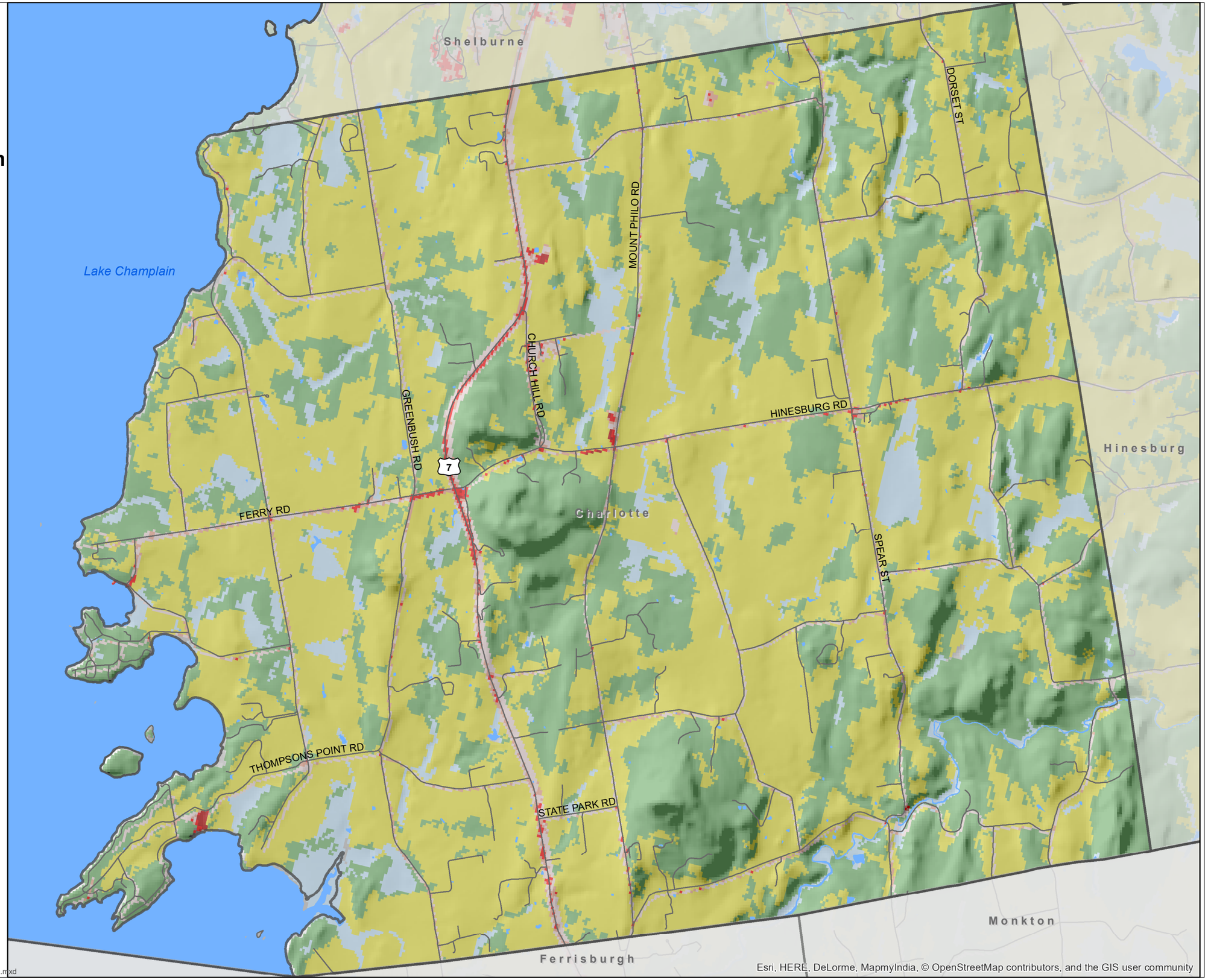
Figure 1.1
Geography

Charlotte, Vermont
2017 All-Hazards Mitigation Plan



Land Cover

- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land
- Forest
- Pasture/Crops
- Wetlands

N

0 0.375 0.75 1.5 Miles

DATA SOURCES:
Land Cover - NLCD, 2011
Hillshade - VCGI

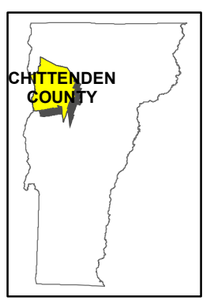


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Figure 1.2
Housing and Employment

2017
Charlotte, Vermont
All-Hazards Mitigation Plan

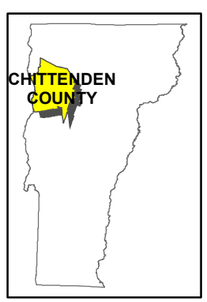
- Congregate Housing*
- Mobile Home
- Multi-family
- Single Family
- Employment Locations

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

N

0 0.375 0.75 1.5 Miles

DATA SOURCES:
Mobile Home, Multi-familiy, Single-family- E911,2015
Employment Locations -CCRPC, 2013
Congregate Housing-VT Dept. Aging, Independent Living, 2015



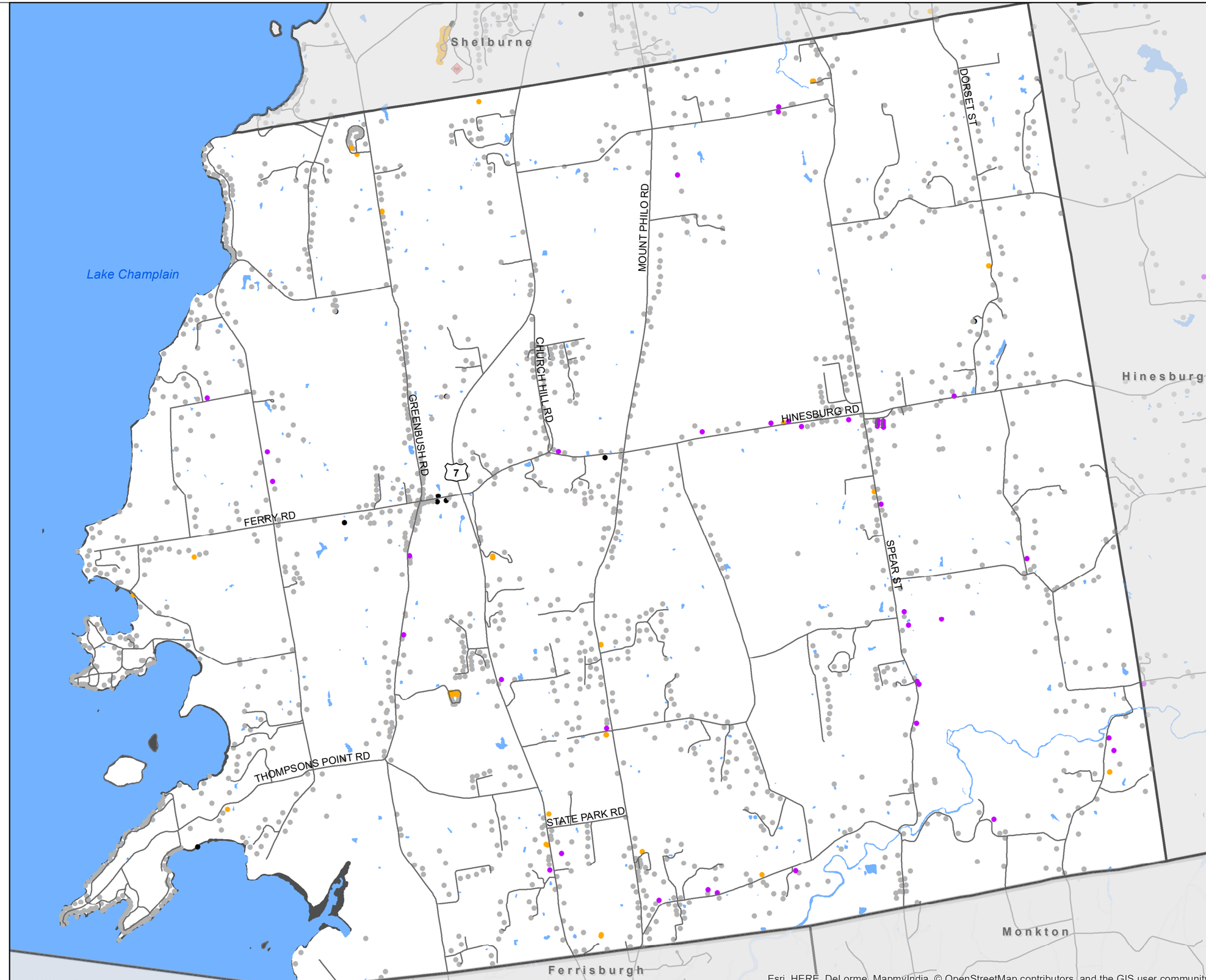


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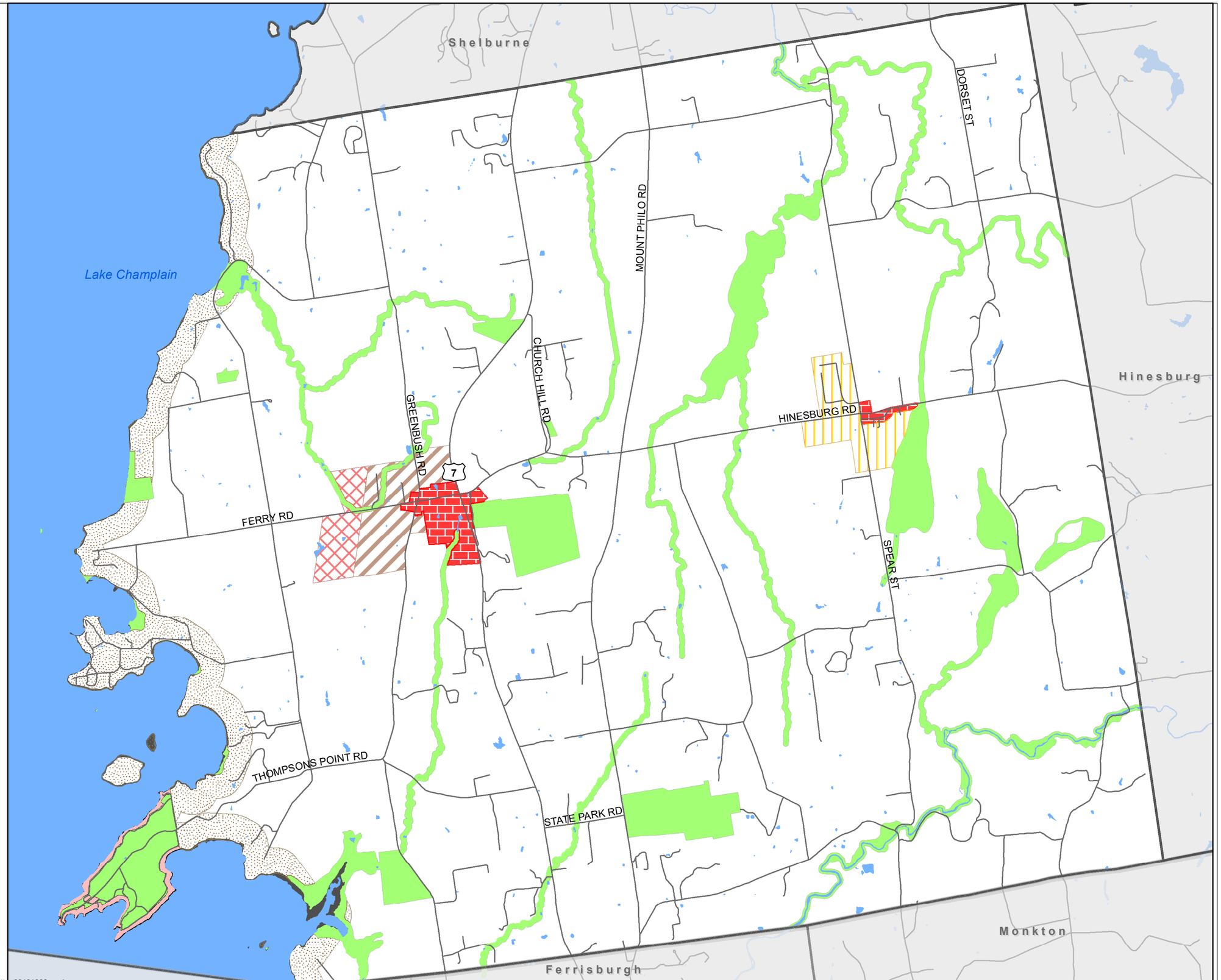
Figure 1.3
Future Land Use

Charlotte, Vermont
2017 All-Hazards Mitigation Plan

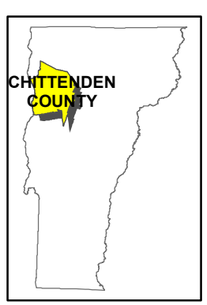


Zoning District

- Commercial/Light Industrial
- Conservation
- East Charlotte Village
- Rural
- Shoreland
- Shoreland Seasonal Home Management
- Village Commercial
- West Charlotte Village

N

0 0.375 0.75 1.5 Miles



DATA SOURCES:
Zoning, 2008

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Figure 1.4
Critical Facilities
2017
Charlotte, Vermont
All-Hazards Mitigation Plan

- School
- College / University
- Law Enforcement
- Municipal Office
- EMS
- Fire
- Wastewater Treatment Facility
- Emergency Shelter
- Major Road
- Vermont Gas Service Area
- Sewer Service Area
- Water Service Area

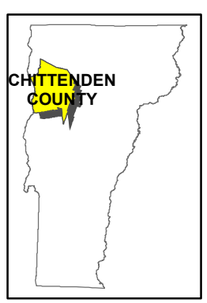
Electric Utility

- Burlington Electric Dept.
- Green Mountain Power
- Vermont Electric Co-op

N

0 0.375 0.75 1.5 Miles

DATA SOURCES:
Schools, Law Enforcement, Municipal Office, EMS, Fire, Wastewater Facility - Critical Facilities, 2014, CCRPC
Electric Utility Franchise Areas - VCGI
Vermont Gas data - VT Gas 2016



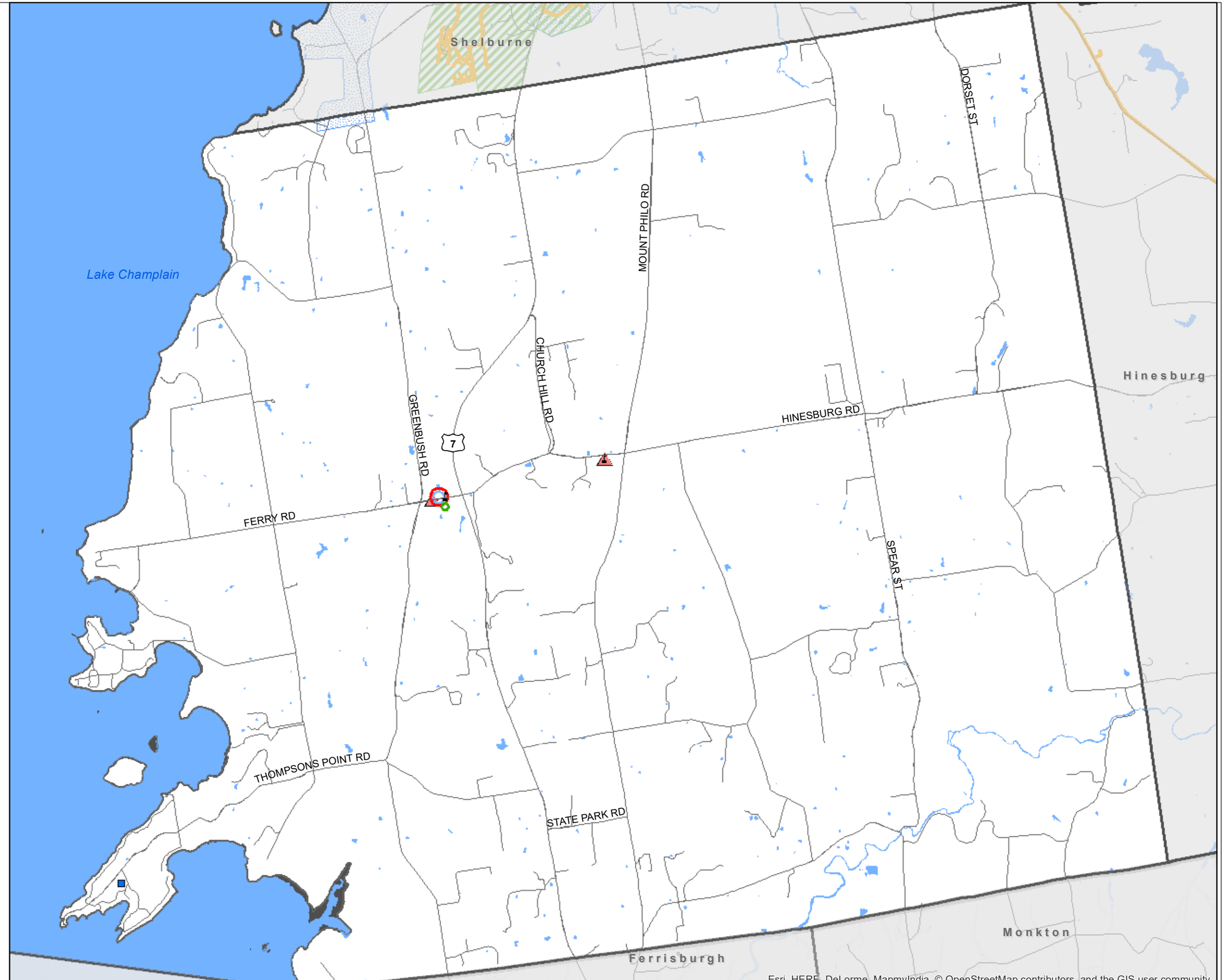


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Figure 2.1
River Corridors and Floodplains

Charlotte, Vermont
2017 All-Hazards Mitigation Plan

National Inventory of Dams

DamStatus

- In Service
- Breached

Geomorphically Incompatible Culvert

Compatibility

- Mostly Incompatible*
- Fully Incompatible**
- River Corridor Protection Area
- ANR River Corridor - January 2015

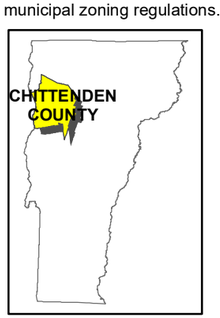
Digital Flood Insurance Rate Map

- Special Flood Hazard Area (100 Year Floodplain)
- View individual Municipal Regs for detail

*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.

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.



N

0 0.375 0.75 1.5 Miles

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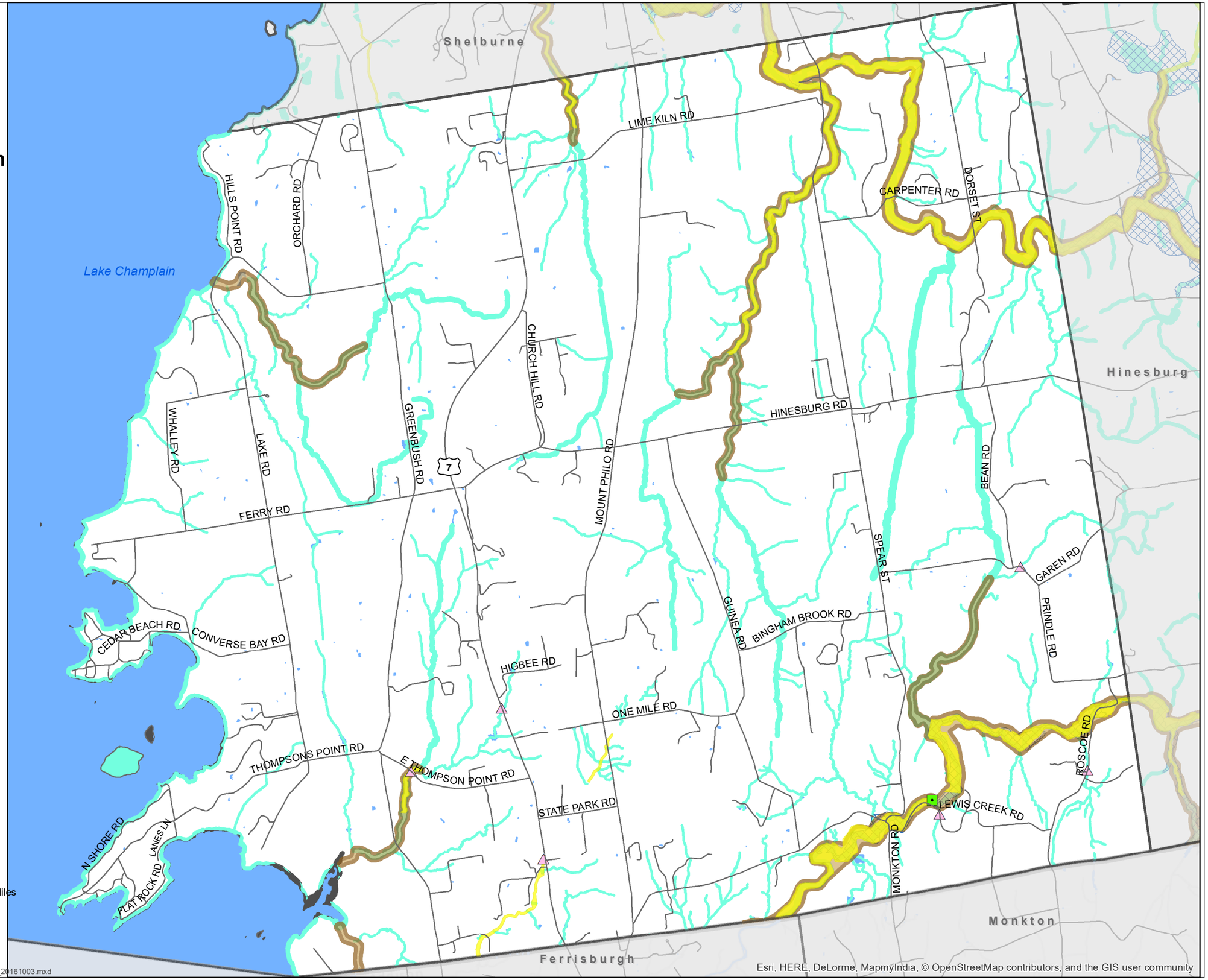

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Figure 3.1
FEMA Public Assistance Projects
2017
Charlotte, Vermont
All-Hazards
Mitigation Plan

Public Assistance Category

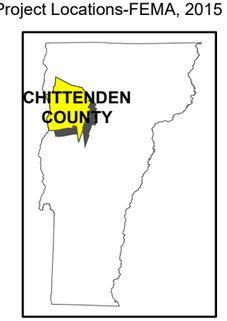
- Debris Removal +
- Debris Removal +
- Protective Measures +
- Roads & Bridges
- Roads & Bridges
- Water Control Facilities (Stormwater Management)
- Public Buildings
- Public Utilities
- Recreational or Other
- Recreational or Other

N

0 0.375 0.75 1.5 Miles

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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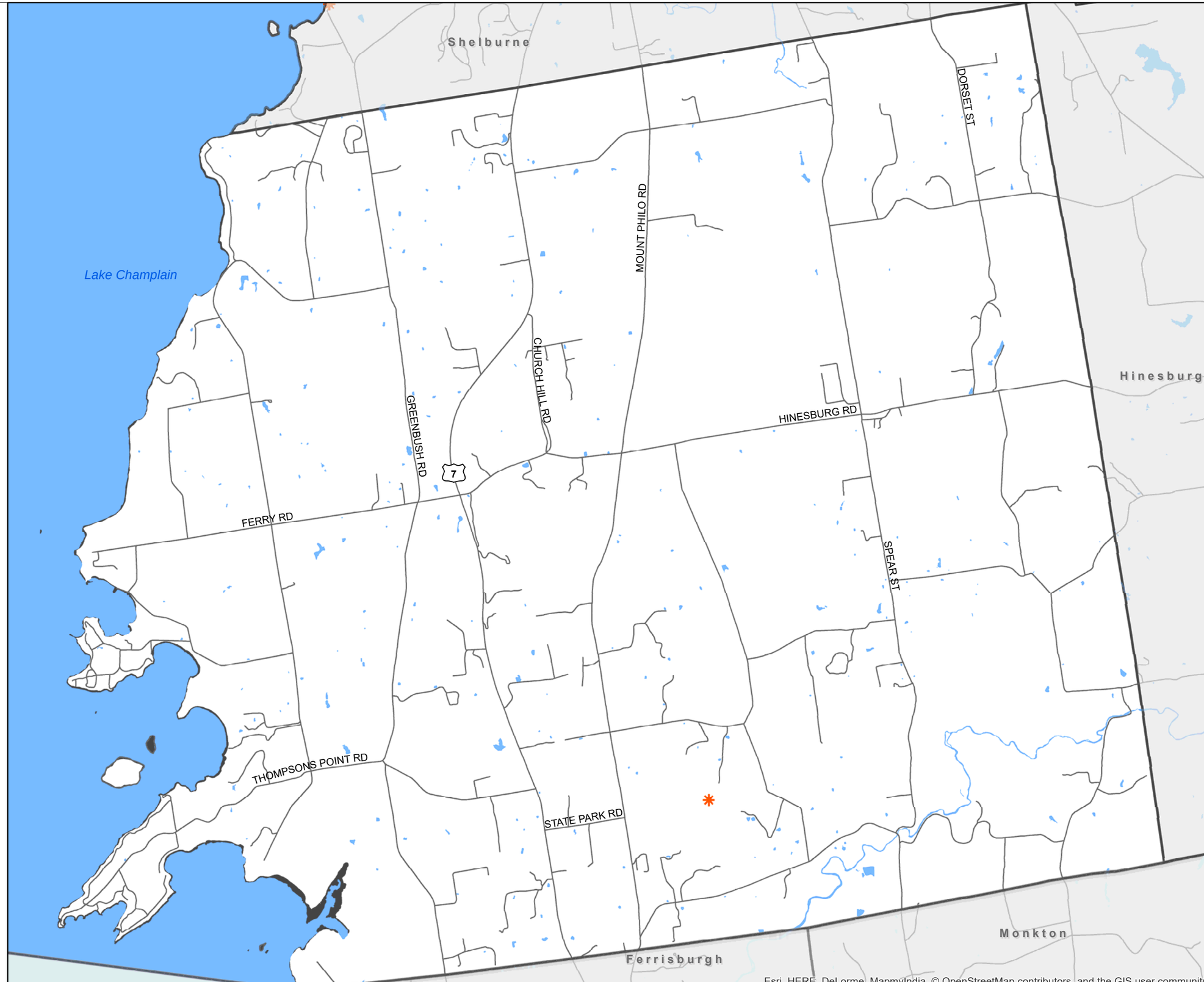

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Figure 3.1.1
FEMA Individual Assistance Locations

Charlotte, 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

N

0 0.375 0.75 1.5 Miles

DATA SOURCES:
Individual Assistance Claims Locations-FEMA, 2015

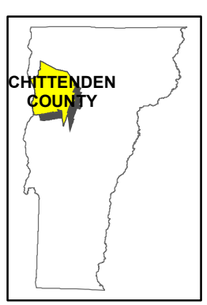

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Figure 3.2
Stormwater Management

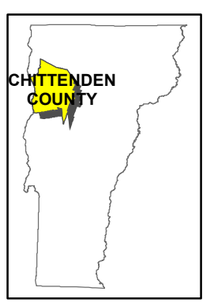
Charlotte, Vermont
2017 All-Hazards Mitigation Plan

- Paved Road
- Gravel or Class 4 Road
- Hydrologically Connected Road Segment
- Stream Centerline
- Stormwater Pipe
- Municipal Separate Storm Sewer System General Permit

N

0 0.375 0.75 1.5 Miles

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



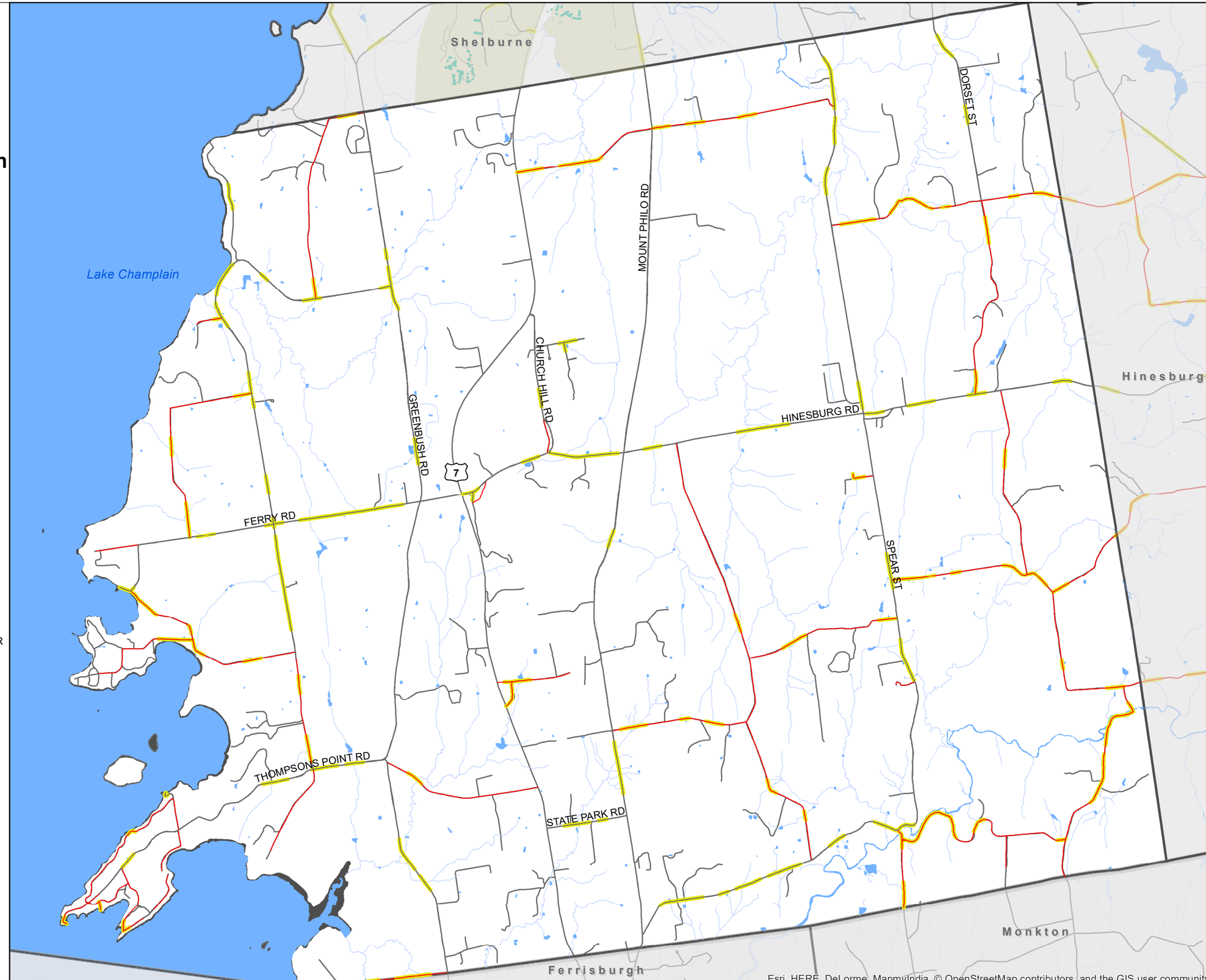


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Figure 4.1
Vulnerable Populations

Charlotte, Vermont
2017 All-Hazards Mitigation Plan

Census Tract Boundary**

Social Vunerability Index

Score by Census Tract

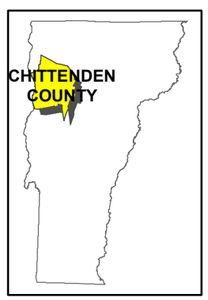
- 0
- 1
- 2
- 3
- 4 - 5
- 6 - 10

**Westford, Underhill, and Bolton are contained within one census tract. St, George and Hinesburg share the same census tract boundary. Huntington and Buels 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.

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 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.



N

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

0 0.375 0.75 1.5 Miles

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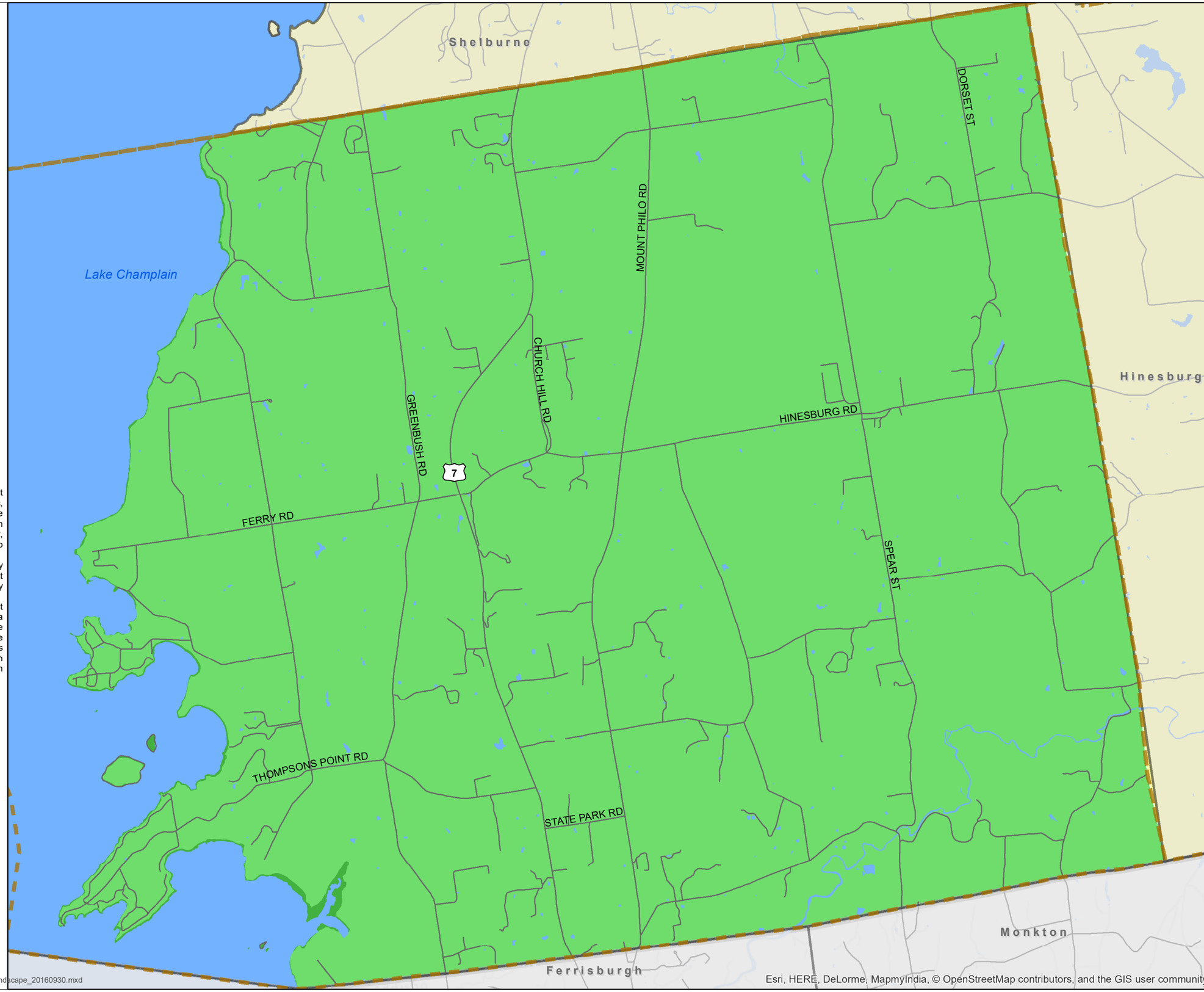

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Figure 4.2
Land Development Trends

2017
Charlotte, Vermont
All-Hazards
Mitigation Plan

Year Built for Residential and Non-residential Development

- Built 2010 or earlier
- Built 2011-2014

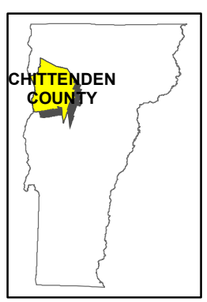
Digital Flood Insurance Rate Map

- Special Flood Hazard Area (100 Year Floodplain)
- River Corridor Protection Area (FEH)

N

0 0.375 0.75 1.5 Miles

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.



CHITTENDEN COUNTY RPC
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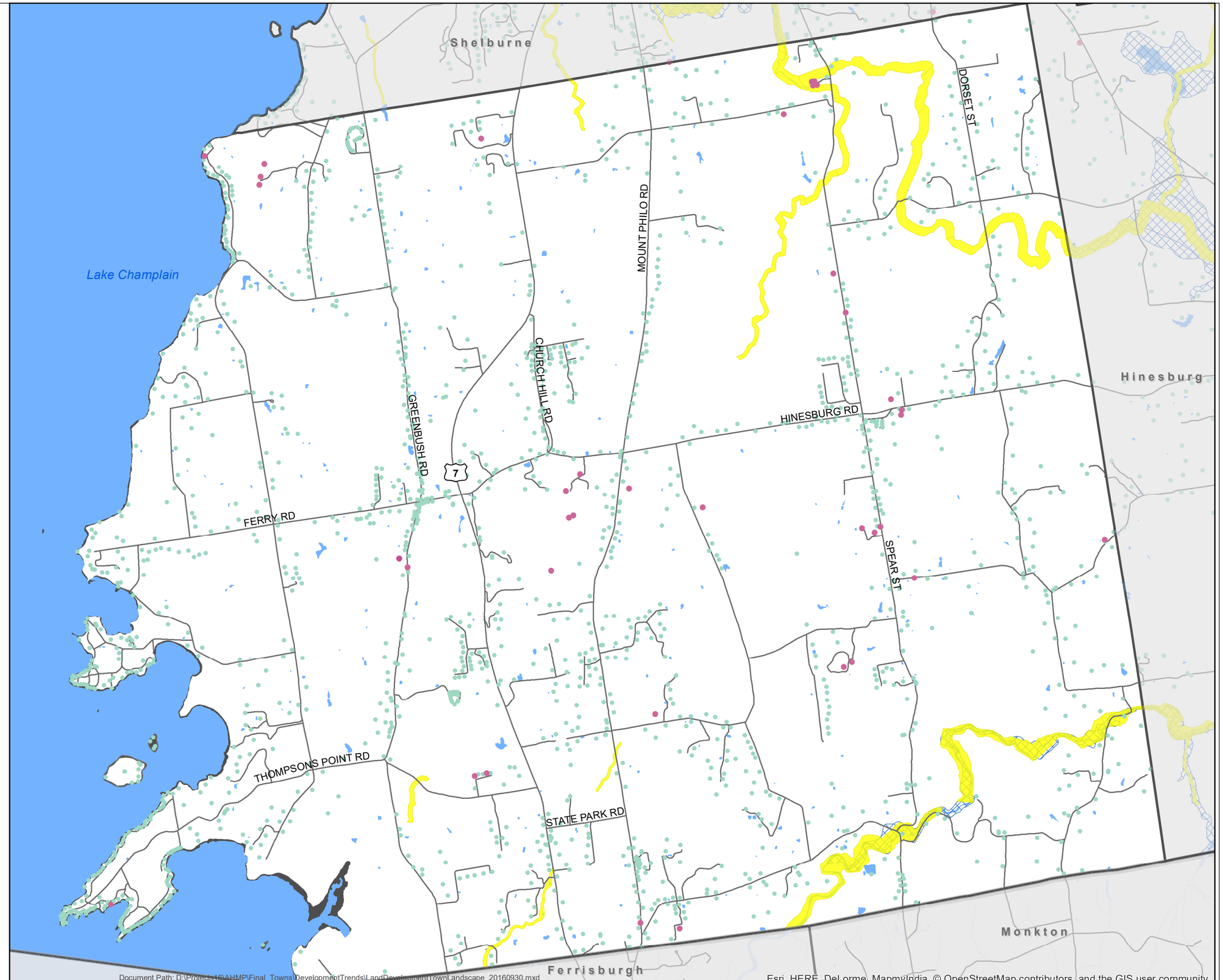

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