Figure 1.1
Geography

Essex, Vermont
2017 All-Hazards Mitigation Plan

Data Sources:
- Land Cover - NLCD, 2011
- Hillshade - VCGI
Figure 1.1
Geography
Essex Junction, Vermont
2017 All-Hazards Mitigation Plan

Data Sources:
Land Cover - NLCD, 2011
Hillshade - VCGI
Figure 1.2
Housing and Employment
Essex, Vermont
2017 All-Hazards Mitigation Plan

- Congregate Housing*
- Mobile Home
- Multi-family
- Single Family
- Employment Locations

*Congregate Housing includes:
Nursing Homes, Assisted Living Residence, Therapeutic Community Residence, and Level III Residential Care Homes.

DATA SOURCES:
Employment Locations - CCRPC, 2013
Congregate Housing-VT Dept. Aging, Independent Living, 2015

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Housing and Employment
Essex Junction, Vermont
2017 All-Hazards Mitigation Plan

DATA SOURCES:
Employment Locations - CDRPC, 2013
Congregate Housing - VT Dept. Aging, Independent Living, 2015

Housing
- Mobile Home
- Multi-family
- Single Family
- Congregate Housing*

Employment Locations

*Congregate Housing includes: Nursing Homes, Assisted Living Residence, Therapeutic Community Residence, and Level III Residential Care Homes.
Figure 1.3
Future Land Use
Essex, Vermont
2017 All-Hazards Mitigation Plan

DATA SOURCES:
Zoning, 2014
Figure 1.3
Future Land Use
Essex Junction, Vermont
2017 All-Hazards Mitigation Plan
Figure 1.4
Critical Facilities
2017
Essex, Vermont
All-Hazards Mitigation Plan

DATA SOURCES:
- Electric Utility Franchise Areas - VCGI
- Vermont Gas data - VT Gas 2016
Figure 2.1
River Corridors and Floodplains
Essex, Vermont
2017 All-Hazards Mitigation Plan

National Inventory of Dams
Dam Status
- In Service
- Breached

Geomorphically Incompatible Culvert
Compatibility
- Mostly Incompatible*
- Fully Incompatible**

River Corridor Protection Area
ANR River Corridor - January 2015

Digital Flood Insurance Rate Map
Special Flood Hazard Area (100 Year Floodplain)
View individual Municipal Regs for detail

DATA SOURCES:
Dams data from US Army Corps of Engineers; Insufficient structures derived from ANR geomorphology inventories. River Corridor Protection Area equals a rivers meander belt (also known as Fluvial Erosion Hazard Area). River Corridor equals a rivers meander belt plus buffer extension. See Floodready.vermont.gov for more detail FEMA DFIRM - developed in 2011 by FEMA consultant Municipal Water Protection Buffers & Setbacks derived from municipal zoning regulations.
Figure 2.1
River Corridors and Floodplains
Essex Junction, Vermont
2017 All-Hazards Mitigation Plan

DATA SOURCES:
Dams data from US Army Corps of Engineers; Insufficient structures derived from ANR geomorphology inventories. River Corridor Protection Area equals a river’s meander belt (also known as Fluvial Erosion Hazard Area). River Corridor equals a river’s meander belt plus buffer extension. See FloodReady.vermont.gov for more detail. FEMA DFIRM – developed in 2011 by FEMA consultant
Municipal Water Protection Buffers & Setbacks derived from municipal zoning regulations.

Digital Flood Insurance Rate Map
Special Flood Hazard Area (100 Year Floodplain)
View individual Municipal/Rego for detail

River Corridor Protection Area
ANR River Corridor - January 2015

National Inventory of Dams
Dam Status
In Service
Breached

Compatability
Mostly Incompatible
Fully Incompatible"*/

Mostly incompatible 5<GC<10 % Bankfull Width + Approach Angle scores < 2 Structure mostly incompatible with current form and process, with a moderate to high risk of structure failure. Re-design and replacement planning should be initiated to improve geomorphic compatibility.

**Fully incompatible 0<GC<5 % Bankfull Width + Approach Angle scores < 2 AND Sediment Continuity + Erosion and Armoring scores < 2 Structure fully incompatible with channel and high risk of failure. Re-design and replacement should be performed as soon as possible to improve geomorphic compatibility.

*Mostly incompatible 5<GC<10 % Bankfull Width + Approach Angle scores < 2 Structure mostly incompatible with current form and process, with a moderate to high risk of structure failure. Re-design and replacement planning should be initiated to improve geomorphic compatibility.

**Fully incompatible 0<GC<5 % Bankfull Width + Approach Angle scores < 2 AND Sediment Continuity + Erosion and Armoring scores < 2 Structure fully incompatible with channel and high risk of failure. Re-design and replacement should be performed as soon as possible to improve geomorphic compatibility.

Figure 2.1
River Corridors and Floodplains
Essex Junction, Vermont
2017 All-Hazards Mitigation Plan
Figure 3.1
FEMA Public Assistance Projects
2017
Essex, Vermont
All-Hazards Mitigation Plan

Public Assistance Category
- Debris Removal
- Debris Removal
- Protective Measures
- Roads & Bridges
- Roads & Bridges
- Water Control Facilities
- Stormwater Management
- Roads & Bridges
- Public Buildings
- Public Utilities
- Recreational or Other
- Recreational or Other

Note: Some Debris removal and protective measures locations are shown at the location of the municipal office. This indicates assistance was at various locations throughout the municipality not that damages were incurred at the office.

DATA SOURCES:
Public Assistance Project Locations-FEMA, 2015

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Figure 3.1
FEMA Public Assistance Projects
2016-2021 Essex Junction, Vermont
Multi-Jurisdictional All-Hazards Mitigation Plan

Public Assistance Category

- Debris Removal
- Protective Measures
- Water Control Facilities (Stormwater Management)
- Public Buildings
- Public Utilities
- Roads & Bridges
- Recreational or Other

Note: Some Debris removal and protective measures locations are shown at the location of the municipal office. This indicates assistance was at various locations throughout the municipality not that damages were incurred at the office.

Data Sources:
Public Assistance Project Locations-FEMA, 2015
Figure 3.1.1
FEMA Individual Assistance Locations

Essex, Vermont
2017 All-Hazards Mitigation Plan

Number of Claims
June 2011 Disaster
- 1 - 2
- 3 - 4
- 5 - 6
September 2011 Disaster
- 1 - 2
- 3 - 4

DATA SOURCES:
Individual Assistance Claims Locations-FEMA, 2015
Figure 3.1.1
FEMA Individual Assistance Locations
Essex Junction, Vermont
2017 All-Hazards Mitigation Plan

Number of Claims
June 2011 Disaster  September 2011 Disaster
1 - 2
1 - 2
3 - 4
3 - 4
5 - 6

DATA SOURCES:
Individual Assistance Claims Locations-FEMA, 2015
Figure 3.2
Stormwater Management
Essex, Vermont
2017 All-Hazards Mitigation Plan

DATA SOURCES:
Hydrologically Connected Roads - ANR, 2016
Paved, Gravel & Class 4 Roads - VTrans
MS4 area - ANR
Priority Surface Waters - 2014 List of Priority Surface Waters; ANR

Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
Figure 3.2
Stormwater Management
Essex Junction, Vermont
2017 All-Hazards Mitigation Plan
Note: The Social Vulnerability Index (SVI) draws together 16 different measures of vulnerability in three different thematic socioeconomic, demographic, and housing/transportation. The 16 individual measures include poverty, unemployment, per capita income, educational attainment, health insurance, children/elderly, single parent households, disability, minority, limited English, location of apartment buildings, mobile homes, crowding, no vehicle access, and population living in group quarters.

The measures are combined to create relative vulnerability index. For every vulnerability measure, census tracts above the 90th percentile, or the most vulnerable 10%, are assigned a flag. The vulnerability index is created by counting the total number of flags in each census tract.

It is important to remember that this Social Vulnerability Index is just a first step in screening for populations that may be more or less vulnerable to a variety of hazard. Depending on the situation, different measures could be more or less important and should be looked at more closely. These data are NOT saying that one census tract is more vulnerable than another. Rather it is saying that there is a higher concentration of various vulnerable population living within a tract and seeks to identify the conditions that make a population vulnerable.

**Westford, Underhill, and Bolton are contained within one census tract. St. George and Hinesburg share the same census tract boundary. Huntington and Silsbee Gore also consist of one tract. All the other municipalities are broken down by one or more tracts. More urban communities have many more tracts as the optimal population for tract is 4,000 people. The minimum population threshold is 1,200 and the maximum is 8,000.**

DATA SOURCES:
Social Vulnerability Index, VDH, 2015
Census Tracts, US Census
Figure 4.1
Vulnerable Populations
Essex Junction, Vermont
2017 All-Hazards Mitigation Plan

Note: The Social Vulnerability Index (SVI) draws together 16 different measures of vulnerability in three different themes: socioeconomic, demographic, and housing/transportation. The 16 individual measures include poverty, unemployment, per capita income, educational attainment, health insurance, children/elderly, single-parent households, disability, minority, limited English, location of apartment buildings, mobile homes, crowding, no vehicle access, and population living in group quarters.

The measures are combined to create relative vulnerability indices. For every vulnerability measure, census tracts above the 90th percentile, or the most vulnerable 10%, are assigned a flag. The vulnerability index is created by counting the total number of flags in each census tract. It is important to remember that this Social Vulnerability Index is just a first step in screening for populations that may be more or less vulnerable to a variety of hazards. Depending on the situation, different measures may be more or less important and should be looked at more closely. These data are NOT saying that one census tract is more vulnerable than another. Rather it is saying that there is a higher concentration of vulnerable population living within a tract and seeks to identify the conditions that make a population vulnerable.

DATA SOURCES:
Social Vulnerability Index, VDH, 2015
Census Tracts, US Census

0 0.2 0.4 0.8 Miles

0 2 3 4-5 6-10

Census Tract Boundary**

**Westford, Underhill, and Bolton are contained within one census tract boundary. St. George and Hinesburg share the same census tract boundary. Huntington and Buel’s Gore also consist of one tract. All the other municipalities are broken down by one or more tracts. More urban communities have many more tracts as the optimal population for tract is 4,000 people. The minimum population threshold is 1,200 and the maximum is 8,000.
Figure 4.2
Land Development Trends

2017
Essex, Vermont
All-Hazards Mitigation Plan

Year Built for Residential and Non-residential Development
- Built 2010 or earlier
- Built 2011-2014

Digital Flood Insurance Rate Map
- Special Flood Hazard Area (100 Year Floodplain)
- River Corridor Protection Area (FEH)

DATA SOURCES:
Housing Units - CCRPC, 2014
CI Data-CCRPC, 2014
Special Flood Hazard Area - developed in 2011 by FEMA
River Corridor equals a rivers meander belt plus buffer extension. See Floodready.vermont.gov for more detail.
Figure 4.2
Land Development Trends
Essex Junction, Vermont
2017 All-Hazards Mitigation Plan

DATA SOURCES:
Housing Units - CCRPC, 2014
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Special Flood Hazard Area - developed in 2011 by FEMA
River Corridor equals a river's meander belt plus buffer extension.
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Special Flood Hazard Area (100 Year Floodplain)
River Corridor Protection Area (FEH)