

8.0 National Flood Insurance Program

Long-term mitigation of potential flood impacts can be best achieved through comprehensive floodplain management regulations and enforcement, particularly at a local level. The National Flood Insurance Program (NFIP) is regulated by FEMA. The goal of this program is to reduce the impact of flooding on private and public structures by providing affordable insurance for property owners. The program encourages local jurisdictions to adopt and enforce floodplain management regulations in order to mitigate the potential effects of flooding on new and existing infrastructure (FEMA, 2015).

Communities that participate in the NFIP adopt floodplain ordinances that require that all insured structures that are damaged over 50-percent of the property's market value must comply with the floodplain ordinance when the structure is repaired/re-built. These repairs could mean changes to the elevation of the structure, acquisition and demolition by the municipality, or relocation to a location outside of the floodplain. Insured structures that are located within floodplains identified on FEMA's Flood Insurance Rate Maps (FIRMs) receive funds if impacted by a flooding disaster. These distributed funds are to be used to mitigate the risk of future flooding by implementing pre-disaster mitigation actions, such as those previously referenced.

The NFIP and other flood mitigation actions are important for the protection of public and private property and public safety. Flood mitigation is valuable to communities because: (1) it creates safer environments by reducing loss of life and decreasing property damage; (2) it allows individuals to minimize post-flood disaster disruptions and to recover quicker (homes built to NFIP standards receive less damage from flood events – when damage does occur, the flood insurance program protects the homeowner's investment); and (3) it lessens the financial impacts on individuals, communities, and other involved parties (FEMA, 2015).

Local NFIP participation is addressed in the respective annexes of each of the participating jurisdictions in this plan. Section 8.2 summarizes NFIP data across the County while Appendix F details an NFIP compliance guidance package that was recently disseminated to all participating local floodplain administrators in Orange County in an effort to improve compliance going forward.

8.1 Orange County Flood Mapping

FEMA's Q3 flood data, which is derived from their FIRMs, were reviewed for Orange County. Flood hazard mapping associated with Orange County was updated and effective as of August 2009. All municipalities within Orange County have been mapped and data is available online at <https://msc.fema.gov/portal>.

There are an estimated 57,795 acres of land in the County that are located within 100-year or 500-year mapped flood zones. A 100-year flood indicates a flood elevation that has a 1-percent chance of being equaled or exceeded each year. Similarly, a 500-year flood indicates a flood elevation that has a 0.2-percent chance of being equaled or exceeded in any given year. According to the NYSDHSES State Mitigation Plan (NYSDHSES, 2014), there are 173 properties in Orange County that have repetitive flood loss; total payments for these properties is

\$11,622,373. The State Plan also indicates that there are 25 properties which have experienced severe repetitive losses; which account for \$3,406,766 in total payments. The 2011 NYSDHSES State Plan includes an estimated value of structures located within 100-year mapped floodplains in Orange County. This estimate includes a median sales price of \$317,600 and an estimate of 5,327 structures in 100-year floodplains, for a total calculated estimated value of \$1,691,855,200. This potential flood loss estimate is based on 100-year floodplain mapping and estimated values of structures. The 2014 NYSDHSES State Mitigation Plan shows there are approximately 3,087 residential properties within the 100-year floodplain and of these properties a total of 2,044 are covered by NFIP policies. The 2011 plan indicates that the calculated estimate value of residential structures in the 100-year floodplain is \$690,000,000.

The land area in Orange County that is mapped within either of these flood zones accounts for, at least portions of, 14,540 tax parcels. A HAZUS study identified 120,132 buildings in the region with an aggregate total replacement value of \$43,504,565. By occupancy, the buildings are largely residential at 74.2%, with commercial (17.1%) and industrial (4.2%) following. The remaining categories (agricultural, religion, government, and education) fall between 0.5-1.6%. The Wallkill and Hudson Rivers influence the majority of the hydrology. Table 8.1a lists the total number of parcels mapped in 100- and 500-year floodplains according to their jurisdiction location.

Jurisdiction	Total Parcels Located in Floodplains (includes entire or partial parcels)
Town of Blooming Grove	519
Town of Chester	792
Village of Chester	228
Town of Cornwall	228
Village of Cornwall-on-Hudson	129
Town of Crawford	189
Town of Deerpark	1154
Village of Florida	145
Town of Goshen	996
Village of Goshen	375
Town of Greenville	191
Village of Greenwood Lake	372
Town of Hamptonburgh	444
Village of Harriman	46
Village of Highland Falls	26
Town of Highlands	145
Village of Maybrook	0
City of Middletown	202
Town of Minisink	195
Town of Monroe	217

Table 8.1a: Total Parcels Mapped in 100- and 500-Year Floodplains by Jurisdiction	
Jurisdiction	Total Parcels Located in Floodplains (includes entire or partial parcels)
Village of Monroe	322
Town of Montgomery	531
Village of Montgomery	105
Town of Mount Hope	103
Town of Newburgh	1065
City of Newburgh	206
Village of Otisville	0
City of Port Jervis	1787
Village South Blooming Grove	122
Town of Tuxedo	173
Village Tuxedo Park	7
Village of Unionville	45
Village of Walden	102
Town of Walkill	540
Town of Warwick	1686
Village of Warwick	211
Village of Washingtonville	408
Town of Wawayanda	327
Town of Woodbury	207
Village of Woodbury	0

8.2 Orange County NFIP Policy and Loss Statistics

National Flood Insurance Program records and claims were analyzed to determine the extent of participation, flood losses, and flood insurance policies within Orange County. All of the jurisdictions within the County are current participants in FEMA's NFIP, except for the Village of Otisville and the Town of Woodbury. NFIP Policy Data and Loss statistics for all participating jurisdictions in Orange County are included on Tables 8.2a and 8.2b. These data are current as of January 31, 2018.

The information included in Table 8.2a documents the number of flood insurance policies, coverage amounts, and premium amounts for all jurisdictions within Orange County on January 31, 2018. The Village of Otisville and the Town of Woodbury have no data because they currently do not participate in the NFIP. The Town of Newburgh has the highest number of policies in-force, while the City of Port Jarvis has and the greatest insurance amounts in-force.

The flood loss data included in Table 8.2b documents the number of losses and payment amounts associated with flood losses from January 1, 1978 to February 28, 2017. NFIP Loss Statistics indicate that the Village of Washingtonville has experienced the highest incidence of loss from flood events (240); the Village of Washingtonville has also sustained the most total damage

(\$4,507,977.51). The Town of Deerpark also has a large amount of total loss (182) and a high total payments value (\$3,747,900.82). The Town of Greenville has not reported any loss claims since this information started to be collected in 1978.

Table 8.2a: NFIP Policy Statistics, Snapshot as of January 31, 2018 (FEMA, Policy Information, 2018)			
Jurisdiction	Policies In-Force	Insurance In-Force (whole \$)	Written Premium In-Force
BLOOMING GROVE, TOWN OF	67	\$14,741,400	82,734
CHESTER, TOWN OF	72	\$20,298,400	70,271
CHESTER, VILLAGE OF	22	\$7,670,700	29,813
CORNWALL ON THE HUDSON, VILLAGE	16	\$4,438,000	17,234
CORNWALL, TOWN OF	43	\$10,041,600	24,807
CRAWFORD, TOWN OF	13	\$3,485,700	14,036
DEERPARK, TOWN OF	116	\$24,582,600	138,291
FLORIDA, VILLAGE OF	15	\$4,801,400	31,258
GOSHEN, TOWN OF	36	\$8,177,100	48,956
GOSHEN, VILLAGE OF	44	\$12,165,600	72,802
GREENVILLE, TOWN OF	9	\$2,690,000	6,235
GREENWOOD LAKE, VILLAGE OF	51	\$12,409,600	74,604
HAMPTONBURGH, TOWN OF	30	\$7,218,600	35,657
HARRIMAN, VILLAGE OF	5	\$2,100,000	7,182
HIGHLAND FALLS, VILLAGE OF	6	\$1,304,400	2,513
HIGHLANDS, TOWN OF	2	\$378,000	545
KIRYAS JOEL, VILLAGE OF	135	\$33,726,300	31,362
MAYBROOK, VILLAGE OF	1	\$350,000	373
MIDDLETOWN, CITY OF	107	\$31,684,000	158,332
MINISINK, TOWN OF	8	\$1,837,000	3,082
MONROE, TOWN OF	26	\$6,653,600	21,232
MONROE, VILLAGE OF	75	\$21,501,900	116,673
MONTGOMERY, TOWN OF	20	\$5,589,000	22,707
MONTGOMERY, VILLAGE OF	7	\$2,004,600	2,807
MOUNT HOPE, TOWN OF	5	\$1,568,000	4,479
NEW WINDSOR, TOWN OF	55	\$16,342,000	44,587
NEWBURGH, CITY OF	34	\$11,729,800	58,894
NEWBURGH, TOWN OF	167	\$33,540,700	117,718
PORT JERVIS, CITY OF	142	\$36,605,800	146,785
SOUTH BLOOMING GROVE, VILLAGE OF	90	\$10,374,000	46,895
TUXEDO PARK, VILLAGE OF	3	\$560,000	959

Table 8.2a: NFIP Policy Statistics, Snapshot as of January 31, 2018 (FEMA, Policy Information, 2018)			
Jurisdiction	Policies In-Force	Insurance In-Force (whole \$)	Written Premium In-Force
TUXEDO, TOWN OF	24	\$6,948,700	43,762
UNIONVILLE, VILLAGE OF	4	\$935,500	2,678
WALDEN, VILLAGE OF	16	\$4,316,000	8,395
WALLKILL, TOWN OF	50	\$14,439,400	55,070
WARWICK, TOWN OF	67	\$16,471,500	84,537
WARWICK, VILLAGE OF	62	\$16,558,500	107,683
WASHINGTONVILLE, VILLAGE OF	88	\$21,735,900	146,512
WAWAYANDA, TOWN OF	24	\$6,287,100	14,681
WOODBURY, VILLAGE OF	61	\$16,456,700	45,509
Orange County Totals	1,818	\$454,719,100	1,942,650

Policies in-force = NFIP policies as of November 30, 2015

Insurance in-force = coverage amount for policies in-force

Written premium in-force = premium paid for policies in-force

Table 8.2b: NFIP Loss Statistics, as of January 31, 2018 for Losses Incurred Since January 1, 1978 (FEMA, Claim Information, 2018)					
Jurisdiction	Total Losses	Closed Losses	Open Losses	CWOP Losses	Total Payments
BLOOMING GROVE, TOWN OF	156	123	0	33	\$1,991,054.25
CHESTER, TOWN OF	59	50	0	9	\$821,712.51
CHESTER, VILLAGE OF	15	12	0	3	\$108,089.68
CORNWALL-ON-HUDSON, VILLAGE OF	13	11	0	2	\$47,372.33
CORNWALL, TOWN OF	26	18	0	8	\$477,493.33
CRAWFORD, TOWN OF	9	8	0	1	\$278,640.29
DEERPARK, TOWN OF	183	159	0	24	\$3,747,900.82
FLORIDA, VILLAGE OF	16	15	0	1	\$538,443.51
GOSHEN, TOWN OF	55	39	0	16	\$552,803.23
GOSHEN, VILLAGE OF	50	33	0	17	\$795,345.25
GREENVILLE, TOWN OF	2	0	0	2	\$ -
GREENWOOD LAKE, VILLAGE OF	94	55	0	39	\$433,645.99
HAMPTONBURGH, TOWN OF	41	35	0	6	\$584,890.70
HARRIMAN, VILLAGE OF	3	2	0	1	\$49,642.88
HIGHLAND FALLS, VILLAGE OF	3	3	0	0	\$31,632.21
HIGHLANDS, TOWN OF	2	1	0	1	\$270.05
KIRYAS JOEL, VILLAGE OF	1	1	0	0	\$1,465.51

Table 8.2b: NFIP Loss Statistics, as of January 31, 2018 for Losses Incurred Since January 1, 1978 (FEMA, Claim Information, 2018)					
Jurisdiction	Total Losses	Closed Losses	Open Losses	CWOP Losses	Total Payments
MIDDLETOWN, CITY OF	83	59	0	24	\$548,244.47
MINISINK, TOWN OF	8	6	0	2	\$27,623.82
MONROE, TOWN OF	88	56	0	32	\$469,792.05
MONROE, VILLAGE OF	106	78	0	28	\$1,131,591.91
MONTGOMERY, TOWN OF	7	5	0	2	\$42,733.21
MONTGOMERY, VILLAGE OF	15	13	0	2	\$425,768.95
MOUNT HOPE, TOWN OF	7	6	0	1	\$35,197.24
NEW WINDSOR, TOWN OF	41	30	0	11	\$471,251.25
NEWBURGH, CITY OF	35	26	0	9	\$514,835.69
NEWBURGH, TOWN OF	61	38	0	23	\$295,007.90
PORT JERVIS, CITY OF	127	110	0	17	\$1,388,429.86
SOUTH BLOOMING GROVE, VILLAGE	10	3	0	7	\$31,483.91
TUXEDO PARK, VILLAGE OF	1	1	0	0	\$3,479.46
TUXEDO, TOWN OF	33	29	0	4	\$1,309,901.02
UNIONVILLE, VILLAGE OF	6	5	0	1	\$93,574.73
WALDEN, VILLAGE OF	7	4	0	3	\$54,021.52
WALLKILL, TOWN OF	46	43	0	3	\$464,735.33
WARWICK, TOWN OF	57	39	0	18	\$292,723.72
WARWICK, VILLAGE OF	50	30	0	20	\$377,606.36
WASHINGTONVILLE, VILLAGE OF	240	218	0	22	\$4,507,977.51
WAWAYANDA, TOWN OF	11	10	0	1	\$114,248.71
WOODBURY, VILLAGE OF	59	45	0	14	\$581,830.21
Orange County Totals	1,826	1,419	0	407	\$23,642,461

Total losses = all losses submitted regardless of status, total claims

Closed losses = losses that have been paid

Open losses = losses that have not been paid in full

CWOP losses = losses closed without payment

Total payments = total amount paid on losses

Table 8.2c: NFIP Repetitive Loss and Severe Repetitive Loss Properties, as of February 28, 2017, for Losses Incurred Since January 1, 1978 (FEMA, NFIP Legacy Systems Services (LSS), 2017)			
Jurisdiction	Number of Qualifying Properties	Number Identified as Severe Repetitive Loss	Type of Structure(s) (SRL Properties)
Town of Blooming Grove	2	2	Residential
Town of Chester	7	4	Residential
Town of Deerpark	8	4	Residential
Town of Goshen	4	0	N/A
Village of Goshen	3	0	N/A
Village of Greenwood Lake	2	0	N/A
Town of Hamptonburgh	1	1	Residential
City of Middletown	13	0	N/A
Town of Monroe	2	2	Residential
Village of Monroe	11	1	Residential
Town of Montgomery	1	0	N/A
Village of Montgomery	1	1	Residential
City of Newburgh	2	0	N/A
City of Port Jervis	22	1	Residential
Town of Tuxedo	1	0	N/A
Village of Tuxedo Park	6	3	2-Residential, 1-Commercial
Village of Unionville	1	0	N/A
Town of Warwick	1	0	N/A
Village of Warwick	5	0	N/A
Village of Washingtonville	43	3	Residential
Village of Woodbury	1	0	N/A
Orange County Totals	138	23	22-Residential, 1-Commercial

Table 8.2c – NFIP Repetitive Loss and Severe Repetitive Loss Properties above illustrates the breakdown of qualifying properties across the County as of February 28, 2017, the most recent date of correspondence from FEMA Region 1. A significant number of qualifying repetitive loss properties lie in the City of Middletown, Village of Monroe, City of Port Jervis, and Village of Washingtonville where municipal boards should consider the acquisition of such properties as a potential mitigation action.

Local floodplain administrators from each of the participating jurisdictions were provided NFIP best practices incorporation guidance document and will be using it to improve local participation in NFIP standards going forward. This guidance package and correspondence are attached as Appendix F - NFIP Floodplain Administrator Guidance Package.

8.3 NFIP Mitigation Actions

As part of the Orange County Hazard Mitigation Plan Update, each participating jurisdiction was required to evaluate a specific set of mitigation actions aimed at continued compliance and participation with FEMA's NFIP. These mitigation actions are proposed in addition to the mitigation actions already included in this plan. The mitigation actions, incorporated by FEMA in their 2008 guidance and included to reduce the impacts of future flood hazard events, consist of the following:

- Revisions to floodplain management ordinances in order to comply with FEMA's latest regulations and remain consistent with the FIRMs;
- The designation of a Floodplain Administrator in each participating jurisdiction;
- Ensuring that staff members have appropriate training to adequately enforce NFIP regulations and ordinances;
- Requiring staff involved in floodplain management and/or regulations to become Certified Floodplain Managers (CFMs);
- Joining the Community Rating System (CRS).

These NFIP-specific mitigation actions are further detailed in the mitigation action strategies included in the Proposed Hazard Mitigation Initiatives tables for each participating jurisdiction, located in Section 10.

There are no communities in Orange County which are participants in the CRS. The Community Rating System is a voluntary incentive program that recognizes and encourages floodplain management activities at the community level. As a result of CRS participation, flood insurance premium rates are discounted to reflect the reduced flood risk that results from community actions to meet the three goals of the CRS: reduce flood loss, facilitate accurate insurance ratings, and promote flood insurance awareness (FEMA, 2016).