

Annex L Town of Wendell

L.1 PLANNING PROCESS

The table below lists the HMPC members who represented the Town of Wendell.

Table L.1 – HMPC Members

Agency	Representative	Position or Title
Planning Department	David Bergmark	Planning Director
Planning Department	Mackenzie Day	Planner
N/A	Jon Olson	Citizen Stakeholder

L.2 COMMUNITY PROFILE

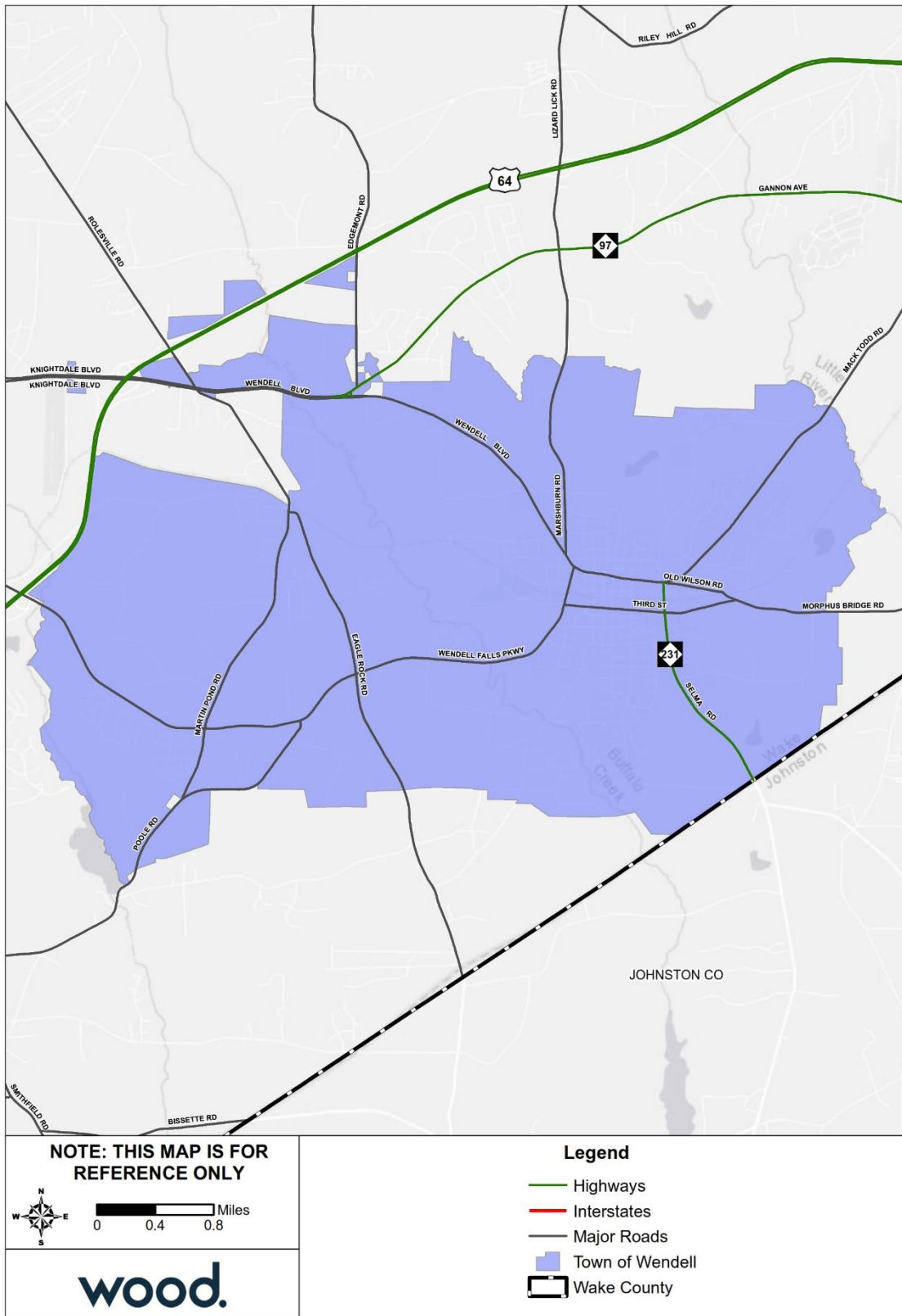
Geography

The Town of Wendell is located in eastern Wake County. It is neighbored by Knightdale to the west, Zebulon to the northeast, and Johnston County to the southeast. The Town is part of the Raleigh, NC Metropolitan Statistical Area, which falls within the larger Raleigh-Durham-Chapel Hill, NC Combined Statistical Area. Wendell comprises a total land area of 5.2 square miles.

According to data from the U.S. Fish and Wildlife Service’s National Wetlands Inventory, there are approximately 1,549 acres of wetlands in Wendell.

Figure L.1 shows a base map of major transportation routes in the Town of Wendell.

Figure L.1 – Major Transportation Routes – Town of Wendell



Source: Wake County GIS Open Data

Population and Demographics

Table L.2 provides population counts and growth estimates for the Town of Wendell as compared to the County overall. Table L.3 provides demographic information for Wendell as compared to the whole County.

Table L.2 – Population Counts, Wendell, 2010-2017

Jurisdiction	2000 Census Population	2010 Census Population	2017 ACS Population Estimate	Total Change 2010-2017	% Change 2010-2017
Wake County total	627,846	900,993	1,023,811	122,818	13.6%
Town of Wendell	4,247	5,845	6,516	671	11.5%

Source: US Census Bureau Decennial Census 2000, Decennial Census 2010; American Community Survey 2013-2017 5-Year Estimates

Table L.3 – Racial Demographics, Wendell, 2017

Jurisdiction	White, %	Black, %	Asian, %	Other Race, %	Two or More Races, %	Persons of Hispanic or Latino Origin*, %
Wake County total	66.5%	20.4%	6.5%	3.6%	2.7%	10.0%
Town of Wendell	67.8%	19.4%	1.0%	3.6%	4.3%	12.9%

Source: US Census Bureau, American Community Survey 2013-2017 5-Year Estimates

*Persons of Hispanic origin may be of any race, so also are included in applicable race categories

Asset Inventory

The following tables summarize the asset inventory for Wendell in order to estimate the total physical exposure to hazards in this area. The locations of critical facilities are shown in Figure L.2 on the following page. Critical facilities are a subset of identified assets from the Critical Infrastructure & Key Resources dataset. Note that the counts are by building; where a critical facility comprises a cluster of buildings, each building is counted and displayed.

Table L.4 – Critical Infrastructure & Key Resources by Type

Jurisdiction	Food & Agriculture	Banking & Finance	Chemical	Commercial Facilities	Communications	Manufacturing	Defense	Government	Healthcare	IT	National Monuments	Nuclear	Postal & Shipping	Transportation	Energy	Emergency Services	Water	Other	Total
Town of Wendell	72	4	0	132	0	75	0	37	6	0	0	0	0	22	0	2	0	0	350

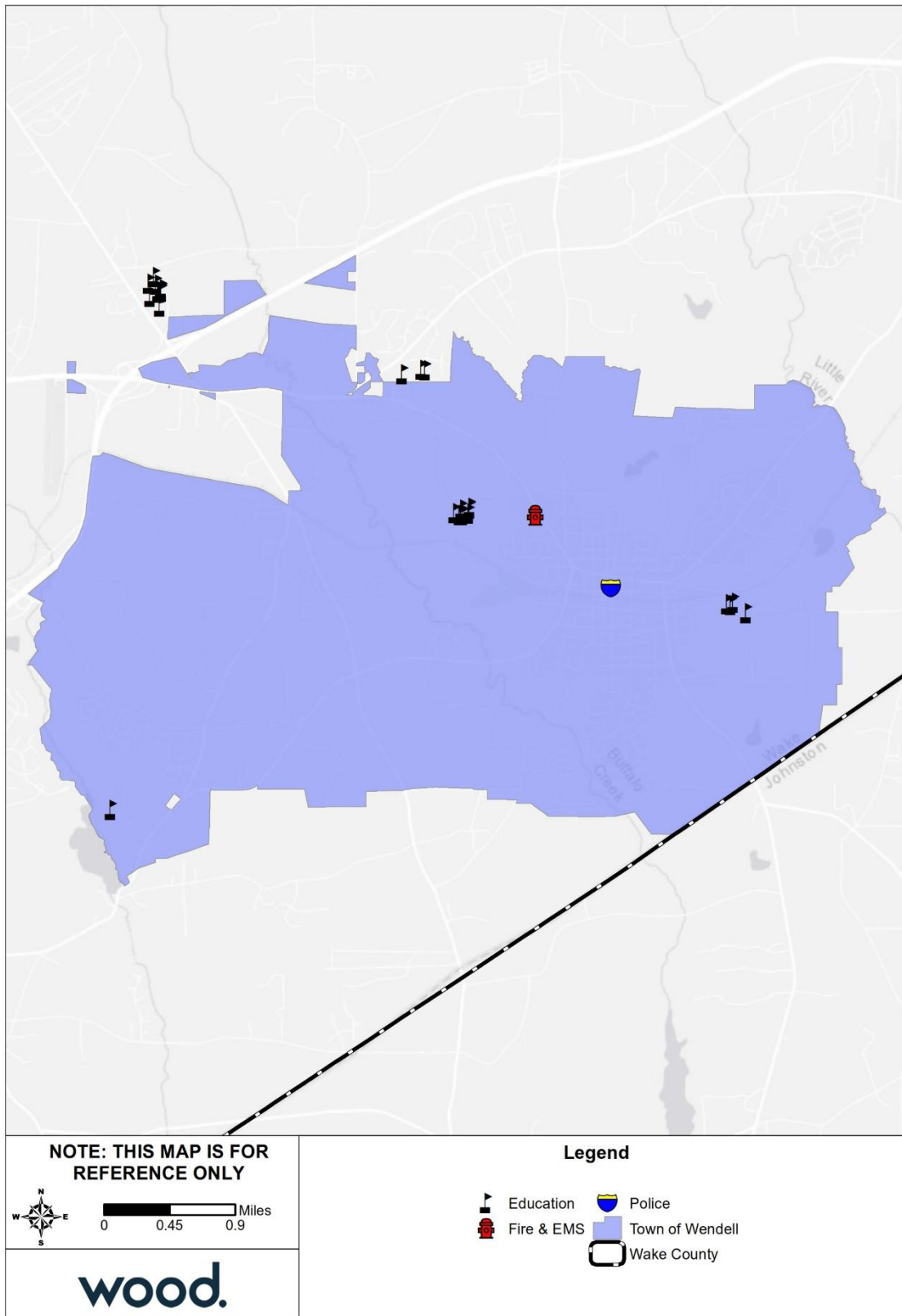
Source: NCEM Risk Management Tool

Table L.5 – High Potential Loss Facilities by Use

Jurisdiction	Residential	Commercial	Industrial	Government	Agricultural	Religious	Utilities	Other	Total
Town of Wendell	2	13	3	6	0	10	0	0	34

Source: NCEM Risk Management Tool

Figure L.2 – Critical Facilities, Town of Wendell



Source: NCEM IRISK Database, GIS Analysis

ANNEX L: TOWN OF WENDELL

To supplement the asset inventory and provide a clearer picture of the current asset exposure in the Town of Wendell, current parcel data was evaluated to identify development since 2010. This information is not incorporated into the risk assessment, which was prepared using NCEM's IRISK database. However, this summary of development since 2010 provides some context to understand the degree to which the IRISK exposure and vulnerability numbers differ from current conditions.

Table L.6 provides a summary by land class of parcel development from January 2011 to April 2019.

Table L.6 – Parcels Developed 2011 or Later, Town of Wendell

Land Class	Number of Parcels	Sum of Building Value
Acres Greater Than 10 With House	2	\$664,790
Agriculture	2	\$181,123
Commercial	4	\$5,349,812
EXEMPT	3	\$1,864,053
HOA	1	-
Industrial	1	\$923,086
Part Exempt	2	\$632,131
Residential Less Than 10 Acres	729	\$144,524,273
Grand Total	744	\$154,139,268

Source: Wake County Open Data; retrieved April 8, 2019

There are six listings on the National Register of Historic Places for the Town of Fuquay-Varina, including two historic districts. These sites are listed in the table below.

Table L.7 – Historic Properties

Ref#	Property Name	Status Date	Category	City
98000947	Wendell Commercial Historic District	7/31/1998	District	Wendell
01000415	Riley Hill School	4/25/2001	Building	Wendell
01001113	Sunnyside	10/15/2001	Building	Wendell
03000928	Avera, Dr. Thomas H., House	9/11/2003	Building	Wendell
07001504	Harmony Plantation	1/29/2008	Building	Wendell
09000382	Wendell Boulevard Historic District	6/3/2009	District	Wendell

Source: National Parks Service, National Register of Historic Places, October 2018

Housing

The table below details key housing statistics for Wendell as compared to the County overall.

Table L.8 – Housing Statistics, Wendell, 2010-2017

Jurisdiction	Housing Units (2010)	Housing Units (2017)	Housing Units Percent Change (2010-2017)	Owner-Occupied, % (2017)	Vacant Units, % (2017)	Median Home Value (2017)
Wake County total	371,836	411,632	10.7%	59.5%	7.2%	\$250,700
Town of Wendell	2,430	2,691	10.7%	64.8%	8.8%	\$145,900

Source: U.S. Census Bureau 2010 Decennial Census, American Community Survey 2013-2017 5-Year Estimates

Note: Owner-Occupied and vacant-unit measures are reported as a percent of the total number of housing units.

Economy

The following tables present key economic statistics for Wendell as compared to the County overall.

Wake County

Multi-Jurisdictional Hazard Mitigation Plan
2019

Table L.9 – Employment Statistics, Wendell, 2017

Jurisdiction	Population in Labor Force	Percent Employed* (%)	Percent Unemployed* (%)	Percent Not in Labor Force* (%)	Unemployment Rate (%)
Wake County	564,096	67.2	3.5	29.2	4.9
Town of Wendell	2,939	60.5	1.7	37.9	2.7

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-Year Estimates

Note: This table reports only the civilian labor force. The labor force in armed services accounted for 0.3% or less of the population 16 and over in all jurisdictions. *Population employed, population unemployed, and Population not in labor force are reported as a percent of the total population aged 16 years and older.

Table L.10 – Percent of Employed Population by Occupation, Wendell, 2017

Occupation	Management, business, science and arts (%)	Service (%)	Sales and Office (%)	Natural Resources, Construction, and Maintenance (%)	Production, transportation, and material moving (%)
Wake County	50.1	13.8	23.4	6.0	6.7
Town of Wendell	39.5	10.7	35.0	4.6	10.3

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-Year Estimates

L.3 RISK ASSESSMENT

This section contains a hazard profile and vulnerability assessment for those hazards that were rated with a higher priority for the Town of Wendell than for Wake County as a whole. Risk and vulnerability findings are also presented here for those hazards that are spatially defined and have variations in risk that could be evaluated quantitatively on a jurisdictional level. The hazards included in this section are: Flood and Wildfire.

L.3.1 Flood

Table L.11 details the acreage of the Town of Wendell by flood zone on the effective DFIRM. Per this assessment, over 8 percent of the Town of Wendell falls within the mapped 1%-annual-chance floodplains.

Table L.11 – Flood Zone Acreage in the Town of Wendell

Flood Zone	Acreage	Percent of Total (%)
Zone A	19.15	0.20
Zone AE	814.47	8.39
Zone X (500-year)	102.78	1.06
Zone X Unshaded	8,774.84	90.36
Total	9,711.24	--

Source: FEMA Effective DFIRM; Wake County GIS

Figure L.3 reflects the effective mapped flood hazard zones for the Town of Wendell, and Figure L.4 displays the depth of flooding estimated to occur in these areas during the 1%-annual-chance flood.

To supplement the IRISK assessment of property at risk from the 1% annual chance flood event in Section 4 and provide a clearer picture of the current property at risk in Town of Wendell, current parcel data was evaluated to identify parcels developed since 2010. Using GIS analysis, parcels developed after 2010 were compared to the boundaries of the 1% annual chance floodplain to identify the exposure of newly developed property to the base flood. In most cases, a parcel was considered exposed to the floodplain if any portion of the parcel was located in the floodplain.

This assessment does not evaluate flood impacts or provide damage estimates. However, this summary of development in or near the floodplain since 2010 provides some context to understand the degree to which the IRISK exposure and vulnerability numbers differ from current conditions.

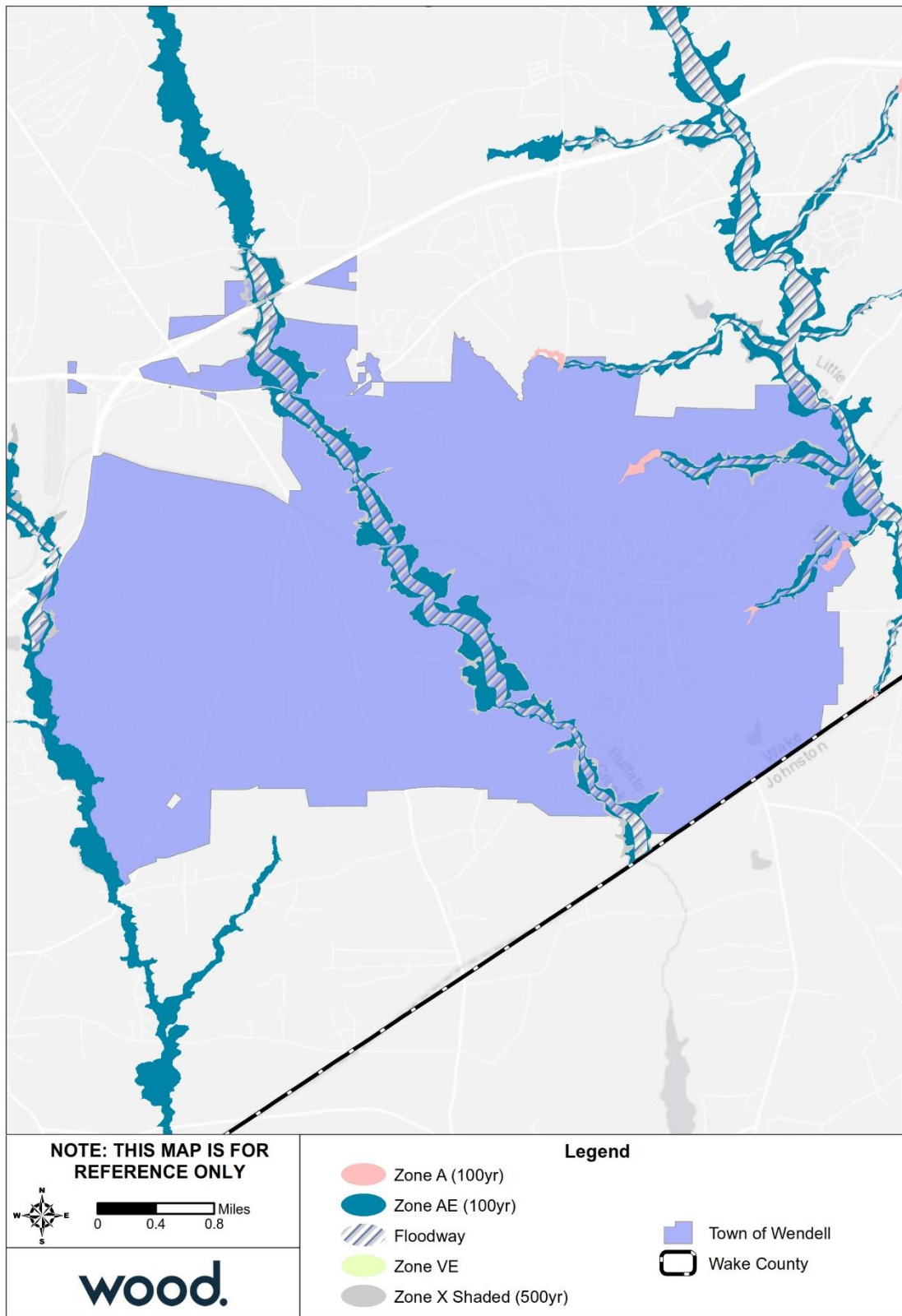
Table L.12 provides a summary by land class of parcel development located in the 1% annual chance floodplain from January 2011 to April 2019.

Table L.12 – Parcels Developed 2011 or Later and Located in 100-Year Floodplain, Town of Wendell

Land Class	Number of Parcels	Sum of Building Value
Acres Greater Than 10 With House	1	\$229,734
Residential Less Than 10 Acres	22	\$3,718,097
Grand Total	23	\$3,947,831

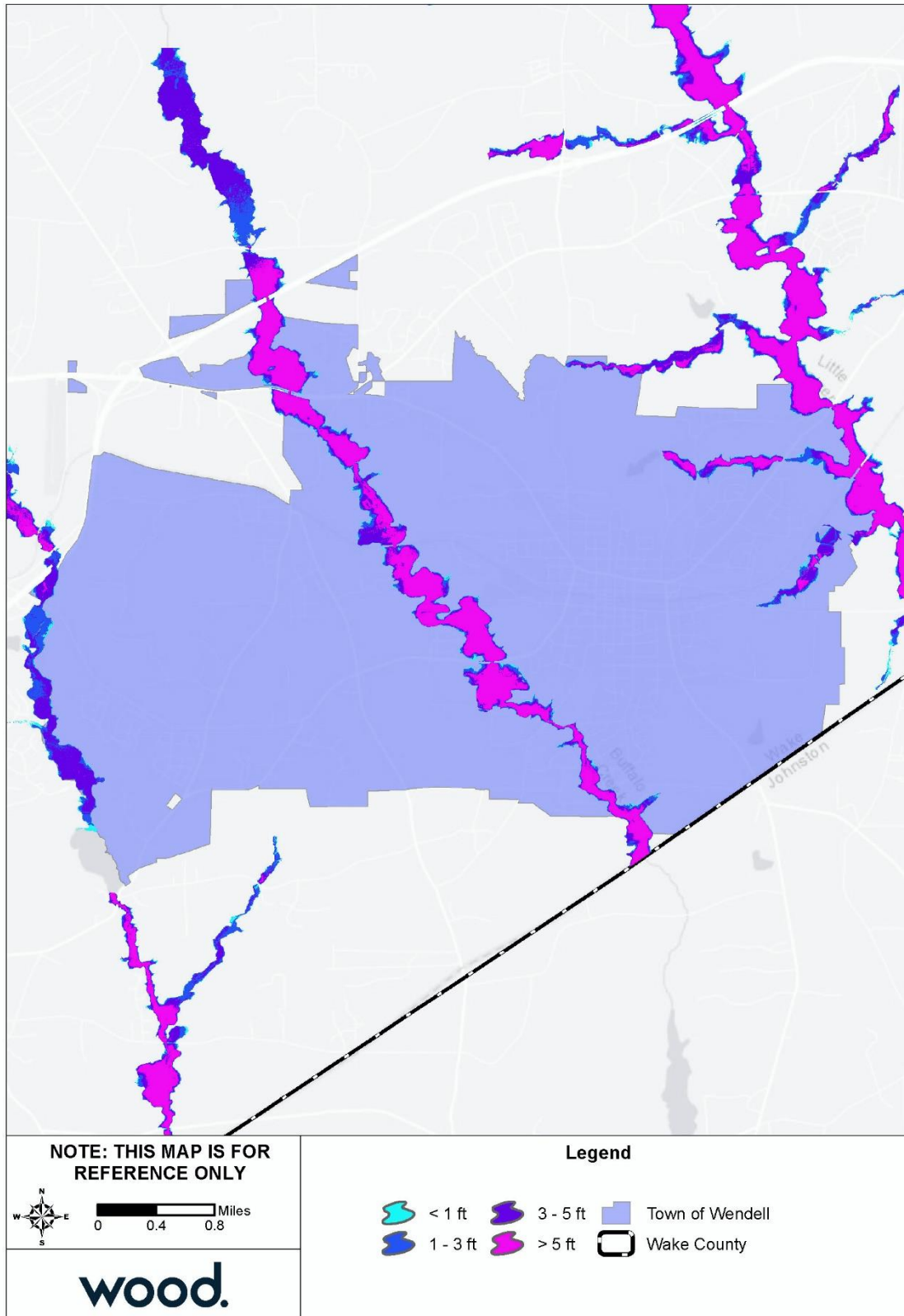
Source: Wake County Open Data; retrieved April 8, 2019; FEMA Effective DFIRM

Figure L.3 – FEMA Flood Hazard Areas, Town of Wendell



Source: FEMA Effective DFIRM

Figure L.4 – Flood Depth, 1%-Annual-Chance Floodplain, Town of Wendell



Source: FEMA Effective DFIRM

L.3.2 Wildfire

Table L.13 summarizes the acreage in the Town of Wendell that falls within the Wildland Urban Interface (WUI), categorized by housing density. Areas in the WUI are those where development may intermix with flammable vegetation. Over 20 percent of the Town of Wendell is not included in the WUI.

Table L.13 – Wildland Urban Interface Acreage, Town of Wendell

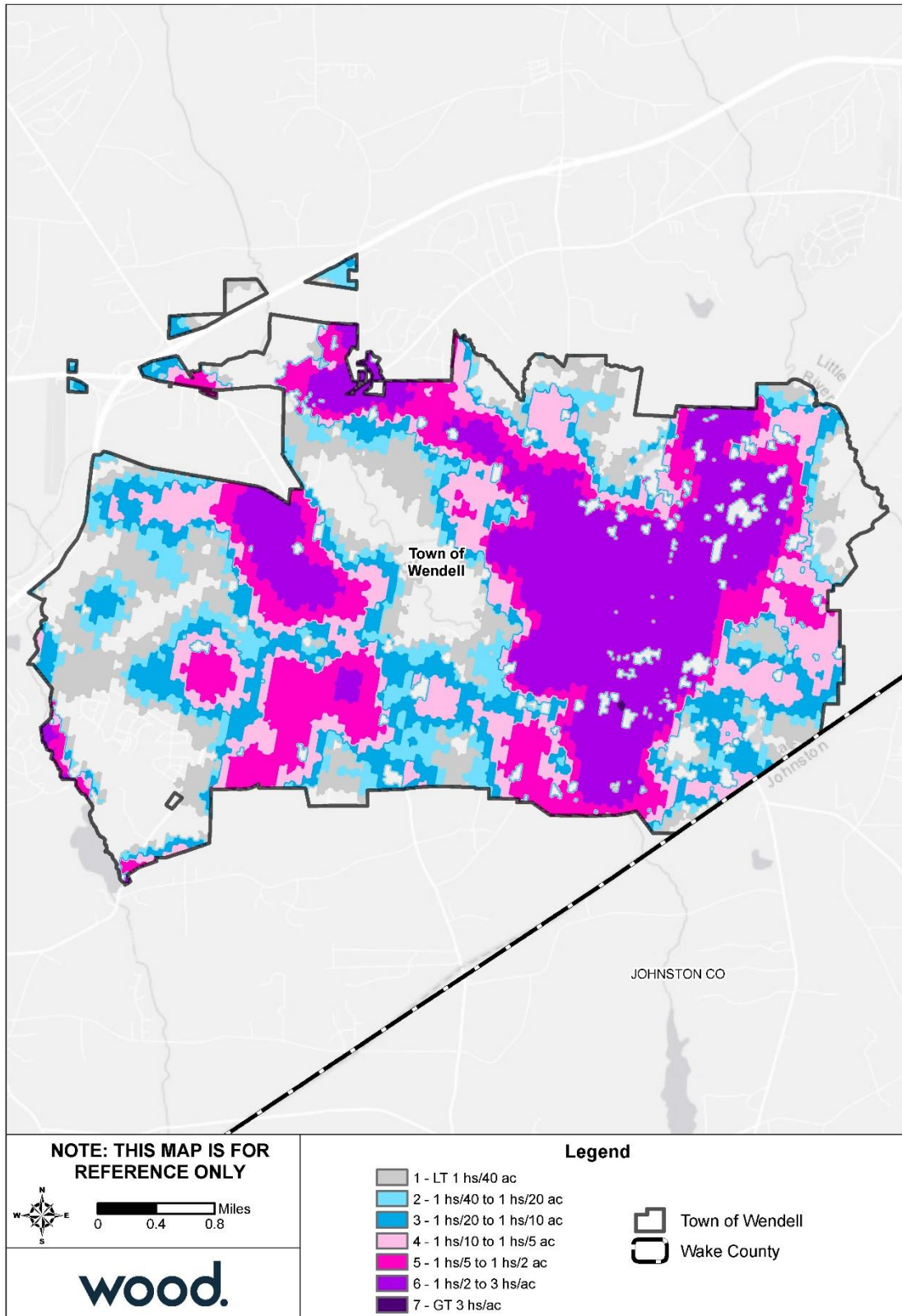
	Housing Density	Total Acreage	Percent of Total Acreage
	<i>Not in WUI</i>	1,973.0	20.3%
	LT 1hs/40ac	1,130.3	11.6%
	1hs/40ac to 1hs/20ac	774.1	8.0%
	1hs/20ac to 1hs/10ac	1,124.0	11.6%
	1hs/10ac to 1hs/5ac	1,265.8	13.0%
	1hs/5ac to 1hs/2ac	1,366.6	14.1%
	1hs/2ac to 3hs/1ac	2,070.3	21.3%
	GT 3hs/1ac	1.7	0.0%
	Total	115,066.8	

Source: Southern Wildfire Risk Assessment

Figure L.5 depicts the WUI for the Town of Wendell. The WUI is the area where housing development is built near or among areas of vegetation that may be prone to wildfire. Figure L.6 depicts the Fire Intensity Scale, which indicates the potential severity of fire based on fuel loads, topography, and other factors. Figure L.7 depicts Burn Probability based on landscape conditions, percentile weather, historical ignition patterns, and historical prevention and suppression efforts.

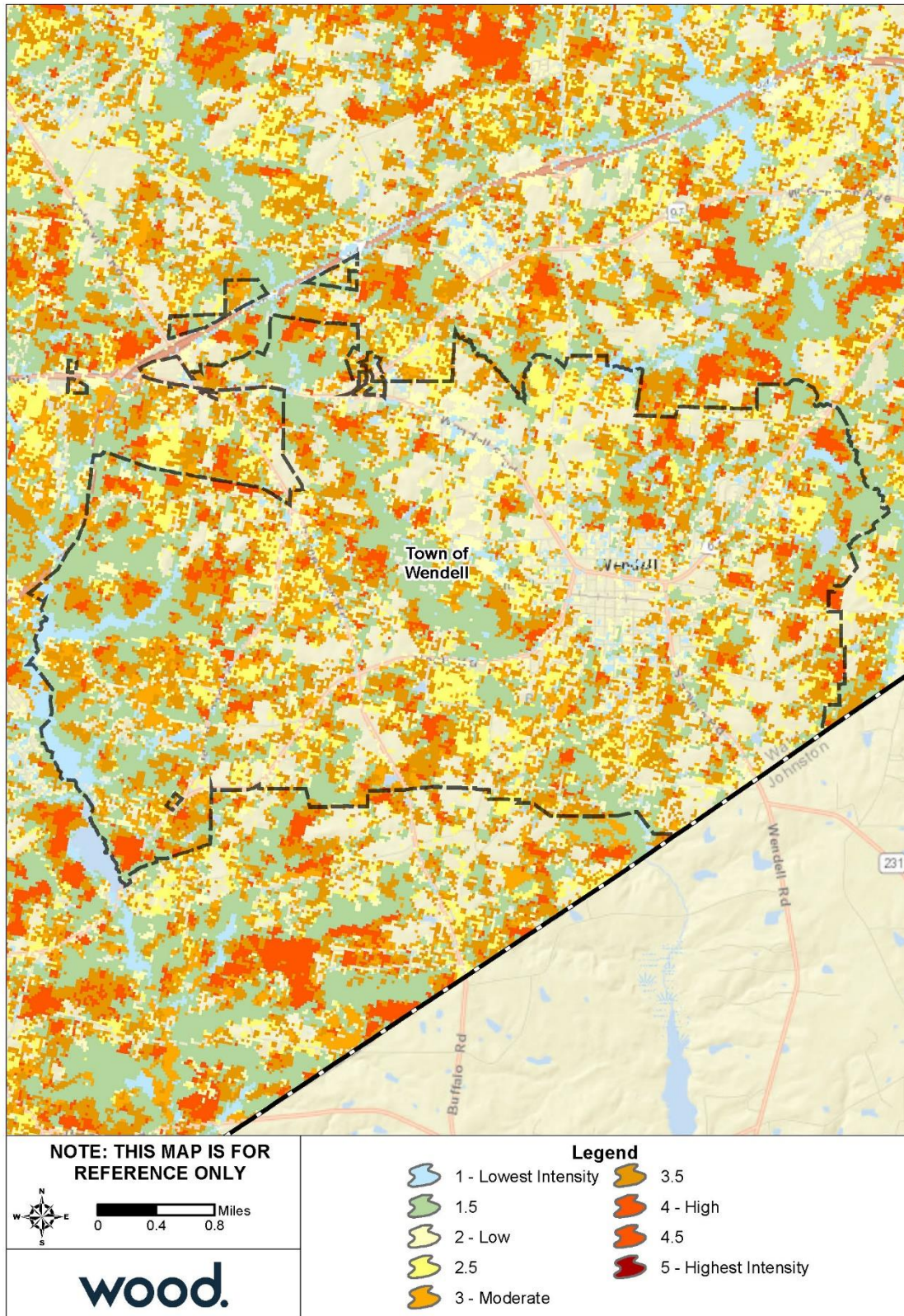
There are pockets of higher potential fire intensity throughout the Town of Wendell, none of which are too large. While some of these areas do fall within the WUI, the entirety of the Town has a relatively low burn probability.

Figure L.5 – Wildland Urban Interface, Town of Wendell



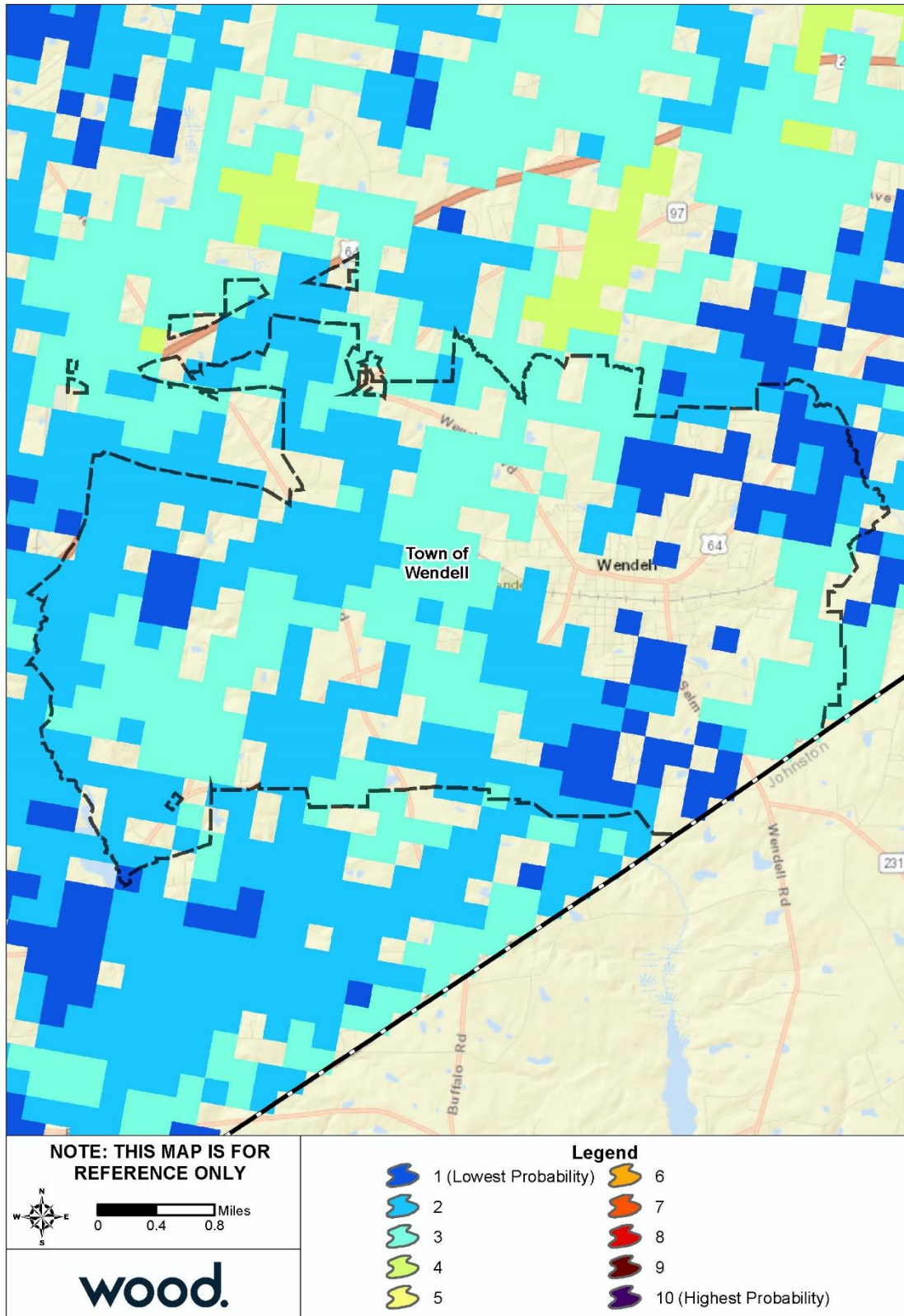
Source: Southern Wildfire Risk Assessment

Figure L.6 – Fire Intensity Scale, Town of Wendell



Source: Southern Wildfire Risk Assessment

Figure L.7 – Burn Probability, Town of Wendell



Source: Southern Wildfire Risk Assessment

L.4 CAPABILITY ASSESSMENT

L.4.1 Overall Capability

Details on the tools and resources in place and available to the Town of Wendell were provided by the Town’s HMPC representatives and are summarized in Section 5 Capability Assessment. Based on that information and using the scoring methodology detailed in that section, Wendell has an overall capability rating of Limited. The Town’s Self-Assessment of key capability areas is summarized in Table L.14 below.

Table L.14 – Capability Self-Assessment, Wendell

Capability Area	Rating
Plans, Ordinances, Codes and Programs	High
Administrative and Technical Capability	Moderate
Fiscal Capability	Limited
Education and Outreach Capability	Limited
Mitigation Capability	Limited
Political Capability	Limited
Overall Capability	Limited

L.4.2 Floodplain Management

The Town of Wendell joined the NFIP through emergency entry in January 1974 and has been a regular participant since June 1978. The following tables reflect NFIP policy and claims data for the Town categorized by structure type, flood zone, Pre-FIRM and Post-FIRM.

Table L.15 – NFIP Policy and Claims Data by Structure Type

Structure Type	Number of Policies in Force	Total Premium	Insurance in Force	Number of Closed Paid Losses	Total of Closed Paid Losses
Single Family	24	\$11,725	\$6,892,000	8	\$144,907.36
2-4 Family	0	\$0	\$0	0	\$0.00
All Other Residential	0	\$0	\$0	0	\$0.00
Non-Residential	1	\$4,211	\$125,000	0	\$0.00
Total	25	\$15,936	\$7,017,000	8	\$144,907.36

Source: FEMA Community Information System, accessed November 2018

Table L.16 – NFIP Policy and Claims Data by Flood Zone

Flood Zone	Number of Policies in Force	Total Premium	Insurance in Force	Number of Closed Paid Losses	Total of Closed Paid Losses
A01-30 & AE Zones	12	\$11,163	\$3,062,000	5	\$72,164.94
A Zones	0	\$0	\$0	0	\$0.00
AO Zones	0	\$0	\$0	0	\$0.00
AH Zones	0	\$0	\$0	0	\$0.00
AR Zones	0	\$0	\$0	0	\$0.00
A99 Zones	0	\$0	\$0	0	\$0.00
V01-30 & VE Zones	0	\$0	\$0	0	\$0.00
V Zones	0	\$0	\$0	0	\$0.00
D Zones	0	\$0	\$0	0	\$0.00
B, C & X Zone					

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Flood Zone	Number of Policies in Force	Total Premium	Insurance in Force	Number of Closed Paid Losses	Total of Closed Paid Losses
Standard	0	\$0	\$0	0	\$0.00
Preferred	13	\$4,773	\$3,955,000	3	\$72,742.42
Total	25	\$15,936	\$7,017,000	8	\$144,907.36

Source: FEMA Community Information System, accessed November 2018

Table L.17 – NFIP Policy and Claims Data Pre-FIRM

Flood Zone	Number of Policies in Force	Total Premium	Insurance in Force	Number of Closed Paid Losses	Total of Closed Paid Losses
A01-30 & AE Zones	2	\$2,289	\$209,000	4	\$55,546.12
A Zones	0	\$0	\$0	0	\$0.00
AO Zones	0	\$0	\$0	0	\$0.00
AH Zones	0	\$0	\$0	0	\$0.00
AR Zones	0	\$0	\$0	0	\$0.00
A99 Zones	0	\$0	\$0	0	\$0.00
V01-30 & VE Zones	0	\$0	\$0	0	\$0.00
V Zones	0	\$0	\$0	0	\$0.00
D Zones	0	\$0	\$0	0	\$0.00
B, C & X Zone	5	\$1,780	\$1,365,000	1	\$7,986.13
Standard	0	\$0	\$0	0	\$0.00
Preferred	5	\$1,780	\$1,365,000	1	\$7,986.13
Total	7	\$4,069	\$1,574,000	5	\$63,532.25

Source: FEMA Community Information System, accessed November 2018

Table L.18 – NFIP Policy and Claims Data Post-FIRM

Flood Zone	Number of Policies in Force	Total Premium	Insurance in Force	Number of Closed Paid Losses	Total of Closed Paid Losses
A01-30 & AE Zones	10	\$8,874	\$2,853,000	1	\$16,618.82
A Zones	0	\$0	\$0	0	\$0.00
AO Zones	0	\$0	\$0	0	\$0.00
AH Zones	0	\$0	\$0	0	\$0.00
AR Zones	0	\$0	\$0	0	\$0.00
A99 Zones	0	\$0	\$0	0	\$0.00
V01-30 & VE Zones	0	\$0	\$0	0	\$0.00
V Zones	0	\$0	\$0	0	\$0.00
D Zones	0	\$0	\$0	0	\$0.00
B, C & X Zone	8	\$2,993	\$2,590,000	2	\$64,756.29
Standard	0	\$0	\$0	0	\$0.00
Preferred	8	\$2,993	\$2,590,000	2	\$64,756.29
Total	18	\$11,867	\$5,443,000	3	\$81,375.11

Source: FEMA Community Information System, accessed November 2018

L.5 MITIGATION STRATEGY

Town of Wendell											
Action #	Description	Goal	Objective	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	2019 Status	Status Comments/Explanation
Prevention											
P-1	Install generators as needed at lift stations.	3	2	All	High	City of Raleigh Public Utilities	To be determined	Internal	3-5 years	Not Started – Carry Forward	No funds were budgeted by CORPUD for this since 2014, but a new pump station is planned south of Hollybrook Rd, which would require a generator.
P-2	Amend the Town's Water Allocation Policy to add a new point category for voluntarily increasing undisturbed riparian buffer protections from 50 to 100 feet around Neuse perennial streams	4	1	Flood, Dam Failure, Hurricane	High	Wendell Planning	\$0	N/A	1 year	New	N/A
P-3	Add environmentally sensitive and hazard areas to the Future Land Use Map and adopt updated Comprehensive Plan, which will allow environmental conditions and hazard areas to guide zoning and density decisions.	4	2	Flood, Dam Failure, Hazardous Materials Incident, Radiological Incident, Terrorism	High	Wendell Planning	\$120,000	Town of Wendell	2-3 years	New	N/A
P-4	Consider amendments to the UDO to establish minimum ingress/egress standards for new residential development based on density/# of lots	4	1	Earthquake, Flood, Dam Failure, Hurricane, Wildfire, Tornado, Severe Winter Storm, Hazardous Materials Incident, Radiological Incident, Terrorism	High	Wendell Planning	\$0	N/A	1 year	New	N/A
P-5	Encourage the use of low-impact development techniques through amendments to the Town's Water Allocation Policy	4	1	Flood, Dam Failure, Hurricane	High	Wendell Planning	\$0	N/A	1 year	New	N/A
P-6	Consider regulations to regulate clear-cutting to help control erosion from construction sites	4	1	Flood, Drought	Moderate	Wendell Planning	\$0	Town of Wendell	2-3 years	New	N/A
P-7	Evaluate potential changes to the Town's Arterial and Collector Street Plan to minimize adverse impacts to environmentally sensitive areas due to new roadway construction or widening	4	2	Flood	Moderate	Wendell Planning	\$500	Town of Wendell	2-3 years	New	N/A
Natural Resource Protection											
NRP-1	Perform environmental asset mapping in order to identify areas most key for preservation and potential acquisition due to an array of environmental factors	2	2	Flood, Drought	Moderate	Wendell Planning	\$10,000	Town of Wendell	2-3 years	New	N/A
NRP-2	Evaluate policy regarding greenway dedication requirements in order to expand greenway network and further protect riparian corridors	4	2	Flood	High	Wendell Planning	\$0	Town of Wendell	2-3 years	New	N/A
Structural Projects											
SP-1	Perform improvements to existing open drainage device near intersection of 1st St & Pine St. to increase total water volume & flow	3	1	Flood	Moderate	Wendell Public Works	\$5,000	Town of Wendell	3-5 years	New	N/A
Emergency Services											
ES-1	Make electrical improvements in the downtown in order to help ensure continuity of service during extreme weather	3	1	Severe Weather, Severe Winter Storm, Hurricane	High	Wendell Public Works	\$5,000	Town of Wendell	2-3 years	New	N/A
ES-2	Develop Adverse Weather Plan Map for Public Works crew	2	1	Severe Weather, Severe Winter Storm, Hurricane	High	Wendell Planning	\$0	N/A	1 year	New	N/A
ES-3	Evaluate potential locations for a future Public Works debris site, to accommodate debris associated with natural hazards	2	2	All	Moderate	Wendell Public Works	\$0	Town of Wendell	3-5 years	New	N/A
ES-4	Provide written after-action report of response to severe weather and hazard events to include recommendations for process improvements and improve planning for future disasters	2	2	All	Moderate	Wendell Police Dept.	\$0	Town of Wendell	2-3 years	New	N/A

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Town of Wendell											
Action #	Description	Goal	Objective	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	2019 Status	Status Comments/Explanation
ES-5	Secure and utilize visual warning barricades for vehicular and pedestrian traffic to block properties, roadways, etc. for public safety during or following hazard events	2	1	All	Moderate	Wendell Public Works	\$2,000	Town of Wendell	3-5 years	New	N/A
ES-6	Conduct periodic training exercises, related to higher-risk hazard threats identified by the Hazard Mitigation Plan	2	2	All	Moderate	Wendell Police Dept.	\$500	Town of Wendell	2-3 years	New	N/A
ES-7	Work with Wake County and the City of Raleigh to operate and update the County's Master Address Repository program, which will support emergency response following hazards.	2	2	All	High	Wendell Planning	\$0	Town of Wendell	2-3 years	New	N/A
Public Education and Awareness											
PEA-1	Modify the Town's "Tell Wendell" webpage application to allow citizens to report flood issues and create a tracking mechanism for the Town	1	2	Flood	High	Wendell Planning	\$0	Town of Wendell	2-3 years	New	N/A
PEA-2	Incorporate Hazard Awareness class into the Track-Out Camp run by the Wendell Parks & Recreation Dept.	1	1	Flood, Earthquake, Extreme Heat, Drought, Hurricane, Severe Weather, Severe Winter Storm, Tornado	Moderate	Wendell Parks and Recreation	\$0	Town of Wendell	2-3 years	New	N/A
PEA-3	Post warning signage at local parks for lightning	1	2	Severe Weather	High	Wendell Parks and Recreation	\$500	Town of Wendell	2-3 years	New	N/A
PEA-4	Facilitate community outreach and distribution of educational materials regarding hazard awareness to the community, to include participation at community events such as Public Safety Day.	1	1	All	Moderate	Wendell Public Works	\$500	Town of Wendell	2-3 years	New	N/A
PEA-5	Perform Continuing Education Training for select Public Works personnel as it relates to state storm water regulations	2	2	Flood	High	Wendell Public Works	\$1,200	Town of Wendell	2-3 years	New	N/A