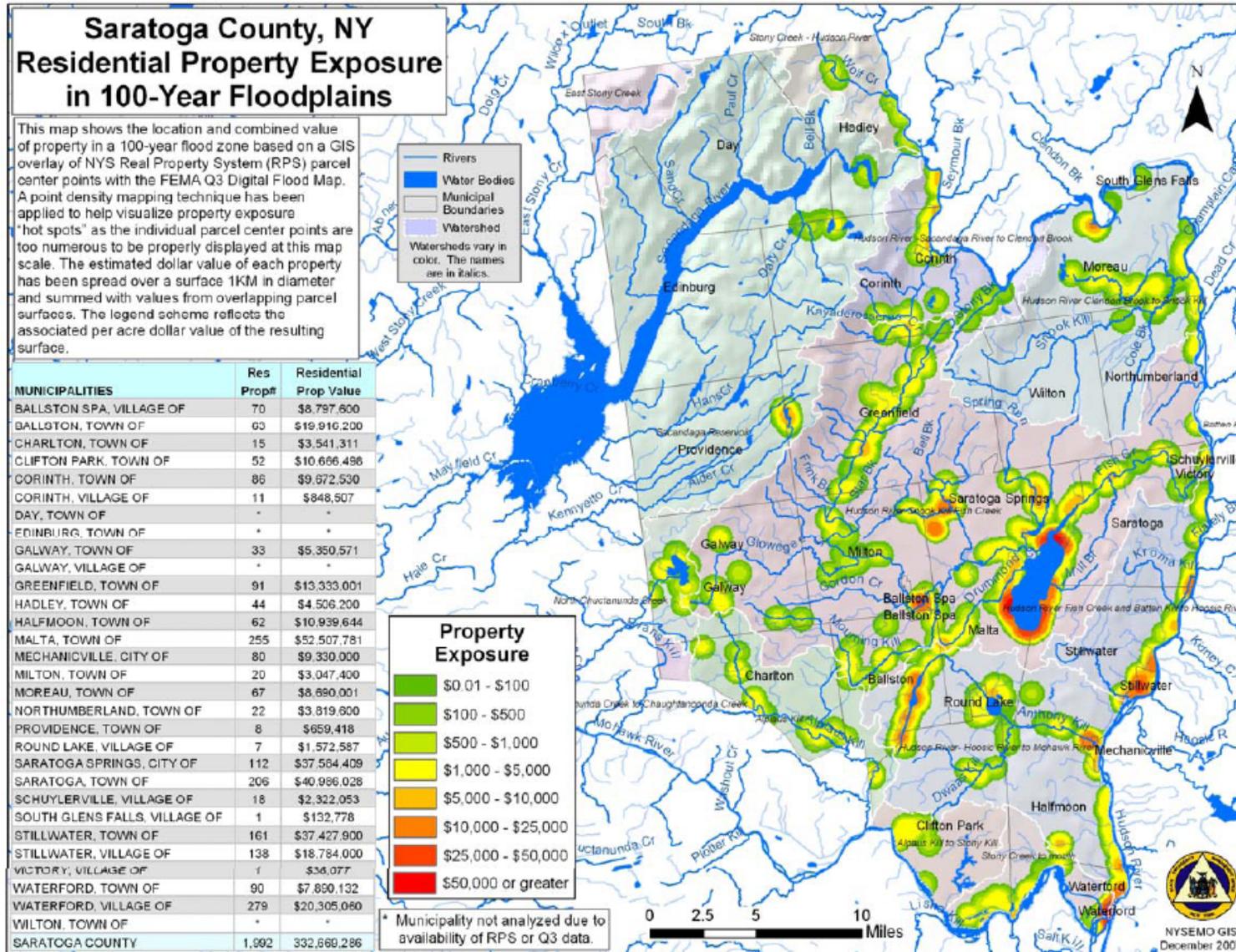


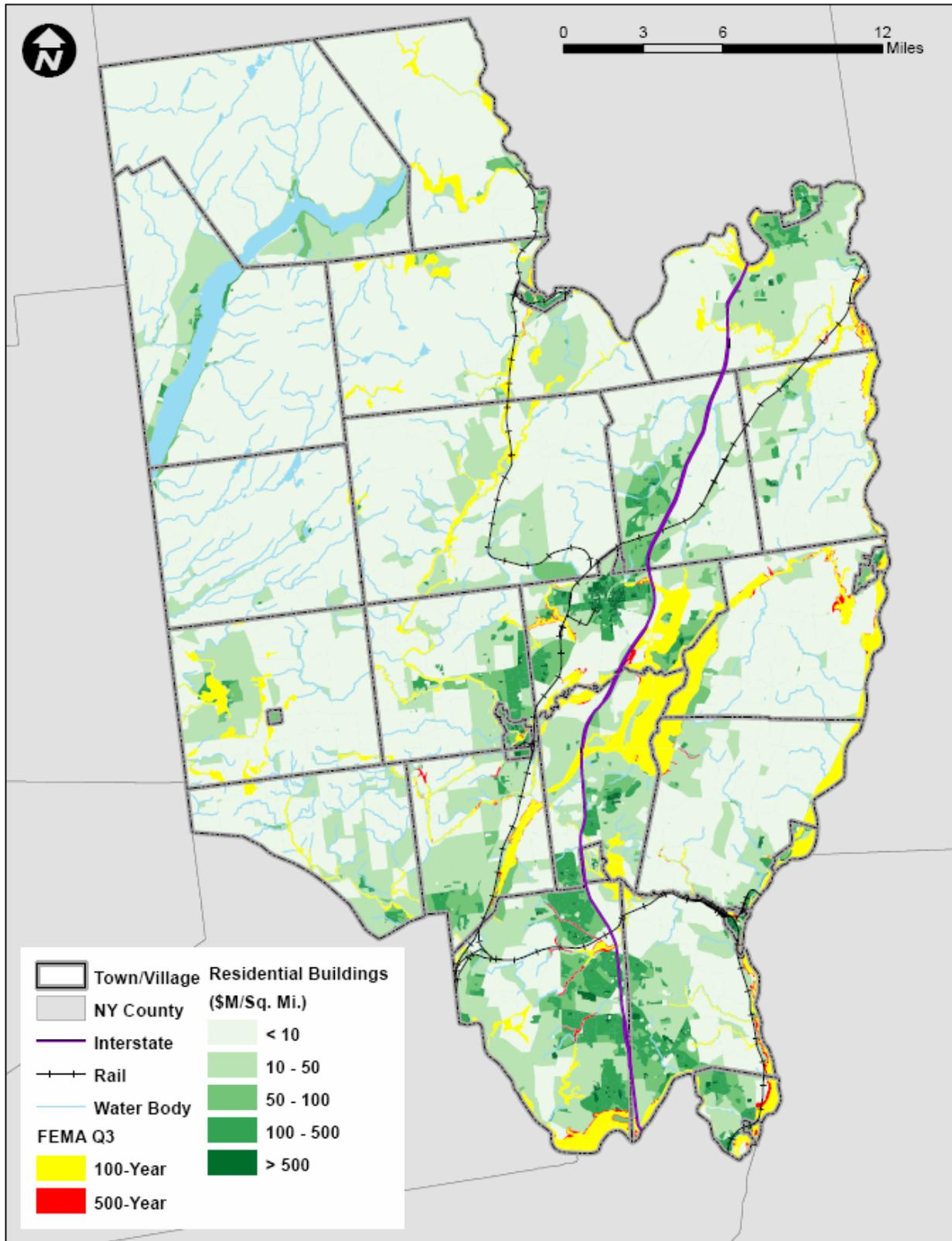
Figure 5.4.1-27. Saratoga County Residential Property Exposure in 100-Year Floodplains



Source: NYSDPC, 2008



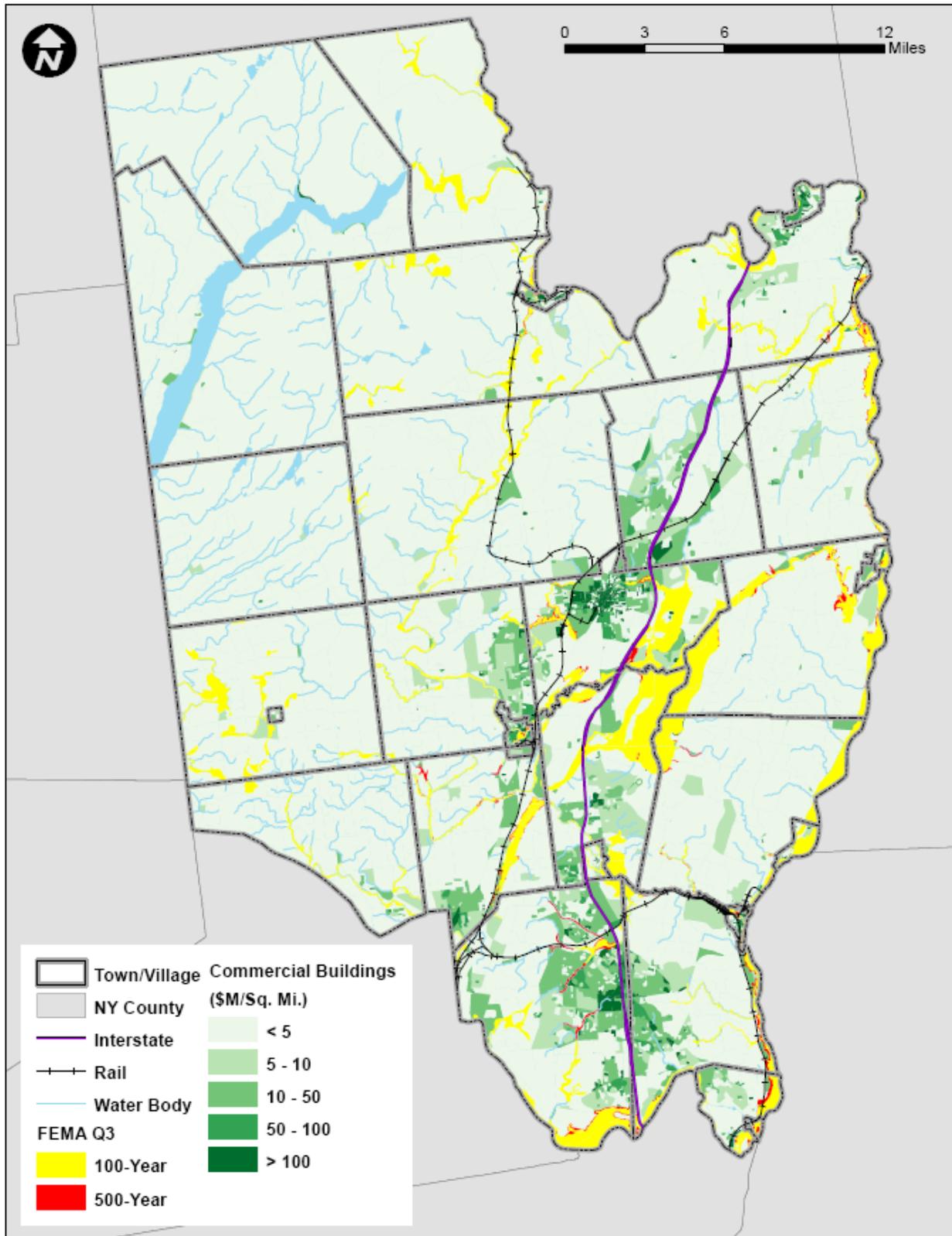
Figure 5.4.1-28. Distribution of Residential General Building Stock Replacement Value Relative to 100- and 500-Year Q3 Flood Boundaries in Saratoga County



Source: HAZUS-MH MR3, 2007; FEMA Q3

SECTION 5.4.1: RISK ASSESSMENT – FLOOD

Figure 5.4.1-29. Distribution of Commercial General Building Stock Replacement Value Relative to 100- and 500-Year Q3 Flood Boundaries in Saratoga County



Source: HAZUS-MH MR3, 2007; FEMA Q3

SECTION 5.4.1: RISK ASSESSMENT – FLOOD

Table 5.4.1-8 Estimated Number of Residential Buildings (Single-Family Dwellings and Manufactured Housing) Located in the 100- and 500-year Floodplains

Jurisdiction	Total in County		RES1		RES2	
	RES1	RES2	100-Year	500-Year	100-Year	500-Year
Town of Ballston	2,412	138	114	115	2	3
Village of Ballston Spa	1,199	0	141	191	0	0
Town of Charlton	1,456	57	9	9	0	0
Town of Clifton Park	10,459	107	63	94	0	1
Town of Corinth	1,122	480	27	30	13	14
Village of Corinth	654	87	20	20	3	3
Town of Day	1,216	237	0	0	0	0
Town of Edinburg	1,454	397	7	10	3	4
Town of Galway	1,613	138	59	59	4	4
Village of Galway	74	5	0	0	0	0
Town of Greenfield	2,290	665	41	41	11	11
Town of Hadley	755	162	10	10	3	3
Town of Halfmoon	3,964	1,586	68	121	8	13
Town of Malta	3,559	562	434	434	49	49
City of Mechanicville	603	23	65	82	3	6
Town of Milton	2,955	1,383	35	35	27	27
Town of Moreau	2,777	764	81	81	21	21
Town of Northumberland	1,346	279	1	1	1	1
Town of Providence	667	218	10	10	4	4
Village of Round Lake	95	116	14	14	17	17
Town of Saratoga	1,151	267	253	260	53	55
City of Saratoga Springs	6,634	313	175	189	13	14
Village of Schuylerville	306	54	19	19	5	5
Village of South Glens Falls	951	20	0	0	0	0
Town of Stillwater	1,608	587	101	104	45	47
Village of Stillwater	391	51	114	114	15	15
Village of Victory	144	35	29	29	6	6
Town of Waterford	1,474	73	96	97	3	4
Village of Waterford	282	0	140	168	0	0
Town of Wilton	3,144	1,136	0	0	0	0
Saratoga County	56,755	9,940	2,126	2,337	309	327

Source: HAZUS-MH MR3, 2007

Notes: RES 1 = Single-Family Dwellings; RES2 = Manufactured Housing; Town estimate does not include the total for their Village(s).



SECTION 5.4.1: RISK ASSESSMENT – FLOOD

Table 5.4.1-9 Estimated General Building Stock Replacement Value (Structure and Contents) Located in the 100- and 500-Year Floodplains

Jurisdiction	Total Buildings (All Occupancy Classes)				Residential Buildings		Commercial Buildings		Industrial Buildings	
	100-Year	% Total	500-Year	% Total	100-Year	500-Year	100-Year	500-Year	100-Year	500-Year
Town of Ballston	\$39,290,000	4.0	\$40,133,000	4.1	\$32,081,000	\$32,532,000	\$5,180,000	\$5,572,000	\$2,029,000	\$2,029,000
Village of Ballston Spa	\$73,525,000	11.0	\$118,821,000	17.7	\$48,619,000	\$64,839,000	\$12,378,000	\$38,884,000	\$1,262,000	\$2,974,000
Town of Charlton	\$3,117,000	0.7	\$3,117,000	0.7	\$2,387,000	\$2,387,000	\$294,000	\$294,000	\$0	\$0
Town of Clifton Park	\$35,132,000	0.8	\$46,361,000	1.0	\$20,092,000	\$31,067,000	\$10,044,000	\$10,298,000	\$712,000	\$712,000
Town of Corinth	\$5,996,000	2.0	\$6,690,000	2.2	\$5,996,000	\$6,690,000	\$0	\$0	\$0	\$0
Village of Corinth	\$11,787,000	4.2	\$11,787,000	4.2	\$4,601,000	\$4,601,000	\$3,622,000	\$3,622,000	\$886,000	\$886,000
Town of Day	\$0	0.0	\$0	0.0	\$0	\$0	\$0	\$0	\$0	\$0
Town of Edinburg	\$1,658,000	0.5	\$2,211,000	0.6	\$1,658,000	\$2,211,000	\$0	\$0	\$0	\$0
Town of Galway	\$17,007,000	3.6	\$17,007,000	3.6	\$16,037,000	\$16,037,000	\$970,000	\$970,000	\$0	\$0
Village of Galway	\$0	0.0	\$0	0.0	\$0	\$0	\$0	\$0	\$0	\$0
Town of Greenfield	\$11,194,000	1.6	\$11,194,000	1.6	\$9,159,000	\$9,159,000	\$0	\$0	\$1,503,000	\$1,503,000
Town of Hadley	\$2,113,000	1.0	\$2,113,000	1.0	\$2,113,000	\$2,113,000	\$0	\$0	\$0	\$0
Town of Halfmoon	\$34,322,000	1.8	\$53,573,000	2.8	\$16,384,000	\$28,697,000	\$14,042,000	\$19,480,000	\$1,024,000	\$1,780,000
Town of Malta	\$155,774,000	10.5	\$155,774,000	10.5	\$131,169,000	\$131,169,000	\$8,520,000	\$8,520,000	\$3,321,000	\$3,321,000
City of Mechanicville	\$47,017,000	9.6	\$58,980,000	12.1	\$37,221,000	\$46,067,000	\$8,762,000	\$8,916,000	\$944,000	\$3,059,000
Town of Milton	\$14,677,000	1.2	\$14,677,000	1.2	\$11,810,000	\$11,810,000	\$1,840,000	\$1,840,000	\$619,000	\$619,000
Town of Moreau	\$32,057,000	3.2	\$32,057,000	3.2	\$19,762,000	\$19,762,000	\$8,743,000	\$8,743,000	\$2,352,000	\$2,352,000
Town of Northumberland	\$176,000	0.0	\$176,000	0.0	\$176,000	\$176,000	\$0	\$0	\$0	\$0
Town of Providence	\$2,479,000	1.3	\$2,479,000	1.3	\$2,479,000	\$2,479,000	\$0	\$0	\$0	\$0
Village of Round Lake	\$6,469,000	9.4	\$6,469,000	9.4	\$5,725,000	\$5,725,000	\$744,000	\$744,000	\$0	\$0
Town of Saratoga	\$77,079,000	19.4	\$78,901,000	19.9	\$69,743,000	\$71,405,000	\$5,504,000	\$5,504,000	\$1,176,000	\$1,336,000
City of Saratoga Springs	\$93,163,000	1.9	\$97,330,000	2.0	\$64,761,000	\$68,416,000	\$18,866,000	\$19,378,000	\$5,410,000	\$5,410,000
Village of Schuylerville	\$18,175,000	12.9	\$18,175,000	12.9	\$4,960,000	\$4,960,000	\$9,282,000	\$9,282,000	\$408,000	\$408,000
Village of South Glens Falls	\$0	0.0	\$0	0.0	\$0	\$0	\$0	\$0	\$0	\$0
Town of Stillwater	\$53,497,000	9.7	\$54,388,000	9.9	\$27,103,000	\$27,994,000	\$17,224,000	\$17,224,000	\$7,522,000	\$7,522,000
Village of Stillwater	\$48,971,000	33.1	\$48,971,000	33.1	\$33,502,000	\$33,502,000	\$6,698,000	\$6,698,000	\$1,323,000	\$1,323,000
Village of Victory	\$7,524,000	15.7	\$7,524,000	15.7	\$7,524,000	\$7,524,000	\$0	\$0	\$0	\$0
Town of Waterford	\$72,247,000	9.3	\$76,443,000	9.8	\$32,971,000	\$33,695,000	\$14,518,000	\$17,990,000	\$24,424,000	\$24,424,000
Village of Waterford	\$133,083,000	60.8	\$162,209,000	74.1	\$100,828,000	\$120,527,000	\$19,054,000	\$22,472,000	\$1,696,000	\$2,241,000



SECTION 5.4.1: RISK ASSESSMENT – FLOOD

Jurisdiction	Total Buildings (All Occupancy Classes)				Residential Buildings		Commercial Buildings		Industrial Buildings	
	100-Year	% Total	500-Year	% Total	100-Year	500-Year	100-Year	500-Year	100-Year	500-Year
Town of Wilton	\$0	0.0	\$0	0.0	\$0	\$0	\$0	\$0	\$0	\$0
Saratoga County	\$997,529,000	4.0	\$1,127,560,000	4.5	\$708,861,000	\$785,544,000	\$166,285,000	\$206,431,000	\$56,611,000	\$61,899,000

Source: HAZUS-MH MR3, 2007

Notes:

1. Values represent replacement values (RV) for building structure and contents.
2. The valuation of general building stock and the loss estimates determined in Saratoga County were based on the default general building stock database provided in HAZUS-MH MR3. The general building stock valuations provided in HAZUS-MH MR3 are Replacement Cost Value from RSMMeans as of 2006.
3. Town estimate does not include the total for their Village(s).

SECTION 5.4.1: RISK ASSESSMENT – FLOOD

Table 5.4.1-9 Estimated General Building Stock Replacement Value (Structure and Contents) Located in the 100- and 500-Year Floodplains (Continued)

Jurisdiction	Agricultural Buildings		Religious Buildings		Government Buildings		Educational Buildings	
	100-Year	500-Year	100-Year	500-Year	100-Year	500-Year	100-Year	500-Year
Town of Ballston	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Village of Ballston Spa	\$682,000	\$682,000	\$8,428,000	\$9,286,000	\$678,000	\$678,000	\$1,478,000	\$1,478,000
Town of Charlton	\$436,000	\$436,000	\$0	\$0	\$0	\$0	\$0	\$0
Town of Clifton Park	\$436,000	\$436,000	\$2,810,000	\$2,810,000	\$1,038,000	\$1,038,000	\$0	\$0
Town of Corinth	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Village of Corinth	\$0	\$0	\$2,172,000	\$2,172,000	\$0	\$0	\$506,000	\$506,000
Town of Day	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Town of Edinburg	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Town of Galway	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Village of Galway	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Town of Greenfield	\$160,000	\$160,000	\$372,000	\$372,000	\$0	\$0	\$0	\$0
Town of Hadley	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Town of Halfmoon	\$218,000	\$378,000	\$2,654,000	\$3,238,000	\$0	\$0	\$0	\$0
Town of Malta	\$146,000	\$146,000	\$1,590,000	\$1,590,000	\$0	\$0	\$11,028,000	\$11,028,000
City of Mechanicville	\$90,000	\$90,000	\$0	\$848,000	\$0	\$0	\$0	\$0
Town of Milton	\$408,000	\$408,000	\$0	\$0	\$0	\$0	\$0	\$0
Town of Moreau	\$968,000	\$968,000	\$232,000	\$232,000	\$0	\$0	\$0	\$0
Town of Northumberland	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Town of Providence	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Village of Round Lake	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Town of Saratoga	\$444,000	\$444,000	\$0	\$0	\$0	\$0	\$212,000	\$212,000
City of Saratoga Springs	\$0	\$0	\$1,088,000	\$1,088,000	\$3,038,000	\$3,038,000	\$0	\$0
Village of Schuylerville	\$0	\$0	\$0	\$0	\$3,525,000	\$3,525,000	\$0	\$0
Village of South Glens Falls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Town of Stillwater	\$128,000	\$128,000	\$796,000	\$796,000	\$724,000	\$724,000	\$0	\$0



SECTION 5.4.1: RISK ASSESSMENT – FLOOD

Jurisdiction	Agricultural Buildings		Religious Buildings		Government Buildings		Educational Buildings	
	100-Year	500-Year	100-Year	500-Year	100-Year	500-Year	100-Year	500-Year
Village of Stillwater	\$0	\$0	\$3,896,000	\$3,896,000	\$0	\$0	\$3,552,000	\$3,552,000
Village of Victory	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Town of Waterford	\$334,000	\$334,000	\$0	\$0	\$0	\$0	\$0	\$0
Village of Waterford	\$218,000	\$218,000	\$5,306,000	\$8,700,000	\$4,769,000	\$6,839,000	\$1,212,000	\$1,212,000
Town of Wilton	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Saratoga County	\$4,668,000	\$4,828,000	\$29,344,000	\$35,028,000	\$13,772,000	\$15,842,000	\$17,988,000	\$17,988,000

Source: HAZUS-MH MR3, 2007

Notes:

1. Values represent replacement values (RV) for building structure and contents.
2. The valuation of general building stock and the loss estimates determined in Saratoga County were based on the default general building stock database provided in HAZUS-MH MR3. The general building stock valuations provided in HAZUS-MH MR3 are Replacement Cost Value from RSMeans as of 2006.
3. Town estimate does not include the total for their Village(s).

SECTION 5.4.1: RISK ASSESSMENT – FLOOD

Table 5.4.1-10 Estimated General Building Stock Loss (Structure and Contents) Damaged by the 100-Year and 500-Year MRP Flood Events

Jurisdiction	Total Buildings		Percentage of Total Building Value		Residential Buildings		Commercial Buildings		Industrial Buildings	
	100 Yr	500 Yr	100 Yr	500 Yr	100 Yr	500 Yr	100 Yr	500 Yr	100 Yr	500 Yr
	Town of Ballston	\$2,203,000	\$2,563,000	0.2	0.3	\$1,298,000	\$1,474,000	\$476,000	\$570,000	\$197,000
Village of Ballston Spa	\$13,776,000	\$16,576,000	2.1	2.5	\$7,140,000	\$8,724,000	\$5,839,000	\$6,855,000	\$394,000	\$446,000
Town of Charlton	\$2,458,000	\$2,711,000	0.5	0.6	\$2,081,000	\$2,284,000	\$275,000	\$306,000	\$39,000	\$45,000
Town of Clifton Park	\$26,213,000	\$30,832,000	0.6	0.7	\$11,935,000	\$14,836,000	\$10,634,000	\$11,714,000	\$1,481,000	\$1,709,000
Town of Corinth	\$7,473,000	\$10,328,000	2.5	3.4	\$6,993,000	\$9,730,000	\$297,000	\$403,000	\$144,000	\$131,000
Village of Corinth	\$4,379,000	\$6,816,000	1.6	2.4	\$1,656,000	\$2,967,000	\$1,671,000	\$2,387,000	\$566,000	\$797,000
Town of Day	\$2,042,000	\$2,049,000	0.7	0.7	\$1,497,000	\$1,506,000	\$168,000	\$166,000	\$61,000	\$61,000
Town of Edinburg	\$1,168,000	\$1,283,000	0.3	0.4	\$1,091,000	\$1,203,000	\$65,000	\$68,000	\$11,000	\$11,000
Town of Galway	\$1,783,000	\$1,965,000	0.4	0.4	\$1,007,000	\$1,087,000	\$314,000	\$336,000	\$61,000	\$71,000
Village of Galway	\$9,000	\$17,000	0.0	0.1	\$1,000	\$2,000	\$5,000	\$9,000	\$0	\$0
Town of Greenfield	\$3,344,000	\$3,395,000	0.5	0.5	\$2,487,000	\$2,629,000	\$246,000	\$228,000	\$366,000	\$325,000
Town of Hadley	\$3,216,000	\$3,927,000	1.6	1.9	\$2,415,000	\$2,958,000	\$537,000	\$650,000	\$146,000	\$199,000
Town of Halfmoon	\$15,187,000	\$21,215,000	0.8	1.1	\$6,815,000	\$9,353,000	\$6,519,000	\$9,534,000	\$805,000	\$1,109,000
Town of Malta	\$5,176,000	\$6,546,000	0.4	0.4	\$3,027,000	\$3,941,000	\$1,498,000	\$1,800,000	\$496,000	\$623,000
City of Mechanicville	\$21,123,000	\$35,746,000	4.3	7.3	\$13,212,000	\$22,546,000	\$5,521,000	\$8,622,000	\$249,000	\$839,000
Town of Milton	\$10,040,000	\$11,775,000	0.9	1.0	\$5,400,000	\$6,763,000	\$2,819,000	\$2,951,000	\$722,000	\$850,000
Town of Moreau	\$18,582,000	\$8,133,000	1.9	0.8	\$5,085,000	\$5,307,000	\$11,886,000	\$2,049,000	\$1,329,000	\$452,000
Town of Northumberland	\$2,895,000	\$3,149,000	0.7	0.8	\$2,036,000	\$2,284,000	\$223,000	\$237,000	\$147,000	\$173,000
Town of Providence	\$1,298,000	\$1,492,000	0.7	0.8	\$752,000	\$874,000	\$148,000	\$166,000	\$147,000	\$156,000
Village of Round Lake	\$143,000	\$167,000	0.2	0.2	\$66,000	\$88,000	\$62,000	\$63,000	\$15,000	\$16,000
Town of Saratoga	\$9,898,000	\$10,824,000	2.5	2.7	\$6,756,000	\$7,040,000	\$2,571,000	\$3,126,000	\$396,000	\$489,000
City of Saratoga Springs	\$18,754,000	\$20,503,000	0.4	0.4	\$6,509,000	\$7,087,000	\$6,305,000	\$6,990,000	\$4,064,000	\$4,454,000
Village of Schuylerville	\$4,113,000	\$5,192,000	2.9	3.7	\$1,352,000	\$1,655,000	\$2,030,000	\$2,621,000	\$220,000	\$268,000
Village of South Glens Falls	\$6,077,000	\$6,997,000	1.8	2.1	\$4,394,000	\$4,967,000	\$952,000	\$1,156,000	\$66,000	\$73,000
Town of Stillwater	\$16,572,000	\$18,208,000	3.0	3.3	\$3,439,000	\$3,981,000	\$8,052,000	\$8,681,000	\$3,950,000	\$4,323,000



SECTION 5.4.1: RISK ASSESSMENT – FLOOD

Jurisdiction	Total Buildings		Percentage of Total Building Value		Residential Buildings		Commercial Buildings		Industrial Buildings	
	100 Yr	500 Yr	100 Yr	500 Yr	100 Yr	500 Yr	100 Yr	500 Yr	100 Yr	500 Yr
Village of Stillwater	\$6,537,000	\$7,131,000	4.4	4.8	\$4,192,000	\$4,385,000	\$974,000	\$1,143,000	\$414,000	\$460,000
Village of Victory	\$1,660,000	\$2,174,000	3.5	4.5	\$1,660,000	\$2,174,000	\$0	\$0	\$0	\$0
Town of Waterford	\$19,517,000	\$27,183,000	2.5	3.5	\$9,169,000	\$12,067,000	\$3,482,000	\$5,604,000	\$6,765,000	\$9,329,000
Village of Waterford	\$16,699,000	\$38,868,000	7.6	17.8	\$13,436,000	\$28,491,000	\$1,079,000	\$4,556,000	\$171,000	\$618,000
Town of Wilton	\$526,000	\$550,000	0.0	0.0	\$320,000	\$325,000	\$197,000	\$214,000	\$1,000	\$2,000
Saratoga County	\$242,861,000	\$308,315,000	1.0	1.2	\$127,221,000	\$172,728,000	\$74,845,000	\$83,205,000	\$23,423,000	\$28,265,000

Source: HAZUS-MH MR3, 2007

Notes:

1. Values represent replacement values (RV) for building structure and contents.
2. The valuation of general building stock and the loss estimates determined in Saratoga County were based on the default general building stock database provided in HAZUS-MH MR3. The general building stock valuations provided in HAZUS-MH MR3 are Replacement Cost Value from RSMMeans as of 2006.
3. Town estimate does not include the total for their Village(s).



SECTION 5.4.1: RISK ASSESSMENT – FLOOD

Table 5.4.1-10 Estimated General Building Stock Loss (Structure and Contents) Damaged by the 100-Year and 500-Year MRP Flood Events (Continued)

Jurisdiction	Agriculture Buildings		Religious Buildings		Government Buildings		Education Buildings	
	100 Yr	500 Yr	100 Yr	500 Yr	100 Yr	500 Yr	100 Yr	500 Yr
Town of Ballston	\$171,000	\$216,000	\$17,000	\$18,000	\$0	\$0	\$44,000	\$49,000
Village of Ballston Spa	\$98,000	\$107,000	\$218,000	\$360,000	\$76,000	\$72,000	\$11,000	\$12,000
Town of Charlton	\$19,000	\$25,000	\$35,000	\$42,000	\$1,000	\$1,000	\$8,000	\$8,000
Town of Clifton Park	\$808,000	\$957,000	\$669,000	\$765,000	\$558,000	\$724,000	\$128,000	\$127,000
Town of Corinth	\$33,000	\$56,000	\$6,000	\$8,000	\$0	\$0	\$0	\$0
Village of Corinth	\$80,000	\$106,000	\$376,000	\$516,000	\$14,000	\$16,000	\$16,000	\$27,000
Town of Day	\$0	\$104,000	\$186,000	\$187,000	\$130,000	\$129,000	\$0	\$0
Town of Edinburg	\$0	\$1,000	\$1,000	\$1,000	\$0	\$0	\$0	\$0
Town of Galway	\$7,000	\$10,000	\$90,000	\$110,000	\$15,000	\$17,000	\$289,000	\$334,000
Village of Galway	\$0	\$0	\$0	\$0	\$3,000	\$6,000	\$0	\$0
Town of Greenfield	\$61,000	\$76,000	\$114,000	\$95,000	\$68,000	\$41,000	\$2,000	\$1,000
Town of Hadley	\$0	\$0	\$93,000	\$100,000	\$25,000	\$20,000	\$0	\$0
Town of Halfmoon	\$121,000	\$143,000	\$807,000	\$887,000	\$25,000	\$59,000	\$95,000	\$130,000
Town of Malta	\$39,000	\$23,000	\$35,000	\$57,000	\$2,000	\$2,000	\$79,000	\$100,000
City of Mechanicville	\$1,000	\$8,000	\$84,000	\$256,000	\$628,000	\$1,405,000	\$1,428,000	\$2,070,000
Town of Milton	\$189,000	\$177,000	\$367,000	\$350,000	\$543,000	\$684,000	\$0	\$0
Town of Moreau	\$125,000	\$137,000	\$38,000	\$48,000	\$3,000	\$3,000	\$116,000	\$137,000
Town of Northumberland	\$234,000	\$184,000	\$37,000	\$56,000	\$217,000	\$214,000	\$1,000	\$1,000
Town of Providence	\$0	\$0	\$216,000	\$254,000	\$35,000	\$41,000	\$0	\$1,000
Village of Round Lake	\$0	\$71,000	\$0	\$0	\$0	\$0	\$0	\$0
Town of Saratoga	\$86,000	\$26,000	\$0	\$0	\$0	\$0	\$89,000	\$98,000
City of Saratoga Springs	\$18,000	\$0	\$688,000	\$715,000	\$863,000	\$908,000	\$307,000	\$323,000
Village of Schuylerville	\$0	\$0	\$0	\$615,000	\$501,000	\$633,000	\$10,000	\$15,000
Village of South Glens Falls	\$0	\$116,000	\$517,000	\$484,000	\$140,000	\$176,000	\$8,000	\$10,000
Town of Stillwater	\$108,000	\$1,000	\$451,000	\$449,000	\$572,000	\$623,000	\$0	\$0
Village of Stillwater	\$1,000	\$0	\$370,000	\$2,000	\$15,000	\$18,000	\$571,000	\$675,000
Village of Victory	\$0	\$111,000	\$0	\$3,145,000	\$0	\$0	\$0	\$0
Town of Waterford	\$44,000	\$121,000	\$2,000	\$0	\$0	\$0	\$55,000	\$70,000



SECTION 5.4.1: RISK ASSESSMENT – FLOOD

Jurisdiction	Agriculture Buildings		Religious Buildings		Government Buildings		Education Buildings	
	100 Yr	500 Yr	100 Yr	500 Yr	100 Yr	500 Yr	100 Yr	500 Yr
Village of Waterford	\$78,000	\$8,000	\$1,367,000	\$9,520,000	\$277,000	\$1,434,000	\$291,000	\$503,000
Town of Wilton	\$8,000	\$2,784,000	\$0	\$18,000	\$0	\$1,000	\$0	\$0
Saratoga County	\$2,329,000	\$216,000	\$6,784,000	\$360,000	\$4,711,000	\$7,227,000	\$3,548,000	\$4,691,000

Source: HAZUS-MH MR3, 2007

Notes:

- (1) Values represent replacement values (RV) for building structure and contents.
- (2) The valuation of general building stock and the loss estimates determined in Saratoga County were based on the default general building stock database provided in HAZUS-MH MR3. The general building stock valuations provided in HAZUS-MH MR3 are Replacement Cost Value from RSMeans as of 2006.
- (3) Town estimate does not include the total for their Village(s).



There are no losses specific to the elevated groundwater flood hazard available at this time. However, general losses include basement inundation (two-feet of water). According to the Planning Committee member for the Town of Wilton, a PE must confirm that groundwater is not within three-feet of the footings for all new construction.

In addition to total building stock modeling, individual data available on flood policies, claims, RLP and severe RLP (SRLs) were analyzed. FEMA Region 2 provided a list of residential properties with NFIP policies, past claims and multiple claims (RLPs). According to the metadata provided: “The NFIP Repetitive Loss File contains losses reported from individuals who have flood insurance through the Federal Government. A property is considered a repetitive loss property when there are two or more losses reported which were paid more than \$1,000 for each loss. The two losses must be within 10 years of each other & be as least 10 days apart. Only losses from (*sic* since) 1/1/1978 that are closed are considered.”

Severe RLPs were then examined in Saratoga County. According to section 1361A of the National Flood Insurance Act, as amended (NFIA), 42 U.S.C. 4102a, a severe RLP property is defined as a residential property that is covered under an NFIP flood insurance policy and:

- Has at least four NFIP claim payments (including building and contents) over \$5,000 each, and the cumulative amount of such claims payments exceeds \$20,000; or
- For which at least two separate claims payments (building payments only) have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building.
- For both of the above, at least two of the referenced claims must have occurred within any 10-year period, and must be greater than 10 days apart.

Table 5.4.1-11 and Figure 5.4.1-30 summarize the NFIP policies, claims and repetitive loss statistics for Saratoga County. According to FEMA, there are 22 RL properties in the County, two of which are SRL properties. Of these 22 RL properties, 20 RL properties are residential (single family and 2-4 family), and two RL properties are non-residential (FEMA Region 2, 2008). The location of the properties with policies, claims and repetitive and severe repetitive flooding were geocoded by FEMA with the understanding that there are varying tolerances between how closely the longitude and latitude coordinates correspond to the location of the property address, or that the indication of some locations are more accurate than others. This data is more current than the properties reported in the New York State HMP and may explain any difference in property count between the two sources.

SECTION 5.4.1: RISK ASSESSMENT – FLOOD

Table 5.4.1-11. NFIP Policies, Claims and Repetitive Loss Statistics

Jurisdiction	# Policies (1)	Insurance (2)	# Claims (Losses) (1)	Total Loss Payments (3)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100-year Boundary (1)	# Policies in 500-Boundary (1)	# Policies Outside the 500-year Flood Hazard (1)
Town of Ballston	21	\$3,753,300	1	\$2,494.80	0	0	12	12	9
Village of Ballston Spa	60	\$8,855,300	1	\$10,911.10	0	0	47	54	6
Town of Charlton	4	\$901,200	5	\$30,629.70	1	0	1	1	3
Town of Clifton Park	28	\$7,072,800	14	\$260,334.05	2	0	11	12	16
Town of Corinth	12	\$2,182,100	3	\$2,070.34	0	0	5	5	7
Village of Corinth	7	\$918,400	1	\$4,294.31	0	0	7	7	0
Town of Day	1	\$350,000	0	\$0	0	0	0	0	0
Town of Edinburg**	0	\$0	0	\$0	0	0	0	0	0
Town of Galway	0	\$42,000 *	0	\$0	0	0	0	0	0
Village of Galway**	0	\$0	0	\$0	0	0	0	0	0
Town of Greenfield	17	\$2,868,300	1	\$23,804.00	0	0	6	6	11
Town of Hadley	10	\$2,211,700	0	\$0	0	0	1	2	8
Town of Halfmoon	52	\$10,270,000	13	\$127,542.22	1	0	32	35	17
Town of Malta	77	\$14,128,300	2	\$73,437.38	0	0	58	59	18
City of Mechanicville	48	\$6,016,100	14	\$103,104.78	1	0	34	36	12
Town of Milton	7	\$1,391,000	1	\$360.57	0	0	3	3	4
Town of Moreau	20	\$3,447,300	1	\$496.54	0	0	8	8	12
Town of Northumberland	12	\$1,811,300	0	\$0	0	0	9	9	3
Town of Providence	0	\$0	0	\$0	0	0	0	0	0
Village of Round Lake	1	\$350,000	0	\$0	0	0	1	1	0
Town of Saratoga	78	\$13,679,000	14	\$91,464.56	0	0	52	52	26
City of Saratoga Springs	37	\$9,682,700	7	\$30,880.04	0	0	15	15	22
Village of Schuylerville	10	\$1,258,300	0	\$0	0	0	10	10	0
Village of South Glens Falls	1	\$250,000	1	\$396.61	0	0	0	0	1
Town of Stillwater	62	\$9,973,500	20	\$91,313.49	2	0	29	31	31
Village of Stillwater	42	\$5,582,900	5	\$32,688.08	0	0	36	36	6



SECTION 5.4.1: RISK ASSESSMENT – FLOOD

Jurisdiction	# Policies (1)	Insurance (2)	# Claims (Losses) (1)	Total Loss Payments (3)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100-year Boundary (1)	# Policies in 500-year Boundary (1)	# Policies Outside the 500-year Flood Hazard (1)
Village of Victory	1	\$105,000	0	\$2,678.00	0	0	0	0	0
Town of Waterford	87	\$15,058,700	86	\$1,317,162.30	7	1	68	69	18
Village of Waterford	192	\$23,744,500	95	\$811,770.18	8	1	164	184	8
Town of Wilton	9	\$2,378,000	0	\$0	0	0	0	0	9
Saratoga County	896	\$148,239,700	285	\$3,017,833	22	2	609	647	247

Source:

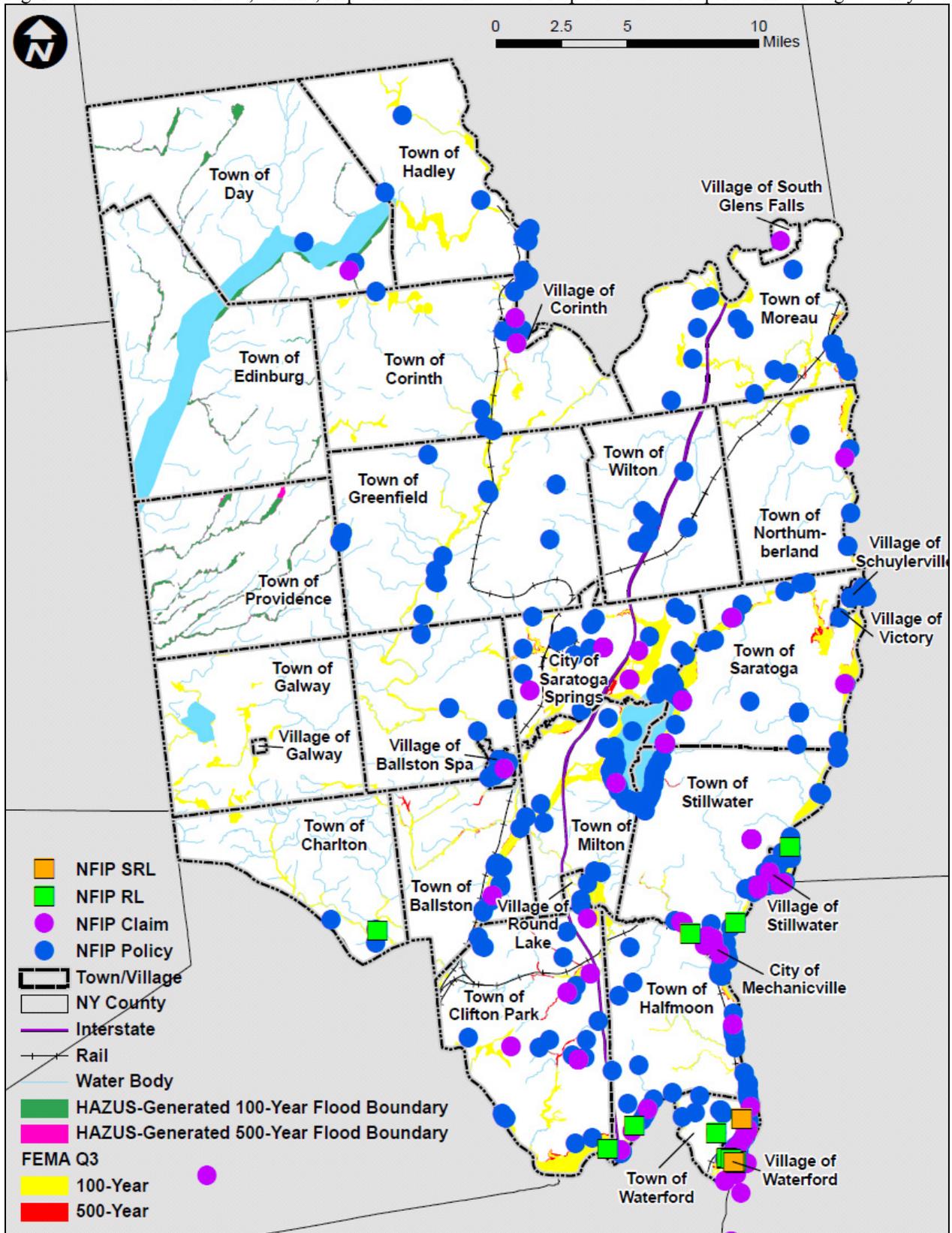
- (1) Policies provided by FEMA Region 2, November 2008 using the “Comm_Name” located within the 100- and 500-year Q3 boundaries.
- (2) <http://bsa.nfipstat.com/reports/1011.htm#NYT> as of January 31, 2009
- (3) <http://bsa.nfipstat.com/reports/1040.htm#36> as of January 31, 2009

As of January 31, 2009, Bureau Net on-line policy statistics indicate there is one policy in the Town of Galway and therefore there is insurance in-force listed for the Town. This, however differs from the statistics provided by FEMA Region 2 in November 2008 which indicates there are zero policies in the Town.

** The Town of Edinburg and the Village of Galway do not participate in the NFIP.

SECTION 5.4.1: RISK ASSESSMENT – FLOOD

Figure 5.4.1-30. NFIP Policies, Claims, Repetitive Loss and Severe Repetitive Loss Properties in Saratoga County



Source: FEMA Region 2, 2008; HAZUS-MH MR3, 2007; Saratoga County

Impact on Critical Facilities

In addition to considering general building stock at risk, the risk of flood to critical facilities, utilities and user-defined facilities was evaluated. Tables 5.4.1-12 and 5.4.1-13 list the facilities and percent damage HAZUS-MH MR3 estimates to structures and/or contents as a result of a 100- and 500-year MRP event, respectively. Tables 5.4.1-14 and 5.4.1-15 list the utilities and percent damage HAZUS-MH MR3 as a result of a 100- and 500-year MRP event, respectively. In select cases, HAZUS-MH did not estimate any damage to a facility even though the facility is located in the Q3 flood zone. Therefore, these facilities located in the Q3 flood zone are listed in the tables as well. For the Towns of Day, Edinburg and Providence where there are no Q3 flood zones, the HAZUS-generated flood boundaries were used.

In cases where short-term functionality is impacted by a hazard, other facilities of neighboring municipalities may need to increase support response functions during a disaster event. Mitigation planning should consider means to reduce impact to critical facilities and ensure sufficient emergency and school services remain when a significant event occurs.

According to the Stillwater FMA, the Village's water treatment plant is entirely within the 100-year floodplain and potentially vulnerable to flooding (The Chazen Companies, 2002).

Table 5.4.1-12 Estimated Damage to Critical Facilities in Saratoga County from the 100-Year MRP Event

Name	Town	Type	Percent Building Damage	Percent Content Damage
Arongen ES	Clifton Park (T)	School	5.3	28.5
St. Mary's School	Ballston Spa (V)	School	NA	NA
Union Fire Dept	Ballston Spa (V)	Fire	NA	NA
Mechanicville Central Fire Station	Mechanicville (C)	Fire	8.1	12.6
Mechanicville Police	Mechanicville (C)	Police	30.6	100.0
Rock City Falls Station #1	Milton (T)	Fire	6.4	7.4
Sheriff's Dept-Civil Div	Milton (T)	Police	NA	NA
Stillwater ES	Stillwater (V)	School	NA	NA
Stillwater MS HS	Stillwater (V)	School	NA	NA
Waterford Volunteer Fire CO	Waterford (V)	Fire	3.5	4.0
Kavanaugh Hook & Ladder CO	Waterford (V)	Fire	NA	NA

Source: HAZUS-MH MR3, 2007

Notes: C = City. NA = Not available. T = Town. V = Village.

Table 5.4.1-13 Estimated Damage to Critical Facilities in Saratoga County from the 500-Year MRP Event

Name	Town	Type	Percent Building Damage	Percent Content Damage
St. Mary's School	Ballston Spa (V)	School	NA	NA
Union Fire Dept	Ballston Spa (V)	Fire	NA	NA
Arongen ES	Clifton Park (T)	School	5.5	29.9
Mechanicville Central Fire Station	Mechanicville (C)	Fire	11.9	52.8
Mechanicville Police	Mechanicville (C)	Police	42.0	100.0
Sheriff's Dept-Civil Div	Milton (T)	Police	NA	NA
Rock City Falls Station #1	Milton (T)	Fire	11.6	48.1
Stillwater MS HS	Stillwater (V)	School	NA	NA
Stillwater ES	Stillwater (V)	School	2.8	14.9
Waterford Volunteer Fire CO	Waterford (V)	Fire	11.4	45.6
Kavanaugh Hook & Ladder CO	Waterford (V)	Fire	2.8	3.2
Waterford Police Dept	Waterford (V)	Police	10.9	35.9

Source: HAZUS-MH MR3, 2007

Notes: C = City. NA = Not available. T = Town. V = Village.

Table 5.4.1-14 Estimated Damage to Utilities in Saratoga County from the 100-Year MRP Event

Name	Town	Type	Percent Damage
NY State Power Authority	Clifton Park (T)	Electric	NA
Mechanicville (C) CSO	Mechanicville (C)	WW	39.1
Schuylerville (V) WWTP 2	Schuylerville (V)	WW	NA
Schuylerville (V) WWTP	Schuylerville (V)	WW	NA
Waterford T WWTP	Waterford (T)	WW	30

Source: HAZUS-MH MR3, 2007

Notes: City (City). NA = Not available. T = Town. V = Village. WW = Wastewater Facility

According to the Stillwater FMA, the Village’s water treatment plant is entirely within the 100-year floodplain and potentially vulnerable to flooding (The Chazen Companies, 2002).

Table 5.4.1-15 Estimated Damage to Utilities in Saratoga County from the 500-Year MRP Event

Name	Town	Type	Percent Damage
NY State Power Authority	Clifton Park (T)	Electric	NA
Mechanicville (C) CSO	Mechanicville (C)	WW	30
Schuylerville (V) WWTP 2	Schuylerville (V)	WW	NA
Schuylerville (V) WWTP	Schuylerville (V)	WW	NA
Waterford T WWTP	Waterford (T)	WW	40

Source: HAZUS-MH MR3, 2007

Notes: City (City). NA = Not available. T = Town. V = Village. WW = Wastewater Facility

Impact on Economy

For impact on economy, estimated losses from a flood event are considered. Losses include but are not limited to general building stock damages, agricultural losses, business interruption, impacts to tourism and tax base to Saratoga County. Damages to general building stock can be quantified using HAZUS-MH as discussed above. Other economic components such as loss of facility use, functional downtime and social economic factors are less measurable with a high degree of certainty. For the purposes of this analysis, general building stock damages are discussed further.

Flooding can cause extensive damage to public utilities and disruptions to the delivery of services. Loss of power and communications may occur; and drinking water and wastewater treatment facilities may be temporarily out of operation. Flooded streets and road blocks make it difficult for emergency vehicles to respond to calls for service. Floodwaters can washout sections of roadway and bridges (Foster, Date Unknown).

Fifty-seven (57) of the 186 highway bridges are located within either the FEMA Q3 100-year flood zone or the HAZUS-generated 100-year flood boundary (for the Towns of Day, Edinburg and Providence). Garnsey's Airport located in the Town of Saratoga is located within the FEMA Q3 100-year flood zone.

Sixty-two (62) of the 186 highway bridges are located within either the FEMA Q3 500-year flood zone or the HAZUS-generated 500-year flood boundary (for the Towns of Day, Edinburg and Providence). Garnsey's Airport located in the Town of Saratoga is located within the FEMA Q3 500-year flood zone.

Direct building losses are the estimated costs to repair or replace the damage caused to the building. The potential damage estimated to the general building stock inventory associated with the 100-year flood is approximately \$242 million. This estimated building damage represents 24-percent of the County's overall total general building stock inventory exposed to this hazard. For the 500-year event, the potential damage estimate is approximately \$308 million (structure and contents), or 27-percent of the total exposed building value. These dollar value losses to the County's total building inventory replacement value, in addition to damages to roadways and infrastructure, would greatly impact Saratoga's tax base and the local economy.

Future Growth and Development

As discussed in Section 4 and Section 9 within each jurisdiction's annex, areas targeted for future growth and development have been identified across the County. Any new development within the identified flood hazard areas will be at risk to flooding. Please refer to Section 4 (County Profile) and each jurisdictions' annex (Section 9) for hazard maps that illustrate where potential new development is located in relation to the FEMA Q3 flood boundaries. Of the potential new development submitted to date, a portion of parcels identified as potential future development are located in mapped flood zones which are areas known to be vulnerable to flooding within the Towns of Ballston, Corinth and Malta (Section 9).

Additional Data Needs and Next Steps

A modified Level 1 HAZUS-MH flood analysis was conducted for Saratoga County using the default model data, with the exception of the updated critical facility inventory which included user-defined data. For future plan updates, a Level 2 HAZUS analysis can be conducted. A Level 2 analysis provides more accurate exposure and loss estimates by replacing the national default inventories with more accurate local inventories. Updated demographic and general building stock data would be needed to conduct a

Level 2 HAZUS-MH analysis. Current FEMA DFIRMs and replacement values of critical facilities would also further support the refined analysis.

Overall Vulnerability Assessment

The flood hazard is evaluated as a significant threat, which was ranked overall as a “High” risk by the Planning Committee with a “frequent” probability of occurrence (see Tables 5.3-3 and 5.3-6 in Section 5.3). This hazard can be managed and planned for through the mitigation strategy and specific activities outlined in Volume II Section 9, which build on efforts already undertaken by these communities.