



APPENDIX E

HAZARD ANALYSIS RESULTS

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Summary

Nearly ninety percent of federal disaster declarations are for flood events. For this reason, our potential loss estimate and hazard analysis focuses on flooding impacts within the 100 year flood plain as recognized by the most current FEMA DFIRM data. The predictability of flooding allows us to accurately portray the impact from a monetary standpoint more so than for rockslides, landslides, straight line winds/tornadic activity, blizzard conditions and dam failure all of which have the ability to cripple communities throughout the county. Inevitably, flooding along both branches of the Susquehanna River and many of the larger tributaries draining into the Susquehanna watershed makes this our largest concern.

The Department of Geographic Information Systems of the County of Northumberland conducted an analysis of the structures impacted by the 1% annual chance flood hazard (100-year flood hazard). Utilizing the 1% annual chance special flood hazard areas (FEMA), tax parcels (Northumberland County GIS), and building centroids (Northumberland County GIS) – the Department identified those at risk structures impacted by a flood hazard. Using those at risk structures, were able to determine the associated structures' valuation data maintained by the county Assessment Office.

Northumberland County's assessed values are used for ad valorem taxation purposes only. They are a market value derived from our base year cost tables; Northumberland County currently has a base year of 1972. Current assessed values cannot be communicated as true market value because of the difference between base year and current or actual year. The State provides each assessment office with a common level ratio to apply to assessed values in order to equate them to a more realistic, market based value. If assessments are used to represent loss without applying the common level ratio, totals would be considerably skewed away from values that would represent true loss. The common level ratio for 2016-2017 for Northumberland County is 25.6%; the ratio is used to explain that after all valid sales in our county are reviewed and compared against the assessment for the corresponding parcel, the average assessment represents 25.6% of what a property could possibly sell for on an open market.

Using the following formula, (building assessed value divided by .256), the structures valuation was converted from 1972 market value to 2016-2017 market value. To simulate the estimated loss for a 1% annual flood event, 25% was applied to each structures 2017 market valuation. The map below shows all parcels that intersect the SFHA and their corresponding values.

The estimated loss for a 1% annual chance flood hazard was summarized by municipality and classified by structure land use (Northumberland County GIS , 2017).

Parcels Affected in the 100 Year SFHA in Northumberland County by Municipality

	PARCELS IN SFHA WITH ADDRESSED STRUCTURE	2016-2017 FAIR MARKET BUILDING VALUE OF STRUCTURES IN SFHA	ESTIMATED LOSS (25%)
COAL Township	77	\$3,242,148	\$810,537.00
DELAWARE Township	139	\$9,569,029	\$2,392,257.25
EAST CAMERON Township	1	\$28,867	\$7,216.75
EAST CHILLISQUAQUE Township	9	\$426,093	\$106,523.25
HERNDON Borough	25	\$969,609	\$242,402.25
JACKSON Township	25	\$1,425,820	\$356,455.00
JORDAN Township	8	\$1,134,259	\$283,564.75
KULPMONT Borough	2	\$85,898	\$21,474.50
LEWIS Township	8	\$534,688	\$133,672.00
LITTLE MAHANOEY Township	15	\$606,837	\$151,709.25
LOWER AUGUSTA Township	8	\$487,462	\$121,865.50
LOWER MAHANOEY Township	24	\$1,103,045	\$275,761.25
MARION HEIGHTS Borough	0	\$0.00	\$0.00
MCEWENSVILLE Borough	1	\$29,297	\$7,324.25
MILTON Borough	573	\$52,159,218	\$13,039,804.50
MOUNT CARMEL Borough	192	\$3,831,020	\$957,755.00
MOUNT CARMEL Township	4	\$172,109	\$43,027.25
NORTHUMBERLAND Borough	11	\$2,307,226	\$576,806.50
POINT Township	64	\$3,175,356	\$793,839.00
RALHO Township	47	\$4,928,908	\$1,232,227.00
RIVERSIDE Borough	12	\$869,396	\$217,349.00
ROCKEFELLER Township	24	\$1,566,719	\$391,679.75
RUSH Township	12	\$634,729	\$158,682.25
SHAMOKIN City	173	\$3,441,915	\$860,478.75
SHAMOKIN Township	16	\$4,291,760	\$1,072,940.00
SNYDERTOWN Borough	9	\$359,336	\$89,834.00
SUNBURY City	29	\$11,434,180	\$2,858,545.00
TURBOT Township	30	\$1,515,510	\$378,877.50
TURBOTVILLE Borough	0	\$0.00	\$0.00
UPPER AUGUSTA Township	42	\$2,758,318	\$689,579.50
UPPER MAHANOEY Township	38	\$728,907	\$182,226.75
WASHINGTON Township	10	\$478,476	\$119,619.00
WATSONTOWN Borough	74	\$6,596,528	\$1,649,132.00
WEST CAMERON Township	3	\$78,282	\$19,570.50
WEST CHILLISQUAQUE Township	358	\$12,955,776	\$3,238,944.00
ZERBE Township	18	\$636,250	\$159,062.50
TOTAL	2,081	\$134,562,971	\$33,640,742.75

Northumberland County Parcels with Building Assessed Values in SFHA by generalized Land Use type

LandUse Code	LandUse Description	COUNT
A	AGRICULTURE	75
C	COMMERCIAL	236
E	EXEMPT	74
G	GARAGE	8
I	INDUSTRIAL	24
P	PUBLIC UTILITY	7
Q	BUILDING	10
R	RESIDENTIAL	1408
M	MOBILE HOME	191
V	VACANT	47
Y	CABIN	1

Northumberland County Parcels with Building Assessed Values in SFHA by detailed Land Use type

LandUse Code	LandUse Description	COUNT
0	EXEMPT	163
1000	RES. - 3 OR LESS LIVING UNITS	1429
1100	TRL, MH, MOD/NO BSMT, DOUBLEWIDES	60
1500	SEASONAL HOUSING	1
2000	LOTS (LESS THAN 10 ACRES)	83
2500	INDUSTRIAL VACANT	3
3000	INDUSTRIAL WITH BUILDING	19
3500	COMMERCIAL VACANT	13
4000	COMMERCIAL W/BLDG ASSD OVR \$20,000	135
4500	COMMERCIAL W/BUILDING	82
5000	AGRICULTURAL (10+ ACRES & BUILDING)	70
5500	AGRICULTURAL VACANT (10+ AC)	6
9000	MISCELLANEOUS	13
9800	LAND (MORE THAN 10 AC)	4

