	0	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	4/14/1974	1	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	4/14/1974	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	3/20/1976	0	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	7/4/1977	1.25	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/4/1977	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/5/1980	61	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	7/12/1980	1.5	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	7/12/1980	1	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	3/31/1982	0	0	0	\$0.00	\$5,000,000.00
2	Severe Storm	Hail	5/22/1982	1	0	0	\$0.00	\$5,000,000.00
2	Severe Storm	Hail	5/27/1982	1	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/15/1982	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/15/1982	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/2/1983	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/2/1983	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/4/1983	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/4/1983	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/4/1983	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/11/1983	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/7/1984	0	0	0	\$0.00	\$20,000.00
2	Severe Storm	Thunderstorm Wind	8/7/1984	0	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	3/28/1985	1	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	4/5/1985	0	0	0	\$0.00	\$0.00

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Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
2	Severe Storm	Thunderstorm Wind	7/10/1985	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	3/10/1986	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/16/1986	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/27/1986	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/18/1987	0	0	0	\$0.00	\$100,000.00
2	Severe Storm	Thunderstorm Wind	5/30/1987	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/29/1987	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/9/1988	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/25/1989	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/1/1989	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/5/1989	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/9/1990	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/19/1990	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/19/1990	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/15/1991	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/23/1991	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/23/1991	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	2/15/1992	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/20/1992	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/27/1992	0	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/2/1993	0	0	0	\$500,000.00	\$0.00
2	Severe Storm	Hail	8/2/1993	1	0	0	\$500,000.00	\$0.00
2	Severe Storm	Hail	3/24/1994	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	4/12/1994	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/24/1994	0	0	0	\$5,000.00	\$0.00

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Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
2	Severe Storm	Thunderstorm Wind	6/20/1994	0	0	0	\$500,000.00	\$10,000.00
2	Severe Storm	Thunderstorm Wind	6/20/1994	0	0	0	\$500,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/28/1994	0	0	0	\$5,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/20/1994	0	0	0	\$50,000.00	\$0.00
2	Severe Storm	Hail	6/14/1995	1	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/28/1995	0	0	1	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/13/1995	0	0	0	\$40,000.00	\$10,000.00
2	Severe Storm	Hail	7/16/1995	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/13/1995	0	0	0	\$4,000.00	\$0.00
2	Severe Storm	High Wind	4/25/1996	50	0	0	\$3,000.00	\$0.00
2	Severe Storm	Lightning	5/9/1996	N/A	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/10/1996	60	0	0	\$20,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/22/1996	55	0	0	\$10,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/24/1996	55	0	0	\$2,000.00	\$0.00
2	Severe Storm	High Wind	10/30/1996	50	0	0	\$75,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	10/30/1996	50	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	11/7/1996	N/A	0	0	\$20,000.00	\$0.00
2	Severe Storm	High Wind	2/27/1997	50	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	5/18/1997	0.88	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/18/1997	N/A	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/19/1997	N/A	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/8/1997	N/A	0	0	\$1,000.00	\$0.00
2	Severe Storm	Lightning	7/26/1997	N/A	0	0	\$50,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/12/1997	N/A	0	1	\$4,000.00	\$0.00
2	Severe Storm	High Wind	3/28/1998	N/A	0	0	\$10,000.00	\$0.00

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Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
2	Severe Storm	High Wind	4/9/1998	N/A	0	0	\$40,000.00	\$0.00
2	Severe Storm	Hail	5/4/1998	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/12/1998	N/A	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/27/1998	N/A	0	0	\$5,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/27/1998	N/A	0	0	\$3,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/28/1998	N/A	0	0	\$100,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/28/1998	N/A	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/29/1998	N/A	0	0	\$30,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/19/1998	N/A	0	0	\$30,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/24/1998	N/A	0	0	\$7,000.00	\$0.00
2	Severe Storm	Hail	8/25/1998	1.5	0	0	\$0.00	\$0.00
2	Severe Storm	High Wind	11/10/1998	N/A	0	0	\$30,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	11/10/1998	N/A	0	0	\$10,000.00	\$0.00
2	Severe Storm	High Wind	5/6/1999	N/A	0	0	\$15,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/11/1999	N/A	0	0	\$25,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/9/1999	51	0	0	\$90,000.00	\$0.00
2	Severe Storm	Hail	7/23/1999	0.88	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/23/1999	N/A	0	0	\$10,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/24/1999	N/A	0	0	\$20,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/31/1999	N/A	0	0	\$5,000.00	\$0.00
2	Severe Storm	Hail	10/13/1999	1.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	10/13/1999	N/A	0	0	\$50,000.00	\$0.00
2	Severe Storm	Hail	10/13/1999	1	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/16/2000	N/A	0	0	\$10,000.00	\$0.00
2	Severe Storm	Hail	7/14/2000	0.75	0	0	\$0.00	\$0.00

APPENDIX A: HISTORICAL HAZARD EVENTS

Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
2	Severe Storm	Thunderstorm Wind	7/14/2000	N/A	0	0	\$5,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/6/2000	N/A	0	0	\$575,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/27/2000	N/A	0	0	\$5,000.00	\$0.00
2	Severe Storm	High Wind	12/11/2000	N/A	0	0	\$75,000.00	\$0.00
2	Severe Storm	High Wind	2/9/2001	N/A	0	0	\$5,000.00	\$0.00
2	Severe Storm	High Wind	2/25/2001	N/A	0	0	\$20,000.00	\$0.00
2	Severe Storm	High Wind	4/12/2001	N/A	0	0	\$15,000.00	\$0.00
2	Severe Storm	High Wind	10/25/2001	N/A	0	0	\$15,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	11/30/2001	N/A	0	0	\$100,000.00	\$0.00
2	Severe Storm	High Wind	2/1/2002	N/A	0	0	\$15,000.00	\$0.00
2	Severe Storm	High Wind	3/9/2002	N/A	0	0	\$250,000.00	\$0.00
2	Severe Storm	Hail	4/19/2002	0.75	0	0	\$5,000.00	\$0.00
2	Severe Storm	Hail	4/19/2002	1	0	0	\$10,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/29/2002	N/A	0	0	\$15,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/29/2002	54	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/19/2002	N/A	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/29/2002	N/A	0	0	\$25,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/23/2002	N/A	0	0	\$3,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	9/20/2002	52	0	0	\$25,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	9/20/2002	52	0	2	\$200,000.00	\$0.00
2	Severe Storm	Hail	11/10/2002	0.75	0	0	\$5,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	11/10/2002	N/A	0	0	\$25,000.00	\$0.00
2	Severe Storm	Hail	4/4/2003	0.75	0	0	\$2,000.00	\$0.00
2	Severe Storm	Hail	5/1/2003	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	5/1/2003	0.75	0	0	\$0.00	\$0.00

APPENDIX A: HISTORICAL HAZARD EVENTS

Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
2	Severe Storm	Thunderstorm Wind	5/7/2003	50	0	0	\$15,000.00	\$0.00
2	Severe Storm	Hail	5/7/2003	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Strong Wind	5/11/2003	35	0	0	\$25,000.00	\$0.00
2	Severe Storm	Hail	6/29/2003	1	0	0	\$5,000.00	\$0.00
2	Severe Storm	Hail	6/29/2003	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	6/29/2003	1	0	0	\$5,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/4/2003	50	0	0	\$15,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/4/2003	50	0	0	\$4,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/7/2003	50	0	0	\$40,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/8/2003	50	0	0	\$150,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/8/2003	50	0	0	\$15,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/21/2003	50	0	0	\$6,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/27/2003	50	0	0	\$15,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/26/2003	50	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/27/2003	50	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	9/27/2003	50	0	0	\$15,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	11/12/2003	50	0	0	\$5,000.00	\$0.00
2	Severe Storm	High Wind	11/12/2003	50	0	0	\$75,000.00	\$0.00
2	Severe Storm	High Wind	3/5/2004	52	0	0	\$50,000.00	\$0.00
2	Severe Storm	Hail	4/17/2004	0.88	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/10/2004	50	0	0	\$2,000.00	\$15,000.00
2	Severe Storm	Thunderstorm Wind	5/17/2004	60	0	0	\$100,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/18/2004	50	0	0	\$30,000.00	\$0.00
2	Severe Storm	Hail	5/21/2004	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/21/2004	61	0	0	\$175,000.00	\$0.00

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Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
2	Severe Storm	Thunderstorm Wind	5/30/2004	50	0	0	\$35,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/9/2004	50	0	0	\$20,000.00	\$0.00
2	Severe Storm	Hail	6/9/2004	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/9/2004	50	0	0	\$3,000.00	\$0.00
2	Severe Storm	Hail	6/13/2004	1	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/14/2004	50	0	0	\$3,000.00	\$0.00
2	Severe Storm	Hail	6/24/2004	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/28/2004	50	0	0	\$60,000.00	\$0.00
2	Severe Storm	Hail	8/28/2004	0.5	0	0	\$25,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/28/2004	50	0	0	\$25,000.00	\$0.00
2	Severe Storm	Strong Wind	11/27/2004	35	0	0	\$5,000.00	\$0.00
2	Severe Storm	High Wind	12/7/2004	50	0	0	\$15,000.00	\$0.00
2	Severe Storm	Hail	4/20/2005	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/13/2005	53	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/5/2005	50	0	0	\$2,000.00	\$0.00
2	Severe Storm	Hail	6/28/2005	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/29/2005	50	0	0	\$2,000.00	\$750,000.00
2	Severe Storm	Thunderstorm Wind	7/18/2005	50	0	0	\$5,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/25/2005	50	0	0	\$15,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/26/2005	50	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/13/2005	50	0	0	\$25,000.00	\$0.00
2	Severe Storm	Hail	8/13/2005	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	11/6/2005	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Strong Wind	3/10/2006	40	0	0	\$10,000.00	\$0.00
2	Severe Storm	Hail	4/14/2006	0.88	0	0	\$0.00	\$0.00

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Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
2	Severe Storm	Hail	5/25/2006	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	5/25/2006	1	0	0	\$4,000.00	\$0.00
2	Severe Storm	Hail	5/25/2006	1	0	0	\$5,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/25/2006	50	0	0	\$35,000.00	\$0.00
2	Severe Storm	Hail	6/3/2006	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/3/2006	50	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	6/3/2006	0.88	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	6/8/2006	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/21/2006	50	0	0	\$4,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/22/2006	62	0	0	\$125,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/22/2006	50	0	0	\$30,000.00	\$0.00
2	Severe Storm	Hail	7/2/2006	0.88	0	0	\$0.00	\$0.00
2	Severe Storm	High Wind	12/1/2006	50	0	0	\$4,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/1/2007	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/2/2007	50	0	0	\$50,000.00	\$0.00
2	Severe Storm	Hail	6/8/2007	1	0	0	\$5,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/8/2007	52	0	0	\$4,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/8/2007	50	0	0	\$125,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/9/2007	50	0	0	\$12,000.00	\$0.00
2	Severe Storm	High Wind	12/23/2007	50	0	0	\$6,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	1/9/2008	50	0	0	\$6,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	1/29/2008	57	0	0	\$0.00	\$0.00
2	Severe Storm	High Wind	1/30/2008	55	0	0	\$0.00	\$0.00
2	Severe Storm	High Wind	1/30/2008	55	0	0	\$6,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/13/2008	50	0	0	\$2,000.00	\$0.00

APPENDIX A: HISTORICAL HAZARD EVENTS

Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
2	Severe Storm	Hail	6/22/2008	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	High Wind	9/14/2008	61	0	0	\$3,000,000.00	\$0.00
2	Severe Storm	High Wind	2/11/2009	68	0	0	\$500,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/1/2009	50	0	0	\$30,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/20/2009	50	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/20/2009	50	0	0	\$5,000.00	\$0.00
2	Severe Storm	High Wind	12/9/2009	52	0	0	\$200,000.00	\$0.00
2	Severe Storm	Hail	4/25/2010	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	4/25/2010	1	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/4/2010	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/23/2010	50	0	0	\$15,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/23/2010	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/27/2010	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Hail	6/27/2010	0.88	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/27/2010	50	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/27/2010	50	0	0	\$5,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/4/2010	50	0	0	\$2,000.00	\$0.00
2	Severe Storm	Hail	9/7/2010	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	9/7/2010	50	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	9/7/2010	50	0	0	\$20,000.00	\$0.00
2	Severe Storm	Hail	9/7/2010	1	0	0	\$10,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	9/7/2010	50	0	0	\$10,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	9/7/2010	50	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	10/26/2010	58	0	0	\$0.00	\$0.00
2	Severe Storm	High Wind	4/28/2011	50	0	0	\$100,000.00	\$0.00

APPENDIX A: HISTORICAL HAZARD EVENTS

Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
2	Severe Storm	Thunderstorm Wind	6/5/2011	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Hail	6/9/2011	2	0	0	\$250,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/9/2011	61	0	0	\$25,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/10/2011	50	0	0	\$20,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/11/2011	50	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/25/2011	50	0	0	\$2,000.00	\$0.00
2	Severe Storm	Hail	11/14/2011	0.88	0	0	\$0.00	\$0.00
2	Severe Storm	High Wind	2/24/2012	50	0	0	\$15,000.00	\$0.00
2	Severe Storm	Hail	3/19/2012	1.25	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/29/2012	57	0	0	\$800,000.00	\$0.00
2	Severe Storm	High Wind	10/30/2012	50	0	0	\$20,000.00	\$0.00
2	Severe Storm	Hail	4/10/2013	1	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	4/10/2013	50	0	0	\$35,000.00	\$0.00
2	Severe Storm	Hail	4/10/2013	1	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/31/2013	50	0	0	\$25,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/31/2013	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Hail	6/12/2013	1	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	6/12/2013	1	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	6/12/2013	1	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/13/2013	50	0	0	\$10,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	10/31/2013	50	0	0	\$15,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	10/31/2013	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	10/31/2013	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	12/21/2013	50	0	0	\$30,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	12/21/2013	50	0	0	\$3,000.00	\$0.00

APPENDIX A: HISTORICAL HAZARD EVENTS

Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
2	Severe Storm	Thunderstorm Wind	4/29/2014	52	0	0	\$3,000.00	\$0.00
2	Severe Storm	Hail	4/29/2014	1	0	0	\$5,000.00	\$0.00
2	Severe Storm	Hail	5/14/2014	1	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/18/2014	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	High Wind	11/24/2014	52	0	0	\$100,000.00	\$0.00
2	Severe Storm	Hail	5/5/2015	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/26/2015	50	0	0	\$85,000.00	\$0.00
2	Severe Storm	Hail	5/29/2016	1	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/29/2016	50	0	0	\$5,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/27/2016	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	8/27/2016	50	0	0	\$2,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	9/10/2016	50	0	0	\$15,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	9/10/2016	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	3/1/2017	50	0	0	\$50,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	3/1/2017	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Hail	5/18/2017	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	5/18/2017	0.88	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	5/18/2017	1	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	5/18/2017	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/28/2017	50	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/13/2017	50	0	0	\$5,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/19/2017	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/19/2017	50	0	0	\$5,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/19/2017	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	6/30/2017	50	0	0	\$50,000.00	\$0.00

APPENDIX A: HISTORICAL HAZARD EVENTS

Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
2	Severe Storm	Thunderstorm Wind	7/7/2017	50	0	0	\$12,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/7/2017	50	0	0	\$15,000.00	\$0.00
2	Severe Storm	Hail	7/7/2017	0.88	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	9/4/2017	0.75	0	0	\$0.00	\$0.00
2	Severe Storm	Hail	9/4/2017	1	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/22/2018	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/22/2018	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/22/2018	50	0	0	\$0.00	\$0.00
2	Severe Storm	Thunderstorm Wind	5/22/2018	50	0	0	\$1,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	7/5/2018	50	0	0	\$35,000.00	\$0.00
2	Severe Storm	High Wind	2/24/2019	50	0	0	\$60,000.00	\$0.00
2	Severe Storm	Thunderstorm Wind	4/14/2019	52	0	0	\$0.00	\$0.00
3	Tornadoes	Tornado	6/6/1961	F1	0	0	\$2,500.00	\$0.00
3	Tornadoes	Tornado	5/25/1973	F1	0	0	\$250.00	\$0.00
3	Tornadoes	Tornado	7/3/1973	F0	0	0	\$2,500.00	\$0.00
3	Tornadoes	Tornado	1/26/1974	F1	0	2	\$250,000.00	\$0.00
3	Tornadoes	Tornado	8/13/1975	F2	0	0	\$250,000.00	\$0.00
3	Tornadoes	Tornado	6/30/1977	F1	0	0	\$250,000.00	\$0.00
3	Tornadoes	Tornado	6/7/1979	F1	0	4	\$25,000.00	\$0.00
3	Tornadoes	Tornado	5/27/1985	F1	0	0	\$250,000.00	\$0.00
3	Tornadoes	Tornado	3/10/1986	F1	0	0	\$250,000.00	\$0.00
3	Tornadoes	Tornado	5/15/1986	F1	0	0	\$250,000.00	\$0.00
3	Tornadoes	Tornado	7/13/1992	F1	0	0	\$250,000.00	\$0.00
3	Tornadoes	Tornado	9/4/2017	EF2	0	0	\$1,250,000.00	\$0.00
3	Tornadoes	Tornado	11/5/2017	EF2	0	0	\$750,000.00	\$0.00
4	Severe Winter Storms	Heavy Snow	1/7/1996	N/A	0	0	\$70,000.00	\$0.00
4	Severe Winter Storms	Heavy Snow	3/19/1996	N/A	0	0	\$15,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	1/2/1999	N/A	0	2	\$15,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	1/8/1999	N/A	0	0	\$2,000.00	\$0.00

APPENDIX A: HISTORICAL HAZARD EVENTS

Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
4	Severe Winter Storms	Winter Storm	1/13/1999	N/A	0	0	\$2,000.00	\$0.00
4	Severe Winter Storms	Heavy Snow	3/9/1999	N/A	0	0	\$0.00	\$0.00
4	Severe Winter Storms	Winter Storm	3/24/2002	N/A	0	0	\$40,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	3/26/2002	N/A	0	0	\$150,000.00	\$0.00
4	Severe Winter Storms	Heavy Snow	12/24/2002	N/A	0	0	\$75,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	1/25/2004	N/A	0	0	\$300,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	12/22/2004	N/A	0	0	\$4,800,000.00	\$0.00
4	Severe Winter Storms	Ice Storm	1/5/2005	N/A	0	0	\$8,300,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	2/4/2006	N/A	0	0	\$35,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	2/13/2007	N/A	0	0	\$40,000.00	\$0.00
4	Severe Winter Storms	Ice Storm	2/25/2007	N/A	0	0	\$25,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	12/15/2007	N/A	0	0	\$100,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	2/11/2008	N/A	0	0	\$50,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	2/25/2008	N/A	0	0	\$100,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	3/4/2008	N/A	0	0	\$500,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	3/7/2008	N/A	0	0	\$650,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	12/19/2008	N/A	0	0	\$20,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	1/27/2009	N/A	0	0	\$125,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	2/5/2010	N/A	0	0	\$300,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	2/1/2011	N/A	0	0	\$250,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	2/21/2011	N/A	0	0	\$200,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	12/26/2012	N/A	0	0	\$50,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	3/12/2014	N/A	0	0	\$150,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	12/17/2016	N/A	0	0	\$100,000.00	\$0.00
4	Severe Winter Storms	Winter Storm	1/19/2019	N/A	0	0	\$75,000.00	\$0.00

APPENDIX A: HISTORICAL HAZARD EVENTS

Hazard Priority	Hazard	Event Type	Date	Magnitude (Hail Size / Wind Speed)	Deaths	Injuries	Property Damage	Crop Damage
5	Utility Failure	No historic events within Crawford County.						
6	Hazardous Materials	See Hazardous materials analysis for spill report.						
7	Terrorism	No historic events within Crawford County.						
8	Epidemic	No historic events within Crawford County.						
9	Drought and Extreme Heat	Drought	8/1/1996	N/A	0	0	\$0.00	\$0.00
9	Drought and Extreme Heat	Drought	6/1/1999	N/A	0	0	\$0.00	\$0.00
9	Drought and Extreme Heat	Drought	7/1/1999	N/A	0	0	\$0.00	\$0.00
9	Drought and Extreme Heat	Drought	8/1/1999	N/A	0	0	\$0.00	\$0.00
9	Drought and Extreme Heat	Drought	9/1/1999	N/A	0	0	\$0.00	\$16,000,000.00
10	Invasive Species	No quantifiable historic events within Crawford County.						
11	Dam Failure	No historic events within Crawford County.						
12	Wildfire	See Wildfire analysis for overview of historic fire events in Crawford County.						
13	Earthquakes	Earthquake	1/12/1995	3.3	Unknown	Unknown	Unknown	Unknown

Appendix B: Matrix Scoring Spreadsheet

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
1	All Hazards	Increase communication, coordination and collaboration among community leaders, property owners, local building regulations, and zoning authorities to address risk and provide uniformity and consistency in implementing sound mitigation practices.	Crawford County, City of Bucyrus, City of Galion, Village of Crestline, Village of New Washington,	4.14	4.03	4.24	3.59	3.62	19.62	1
2	All Hazards	Develop a large gathering shelter plan for festivals and other events.	Crawford County, City of Bucyrus, City of Galion, Village of Crestline, Village of New Washington,	3.44	3.56	3.88	3.44	3.44	17.76	1
3	All Hazards	Implement recommendations of feasibility study for upgrading countywide safety service communications.	Crawford County, City of Bucyrus, City of Galion, Village of Crestline, Village of New Washington,	3.79	3.63	3.96	3.50	3.67	18.54	1
4	All Hazards	Identify and pursue funding options and opportunities to develop and implement local and county natural hazard mitigation activities.	Crawford County, City of Bucyrus, City of Galion, Village of Crestline, Village of New Washington,	4.07	3.85	4.15	3.52	3.59	19.19	1
5	All Hazards	Encourage underground utility placement and tree maintenance programs in public right of ways.	Crawford County, City of Bucyrus, City of Galion, Village of Crestline, Village of New Washington,	2.79	3.25	3.67	2.92	3.33	15.96	1
6	All Hazards	Develop/update back-up power generation capabilities at critical government facilities (e.g. temporary storm safe locations, community EOCs).	Crawford County, City of Bucyrus, City of Galion, Village of New Washington, Dallas Twp, Whetstone Twp,	2.65	3.65	3.60	3.50	3.70	17.10	1

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
7	All Hazards	Develop/update Continuity of Operations Plans.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Dallas Twp, Whetstone Twp,	4.16	4.16	4.00	3.74	3.95	20.00	1
8	All Hazards	Provide public education and outreach on disaster preparedness including websites, newsletters, social media, Preparedness Month events, etc.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Village of North Robinson, Dallas Twp, Whetstone Twp,	4.18	4.09	4.27	3.73	3.91	20.18	1
9	All Hazards	Develop or update Emergency Operation Plans.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Village of North Robinson, Bucyrus Twp, Dallas Twp, Whetstone Twp,	4.27	4.32	4.27	3.95	4.18	21.00	1
10	All Hazards	Maintain an all-hazard outdoor warning siren system, including repairing, replacing, and upgrading.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Village of North Robinson, Dallas Twp, Whetstone Twp,	3.30	4.00	4.24	4.05	4.24	19.82	1

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
11	All Hazards	Conduct fire code, building code, zoning, and floodplain management enforcement activities.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Holmes Twp, Whetstone Twp,	3.68	3.74	4.21	3.47	3.84	18.95	1
12	All Hazards	Prepare public buildings to act as shelters in case of any hazard.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Dallas Twp, Holmes Twp, Whetstone Twp,	3.55	3.77	4.23	3.36	3.73	18.64	1
13	All Hazards	Develop a partnership to have places of worship serve as additional shelters.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Bucyrus Twp, Dallas Twp, Holmes Twp, Whetstone Twp,	4.00	4.05	4.41	3.23	3.82	19.50	1
14	Severe Storms	Inform residents of the various ways to receive weather alerts.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Village of North Robinson, Dallas Twp, Holmes Twp, Whetstone Twp,	4.61	4.30	4.39	3.83	4.00	21.13	3

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
15	Severe Storms	Create a Standard Operating Guideline for the timely clearing of roads from debris caused by severe storms.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of North Robinson, Bucyrus Twp, Dallas Twp, Holmes Twp, Whetstone Twp,	4.10	4.14	4.43	3.52	3.81	20.00	3
16	Severe Storms	Install a lightning warning system.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Whetstone Twp,	2.67	3.25	3.67	3.08	3.33	16.00	3
17	Severe Storms	Install lightning rods on public buildings.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Whetstone Twp,	2.77	3.15	3.62	2.62	3.23	15.38	3
18	Flooding	Identify surface water/county tile drainage obstructions for unincorporated areas.	Crawford County, Bucyrus Twp, Dallas Twp, Holmes Twp, Vernon Twp,	2.87	3.39	3.52	3.13	3.57	16.48	2
19	Flooding	Encourage development of strategies to preserve scenic waterways and open space in and around floodplains.	Crawford County, City of Bucyrus, City of Galion, Village of Crestline,	2.85	3.60	3.90	3.30	3.25	16.90	2
20	Flooding	Pursue mitigation activities and funding for designated flood prone areas.	Crawford County, City of Bucyrus, City of Galion, Village of Crestline, Village of New Washington,	3.04	3.67	3.89	3.56	3.70	17.85	2

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
21	Flooding	Investigate and record repetitive loss areas in Cities and villages.	Crawford County, City of Bucyrus, City of Galion, Village of Crestline, Village of New Washington,	3.59	4.00	4.09	3.50	3.64	18.82	2
22	Flooding	Analyze and establish mitigation measures to protect waste water treatment plants.	City of Bucyrus, City of Galion,	3.20	3.80	4.00	2.40	2.80	16.20	2
23	Flooding	Pursue funding for mitigation actions of floodplain properties and residences along waterways through Bucyrus and Galion.	City of Bucyrus, City of Galion,	3.67	3.50	3.83	3.17	3.50	17.67	2
24	Flooding	Complete Environmental Protection Agency storm/drainage separation system.	City of Bucyrus, City of Galion, Village of Crestline, Village of New Washington,	1.89	3.00	4.22	3.67	3.89	16.67	2
25	Flooding	Assess and map problem drainage areas.	City of Bucyrus, City of Galion, Village of Crestline, Village of New Washington,	3.60	4.20	4.20	3.40	3.70	19.10	2
26	Flooding	Evaluate township roads for frequent flood areas in each township.	Bucyrus Twp, Dallas Twp, Holmes Twp, Vernon Twp,	3.13	3.50	3.75	2.88	3.13	16.38	2
27	Flooding	Improve the stormwater management system.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Dallas Twp,	2.83	3.78	4.33	3.78	3.94	18.67	2

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
28	Flooding	Identify and study poor draining areas to control flooding.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of North Robinson, Bucyrus Twp, Dallas Twp, Holmes Twp, Whetstone Twp,	3.38	3.88	4.00	3.67	3.58	18.50	2
29	Flooding	Repair or replace ditches, culverts, and bridges to control flooding.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Bucyrus Twp, Dallas Twp, Holmes Twp, Whetstone Twp,	3.06	3.65	3.88	3.53	3.59	17.71	2
30	Flooding	Identify and study riverbank stabilization opportunities.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Dallas Twp, Whetstone Twp,	2.87	3.47	3.87	3.33	3.20	16.73	2
31	Flooding	Provide mitigation option guidance to property owners of Repetitive Loss and Severe Repetitive Loss Structures, such as acquisition, relocation, elevation, non-residential dry flood proofing, and non-residential wet flood proofing.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Whetstone Twp,	2.54	3.38	3.85	3.15	3.46	16.38	2

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
32	Flooding	Encourage residents in flood prone areas to purchase flood insurance.	Crawford County, City of Galion, Village of Chatfield, Village of New Washington, Bucyrus Twp, Dallas Twp, Whetstone Twp,	3.69	4.06	4.00	3.19	3.06	18.00	2
33	Flooding	Modify building codes to encourage water proofing structures.	Crawford County, City of Galion, Village of Chatfield, Village of New Washington,	3.25	3.67	3.92	3.42	3.42	17.67	2
34	Flooding	Adopt policies to reduce stormwater runoff.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington,	3.57	4.14	4.07	3.57	3.57	18.93	2
35	Flooding	Participate in the Community Rating System (awards communities who exceed National Flood Insurance Program requirements).	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington,	3.70	3.70	4.20	3.00	3.10	17.70	2

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
36	Flooding	Flood control activities at Aumiller Park.	City of Bucyrus,	5.00	5.00	5.00	5.00	5.00	25.00	2
37	Flooding	Flood control activities at Harmon Park.	City of Bucyrus,	5.00	5.00	5.00	5.00	5.00	25.00	2
38	Flooding	Clear log jams down stream to prevent flooding on Caldwell Road in Bucyrus Twp.	Bucyrus Twp,	4.00	4.00	5.00	4.00	5.00	22.00	2
39	Flooding	Remove log jams on Brokensword Creek from SR-4 to CR-31.	Holmes Twp,	3.00	5.00	3.00	4.00	4.00	19.00	2
40	Tornadoes	Install warning sirens.	Village of New Washington, Village of North Robinson,	5.00	5.00	5.00	5.00	5.00	25.00	4

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
41	Tornadoes	Convert old fire sirens into tornado sirens.	Crawford County, City of Bucyrus, Village of Crestline, Village of New Washington,	3.40	3.60	3.93	3.93	4.20	19.07	4
42	Tornadoes	Continue yearly tornado drills at all schools.	Crawford County, City of Bucyrus, City of Galion, Village of Crestline, Village of New Washington,	4.73	5.00	4.65	4.73	4.65	23.77	4
43	Tornadoes	Provide weather radios to homes that are in sparsely populated areas.	Crawford County, City of Bucyrus, City of Galion, Village of Crestline,	2.53	3.18	3.47	3.29	3.71	16.18	4
44	Tornadoes	Participate in and promote the Ohio Safe Room Rebate Program for safe room installation by homeowners.	Crawford County, City of Bucyrus, City of Galion, Village of Crestline, Village of New Washington,	3.00	3.08	3.21	2.29	3.21	14.79	4

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
45	Tornadoes	Establish NOAA Weather Radio program for festivals, fairgrounds, campgrounds, parks, and recreation.	Crawford County, City of Bucyrus, City of Galion, Village of Crestline,	3.58	3.95	4.21	4.00	3.84	19.58	4
46	Tornadoes	Promote commercial safe rooms for high occupancy uses, such as bars and restaurants.	Crawford County, City of Galion, Village of Chatfield, Village of New Washington,	2.83	3.25	3.58	3.00	3.58	16.25	4
47	Tornadoes	Identify tornado safe locations for residents to seek shelter during tornadoes/high wind events.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Village of North Robinson, Dallas Twp, Holmes Twp, Whetstone Twp,	3.60	3.80	4.20	3.60	3.90	19.10	4
48	Tornadoes	Promote wind and tornado resistant construction practices.	Crawford County, City of Galion, Village of Chatfield, Village of New Washington,	2.93	3.29	3.79	3.07	3.36	16.43	4

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
49	Tornadoes	Encourage mobile home parks and other vulnerable communities to have a tornado preparedness plan.	Crawford County, City of Bucyrus, City of Galion, Village of New Washington, Whetstone Twp,	3.65	3.71	3.65	3.35	3.65	18.00	4
50	Severe Winter Storms	Increase public awareness of severe winter storms.	Crawford County, City of Bucyrus, City of Galion, Village of Crestline, Village of New Washington,	4.58	4.77	4.42	4.00	3.96	21.73	5
51	Severe Winter Storms	Begin a public emergency plow telephone hotline for at-risk residents.	Crawford County, City of Bucyrus, City of Galion, Bucyrus Twp, Dallas Twp, Whetstone Twp,	3.40	3.73	3.93	3.00	3.27	17.33	5
52	Severe Winter Storms	Promote community shoveling programs to reduce the risk of heart attacks from excessive labor.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Dallas Twp, Whetstone Twp,	3.71	3.36	3.86	3.50	3.36	17.79	5

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
53	Utility Failure	Tree trimming in right of ways along utility lines.	Crawford County, City of Galion, Village of Chatfield, Village of New Washington, Bucyrus Twp, Dallas Twp,	3.18	3.71	3.53	3.06	3.35	16.82	6
54	Utility Failure	Begin a revolving loan program to help residents purchase backup generators.	Crawford County, City of Galion, Village of Chatfield,	2.78	3.00	3.78	3.00	2.89	15.44	6
55	Utility Failure	Consider burying utility lines outside of 100-Year flood plains in all new subdivisions.	Crawford County, City of Galion,	3.13	3.25	3.75	2.88	3.25	16.25	6
56	Utility Failure	Promote partnerships between utility companies to reduce the cost of higher-grade wires and burying lines.	Crawford County, City of Galion, Village of Chatfield, Village of New Washington,	3.00	3.62	4.08	3.31	3.54	17.54	6

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
57	Hazardous Materials	Develop a Wellhead Protection Plan.	Crawford County, City of Galion, Village of Chatfield,	3.50	3.63	3.88	2.63	3.25	16.88	7
58	Hazardous Materials	Organize an annual drill to prepare for a disaster involving hazardous materials for emergency service personnel.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Bucyrus Twp, Dallas Twp, Whetstone Twp,	3.74	4.17	4.26	3.74	3.70	19.61	7
59	Hazardous Materials	Report what hazardous materials are being handled on-site and amounts according to regulation.	Crawford County, City of Galion, Village of Chatfield, Village of New Washington, Bucyrus Twp, Whetstone Twp,	3.88	4.00	4.31	3.00	3.31	18.50	7
60	Hazardous Materials	Complete a commodity flow study to identify types and volume of hazardous materials transported via river, pipeline, truck, rail, and plane.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Bucyrus Twp, Dallas Twp, Whetstone Twp,	3.57	3.71	4.50	3.36	3.50	18.64	7

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
61	Terrorism	Encourage critical infrastructure to implement protective measures at their facilities.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Bucyrus Twp,	3.47	3.95	4.21	3.63	3.84	19.11	8
62	Terrorism	Coordinate with emergency services to ensure the safety of large public gathering events.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Bucyrus Twp, Dallas Twp,	3.62	4.14	4.19	3.67	3.90	19.52	8
63	Terrorism	Provide guidance to schools, churches, government agencies, health care facilities, and other critical facilities on improving protection, preparedness, response, and recovery activities to an active aggressor threat.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Bucyrus Twp, Dallas Twp, Whetstone Twp,	4.05	4.24	4.33	3.81	3.95	20.38	8
64	Terrorism	Provide free active shooter training or promote free and low cost third-party active shooter training.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Dallas Twp, Whetstone Twp,	3.95	4.21	4.26	4.00	3.95	20.37	8

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
65	Terrorism	Seal water wells.	Crawford County, City of Galion, Village of Chatfield,	2.90	3.50	4.00	3.20	3.20	16.80	8
66	Terrorism	Install temporary bollards or fences during high-occupancy outdoor events.	Crawford County, City of Bucyrus, City of Galion, Village of New Washington,	3.73	4.09	4.36	3.36	3.55	19.09	8
67	Epidemic	Create public education programs to prevent the spread of contagious diseases.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Dallas Twp, Whetstone Twp,	4.10	4.29	4.33	3.71	3.62	20.05	9
68	Epidemic	Create a detailed public health plan to prepare for an epidemic.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Dallas Twp, Whetstone Twp,	3.90	4.10	4.20	3.65	3.55	19.40	9

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
69	Epidemic	Create a public education program for vaccinations.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Dallas Twp,	4.30	4.30	4.35	3.85	3.85	20.65	9
70	Epidemic	Encourage private agencies to become private Point of Dispensing (POD)	Crawford County,	5.00	4.00	5.00	4.00	5.00	23.00	9
71	Drought & Extreme Heat	Ensure municipalities have enough water supplies.	City of Bucyrus, City of Galion, Village of Crestline,	3.29	4.29	3.71	3.43	3.43	18.14	10
72	Drought & Extreme Heat	Provide education opportunities to farmers to reduce adverse effects of drought.	Crawford County, City of Galion, Village of Crestline,	3.64	4.00	4.29	3.50	3.21	18.64	10

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Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
73	Drought & Extreme Heat	Cities and villages to adopt water conservation measures and standards.	Crawford County, City of Bucyrus, City of Galion, Village of Crestline, Village of New Washington,	3.61	3.72	4.33	3.33	3.22	18.22	10
74	Drought & Extreme Heat	Provide guidance and resources for vulnerable populations during extreme temperature events, such as transportation to cooling shelters.	Crawford County, City of Bucyrus, City of Galion, Village of New Washington, Dallas Twp, Whetstone Twp,	3.67	3.87	3.87	3.13	3.27	17.80	10
75	Drought & Extreme Heat	Provide guidance and resources on utility assistance programs.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Dallas Twp,	3.67	3.92	4.08	3.33	3.33	18.33	10
76	Drought & Extreme Heat	Encourage farmers to deepen wells where possible.	Crawford County, City of Galion,	3.00	3.67	3.83	3.00	2.67	16.17	10

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
77	Drought & Extreme Heat	Encourage farmers to connect watering systems to deep wells.	Crawford County, City of Galion,	2.83	3.50	3.50	2.83	2.50	15.17	10
78	Drought & Extreme Heat	Develop a plan to limit water usage during extreme and prolonged droughts.	Crawford County, City of Galion, Village of Chatfield,	4.00	4.25	4.50	3.50	3.25	19.50	10
79	Drought & Extreme Heat	Install water saving equipment in public buildings.	Crawford County, City of Bucyrus, City of Galion,	3.33	4.00	4.56	3.33	3.22	18.44	10
80	Drought & Extreme Heat	Retrofit water supply and storage systems.	Crawford County, City of Galion, Village of Chatfield,	3.67	4.00	4.33	3.50	3.00	18.50	10

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
81	Drought & Extreme Heat	Utilize xeriscaping (installation of drought-resistant plants arranged to save water) on public property to reduce water consumption.	Crawford County, City of Galion,	3.13	3.63	4.13	2.88	2.88	16.63	10
82	Invasive Species	Implement an invasive species education program that covers associated hazards, identification, behavior, and quarantine procedures.	Crawford County, City of Galion, Village of Chatfield, Dallas Twp,	3.43	3.43	3.86	2.36	2.57	15.64	11
83	Invasive Species	Share information with the public that explains the importance of not importing or exporting firewood.	Crawford County, City of Galion, Village of Chatfield, Dallas Twp, Whetstone Twp,	4.08	3.92	4.33	2.67	3.00	18.00	11
84	Dam Failure	Coordinate with Ohio Department of Natural Resources to implement Dam Safety Program.	Crawford County, City of Bucyrus, City of Galion,	3.27	3.82	4.18	3.91	3.55	18.73	12

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
85	Dam Failure	Work with dam owners to develop/update their dam safety plan.	Crawford County, City of Bucyrus, City of Galion,	3.44	2.89	3.44	3.33	3.00	16.11	12
86	Dam Failure	Work with dam owners to ensure they are prepared to respond should their dam fail.	Crawford County, City of Bucyrus, City of Galion,	3.00	3.20	3.50	3.20	3.10	16.00	12
87	Dam Failure	Model dam failure to identify at-risk areas.	Crawford County, City of Bucyrus, City of Galion,	2.83	3.83	3.92	3.75	3.50	17.83	12
88	Dam Failure	Work with local communities to create a dam failure response plan.	Crawford County, City of Bucyrus, City of Galion,	3.27	3.73	3.91	3.55	3.64	18.09	12

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
89	Dam Failure	Reservoir Dam - Spillway at Pines Reservoir	City of Bucyrus,	5.00	5.00	5.00	5.00	5.00	25.00	12
90	Dam Failure	Dam replacement or reinforcement for weakened dams.	City of Galion,	1.00	4.00	4.00	5.00	5.00	19.00	12
91	Wildfire	Promote public education on smoking hazards and recreational fire risks.	Crawford County, City of Bucyrus, City of Galion, Village of Chatfield, Village of New Washington, Bucyrus Twp, Dallas Twp, Whetstone Twp,	3.93	3.87	4.07	3.00	3.00	17.87	13
92	Wildfire	Provide public education on extreme fire danger and red flag warnings, including what it means and what actions to take when it is issued.	Crawford County, City of Galion, Village of Chatfield, Village of New Washington, Bucyrus Twp, Dallas Twp,	3.79	3.64	3.79	2.79	3.07	17.07	13

APPENDIX B: MATRIX SCORING SPREADSHEET

Hazard Mitigation Actions - Matrix Scoring Table, by Hazard										
#	Hazard	Mitigation Action	Community	Cost Effective	Technically Feasible	Environmentally Sound	Immediate Need	Total Risk Reduction	Raw Score	Hazard Priority
93	Wildfire	Develop a wildfire response plan with all fire departments.	Crawford County, City of Galion, Village of Chatfield, Village of New Washington, Bucyrus Twp, Dallas Twp,	4.11	3.89	4.00	2.67	3.00	17.67	13
94	Earthquakes	Provide public awareness and safety procedures during and following an earthquake event.	Crawford County, City of Bucyrus, Village of Crestline,	3.41	3.82	3.71	2.82	2.82	16.59	14
95	Earthquakes	Use community outreach activities to foster an awareness of earthquake mitigation activities in homes, schools, and businesses.	Crawford County, City of Bucyrus, City of Galion, Bucyrus Twp, Dallas Twp, Whetstone Twp,	3.77	3.69	3.92	2.23	3.23	16.85	14

Appendix C: Critical Facilities List

APPENDIX C: CRITICAL FACILITIES LIST

The following table provides a summary of the number of critical facilities categorized by each type. Crawford County maintains a complete list of all critical facilities.

Type	Count
Board of Education	104
Government Property	865
Nursing Facilities and Private Medical Facilities	13
Public Medical Facilities	175
Religious Facilities	408

Appendix D: Sources

APPENDIX D: SOURCES

Introduction:

<http://www.dot.state.oh.us/Divisions/Planning/TechServ/TIM/Documents/RI367/RI-367.pdf>
https://coastal.ohiodnr.gov/portals/coastal/pdfs/pagrivers/LEPAG_Rivers2013_SanduskyR.pdf
<http://www.crawfordparkdistrict.org/our-parks.html>

History and Demographics:

http://www.ohiohistorycentral.org/w/Wyandot_Indians
<https://sites.rootsweb.com/~ohccgs/cohistory.html>
<https://www.census.gov/quickfacts/crawfordcountyohio>

Floods:

<https://www.ncdc.noaa.gov/stormevents/>

Severe Storms:

<https://www.fema.gov/disaster/796>
<https://sharpp.dps.ohio.gov/ohiosharpp/#>

Tornados:

<https://crawfordcountynow.com/local/nws-confirms-tornado-touchdown/>

Severe Winter Storms:

[https://sharpp.dps.ohio.gov/OhioSHARPP/Documents/OhioMitigationPlan/2019/SOHMP%202019%20DRAFT%20\(003\).pdf](https://sharpp.dps.ohio.gov/OhioSHARPP/Documents/OhioMitigationPlan/2019/SOHMP%202019%20DRAFT%20(003).pdf)

Hazardous Materials:

<https://data-oepa.opendata.arcgis.com/datasets/spills-and-releases-environmental-response-sincemay-2017/data>

Dam Failure:

<https://www.fema.gov/dam-safety-concepts>
<http://codes.ohio.gov/oac/1501:21-13-01>
<https://gis2.ohiodnr.gov/MapView/?config=ohiodams>

Drought:

<https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?OH>
<https://www.bucyrustelegraphforum.com/story/news/2016/09/02/harvest-smaller-after-drought/89734694/>
<https://www.weather.gov/cle/2012NotableEvents>
https://www.nass.usda.gov/Publications/AgCensus/2012/Online_Resources/County_Profiles/Ohio/cp39033.pdf
<https://quickstats.nass.usda.gov/>
https://www.nass.usda.gov/Statistics_by_State/Ohio/

Epidemic:

<https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section11.html>

Invasive Species:

<https://www.wkyc.com/article/news/health/invasive-plant-in-ohio-can-severely-burn-skin/266719485>
<http://ohiodnr.gov/invasivespecies>

APPENDIX D: SOURCES

Earthquakes:

<https://www.ready.gov/about-us>

<https://www.ready.gov/earthquakes>

<http://www.geo.mtu.edu/UPSeis/hazards.html>

Appendix E: FEMA Flood Maps:

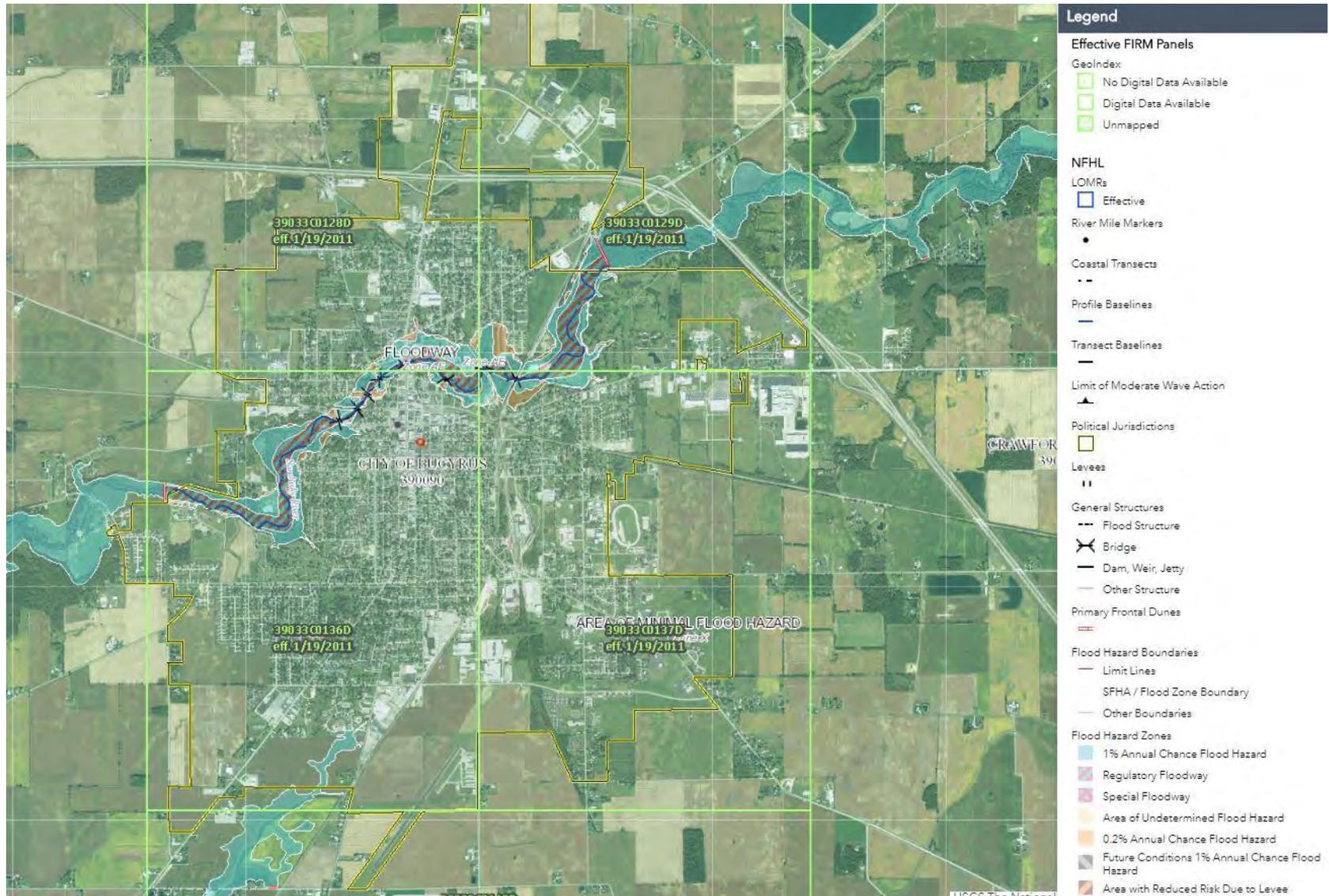
<https://www.ncdc.noaa.gov/>

<https://msc.fema.gov/portal/search?AddressQuery=Bucyrus#searchresultsanchor>

Appendix E: FEMA Flood Maps

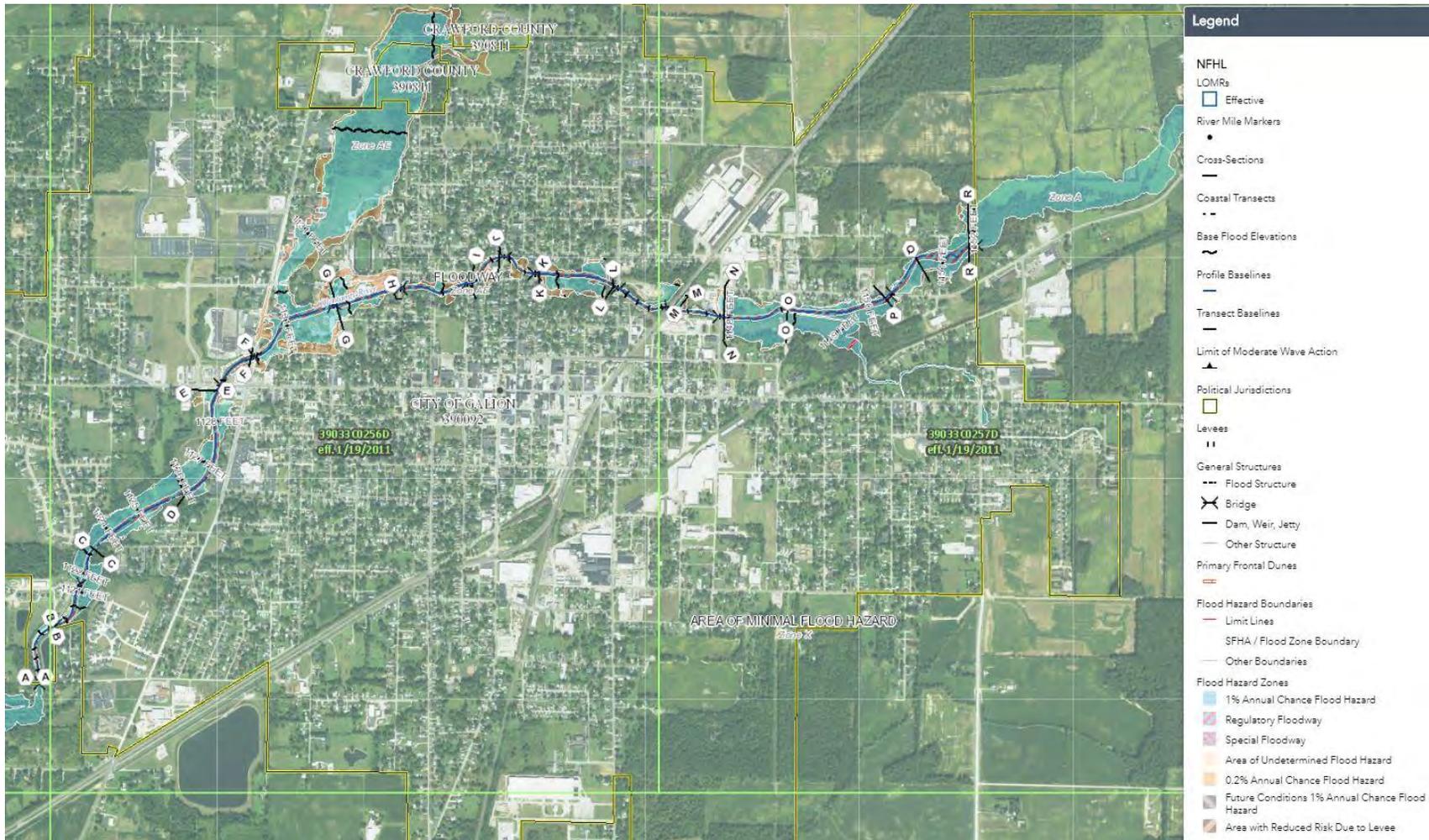
APPENDIX E: FEMA FLOOD MAPS

City of Bucyrus



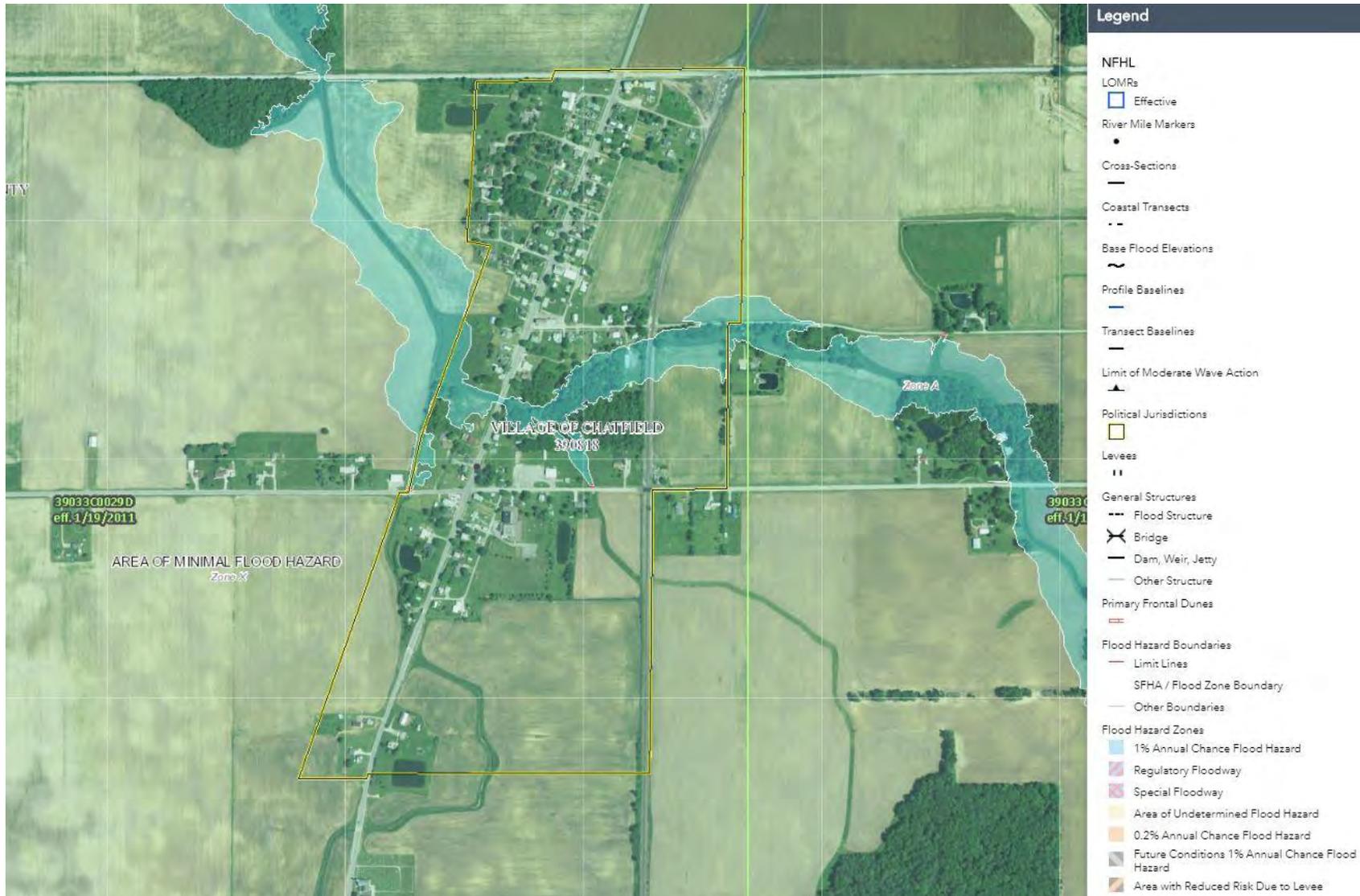
APPENDIX E: FEMA FLOOD MAPS

City of Galion



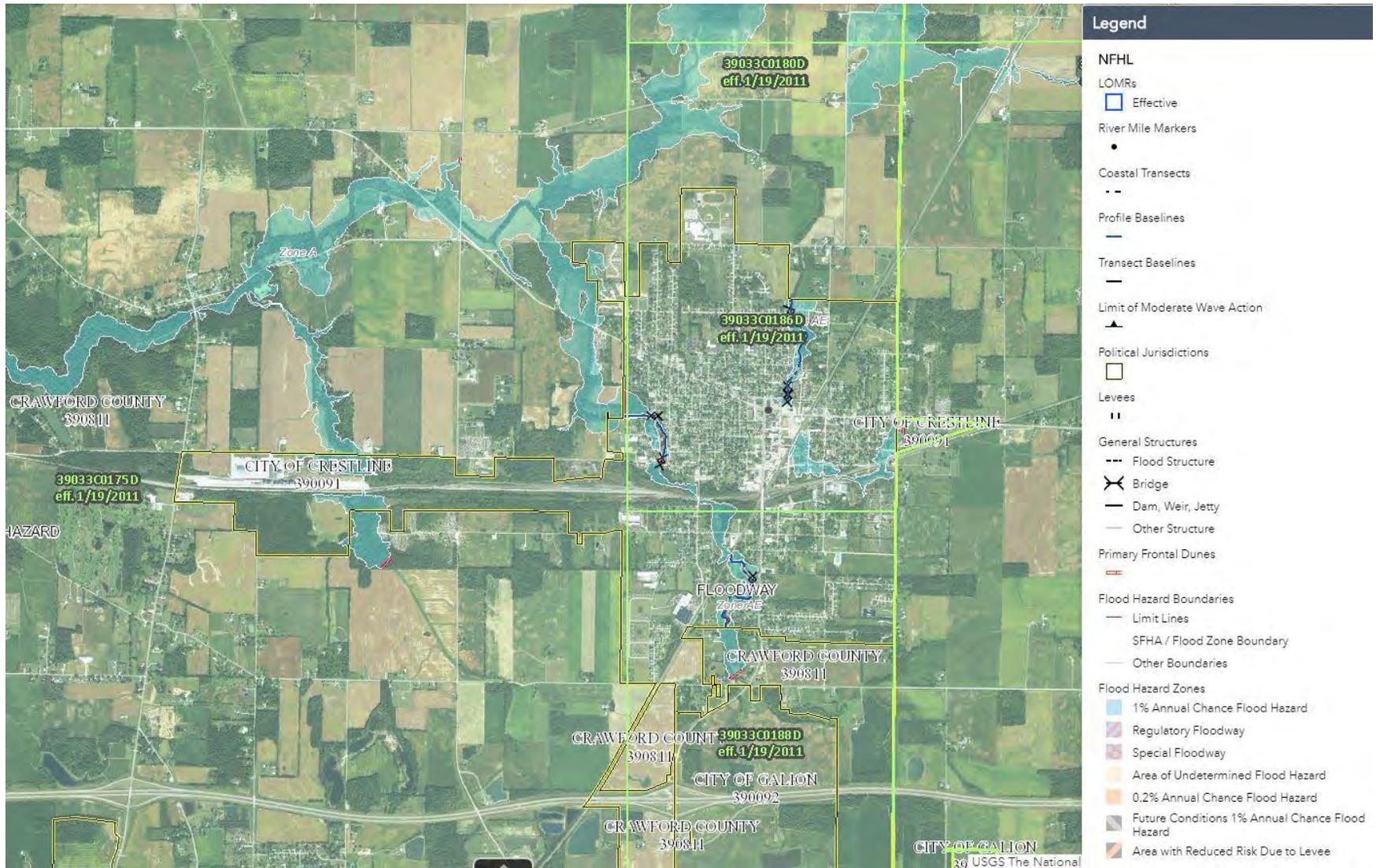
APPENDIX E: FEMA FLOOD MAPS

Village of Chatfield



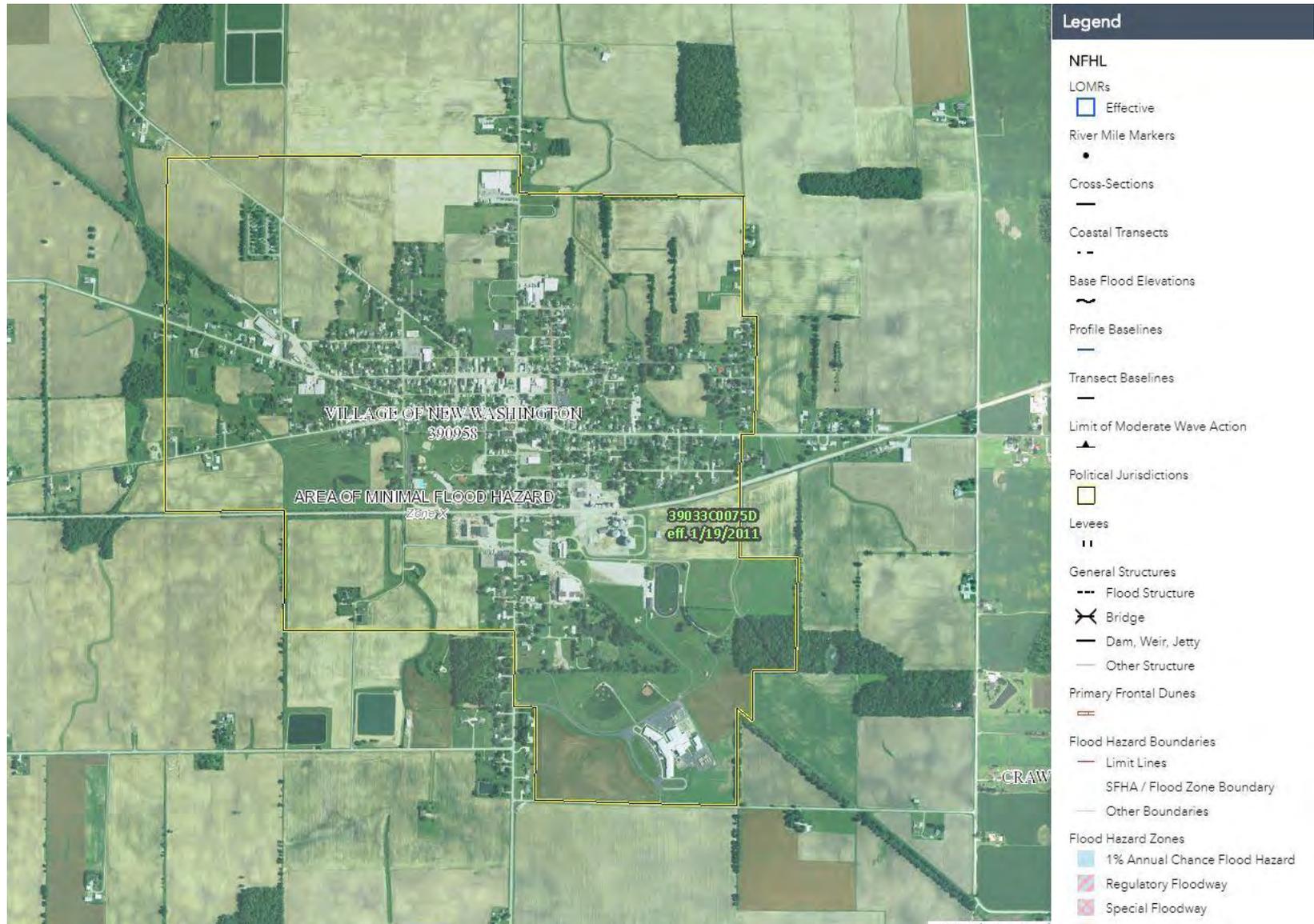
APPENDIX E: FEMA FLOOD MAPS

Village of Crestline



APPENDIX E: FEMA FLOOD MAPS

Village of New Washington



APPENDIX E: FEMA FLOOD MAPS

Village of North Robinson



APPENDIX E: FEMA FLOOD MAPS

Village of Tiro

