

APPENDIX D – LUNENBURG COUNTY, TOWNS OF KENBRIDGE AND VICTORIA

Hazard Rankings

Status of Mitigation Actions

Building Permit Data

Land Use Cover Map

Future Land Use Maps

Critical Facilities Maps

Flood Zone Map

NFIP Survey Results

Hazard Rankings – Lunenburg Co. (From Qualitative Assessment and Local Input)

Hazard	Likelihood	Spatial Extent	Potential Impact	HAZARD RATING
Severe Thunderstorms and Tornadoes	3	2	2	7
Hurricanes and Tropical Storms	1	3	2	6
Winter Storms	1	3	2	6
Drought	2	3	1	6
Flood	1	1	1	3
Wildfire	1	1	1	3
Erosion	1	1	1	3
Earthquakes	0	1	1	2
Dam/Levee Failure	0	1	1	2
Landslides	0	1	1	2
Sinkholes	0	1	1	2

Hazard rankings are based on a qualitative assessment, as described below. The values assigned for each option chosen are added together for each hazard to arrive at a total score.

	Assigned Value	Definition
Likelihood of Occurrence		
Highly Likely	3	Near 100% annual probability
Likely	2	Between 10 and 100% annual probability
Possible	1	Between 1 and 10% annual probability
Unlikely	0	Less than 1% annual probability
Spatial Extent		
Large	3	More than 50% of area affected
Moderate	2	Between 10 and 50% of area affected
Small	1	Less than 10% of area affected
Potential Impact		
Catastrophic	4	High number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of facilities for 30 days or more.
Critical	3	Multiple deaths/injuries possible. More than 25% of property in affected area damaged or destroyed. Complete shutdown of facilities for more than one week.
Limited	2	Minor injuries only. More than 10% of property in affected area damaged or destroyed. Complete shutdown of facilities for more than one day.
Minor	1	Very few injuries, if any. Only minor property damage and minimal disruption on quality of life. Temporary shutdown of facilities.

Detailed Information/Status of Local Mitigation Actions
(includes detailed data for each action, as requested by FEMA)

Lunenburg County

Lunenburg County Mitigation Action 1	Conduct a cumulative impact analysis/studies for flood-prone property and roads within the watershed.	
Category:	Prevention	
Hazard(s) Addressed:	Flood	
Priority (High, Moderate, Low):	Moderate	
Estimated Cost:	\$30,000	
Potential Funding Sources:	County would likely seek grant funding	
Lead Agency/Department Responsible:	County Administration, possibly with help from CRC/VDOT	
Implementation Schedule:	Dependant on availability of funding	
Status: No action taken – lack of funding/staff resources		

Lunenburg County Mitigation Action 2	Designate and prepare safety shelter in several locations in the County.	
Category:	Prevention	
Hazard(s) Addressed:	Multiple	
Priority (High, Moderate, Low):	High/Moderate	
Estimated Cost:	\$100,000	
Potential Funding Sources:	County would likely seek FEMA, VDEM grants	
Lead Agency/Department Responsible:	County Administration, possibly in conjunction with local fire departments and rescue squads	
Implementation Schedule:	Dependant on availability of funding	
Status: Ongoing. One shelter ready in Kenbridge (Emergency Squad – generator installed with the help of a USDA grant). Meherrin Fire Department and Victoria Fire Department also designated as shelters. County is working on setting up Lunenburg Middle School and Kenbridge Fire Department as shelters.		

Lunenburg County Mitigation Action 3		Encourage or require burial of electrical, phone and cable lines.
Category:	Prevention, Structural Project	
Hazard(s) Addressed:	Multiple	
Priority (High, Moderate, Low):	Moderate	
Estimated Cost:	Could be minimal if only changing codes, offering incentives	
Potential Funding Sources:	N/A if cost minimal	
Lead Agency/Department Responsible:	County Administration/Board of Supervisors	
Implementation Schedule:	Short term (if little or no cost)	
Status: No action taken – lack of staff resources. The County may investigate zoning or building code changes to address this.		

Lunenburg County Mitigation Action 4		Require construction of "safe rooms" in new schools, day care and rest homes.
Category:	Prevention, Structural Projects	
Hazard(s) Addressed:	Tornado	
Priority (High, Moderate, Low):	High/Moderate	
Estimated Cost:	Minimal or none – change to codes	
Potential Funding Sources:	N/a	
Lead Agency/Department Responsible:	County PC, BOS, Building Official	
Implementation Schedule:	Short term	
Status: No action taken – lack of staff resources. The County may investigate zoning or building code changes to address this.		

Lunenburg County Mitigation Action 5		Identify and clear fuel loads evented by downed trees.
Category:	Property Protection	
Hazard(s) Addressed:	Multiple	
Priority (High, Moderate, Low):	Moderate	
Estimated Cost:	If done by fire departments, minimal or none	
Potential Funding Sources:	N/A if done by fire departments	
Lead Agency/Department Responsible:	County Administration, possibly with local fire departments/ Virginia Department of Forestry	
Implementation Schedule:	Dependant on availability of funding	
Status: No action taken – lack of staff resources. The County may investigate working with the Virginia Department of Forestry to address this.		

Lunenburg County Mitigation Action 6	Develop/update water management/emergency response plan.	
Category:	Emergency Services, Prevention	
Hazard(s) Addressed:	Drought	
Priority (High, Moderate, Low):	High/Moderate	
Estimated Cost:	Cost of planning	
Potential Funding Sources:	If any significant cost, County would likely seek grant funding	
Lead Agency/Department Responsible:	County Administration	
Implementation Schedule:	Dependant on availability of funding	
Status: Underway, as part of regional Plan (with help from CRC)		

Lunenburg County Mitigation Action 7	Establish a "hazard awareness week" in coordination with the media to promote hazard awareness (seasonal).	
Category:	Public Education and Outreach	
Hazard(s) Addressed:	Multiple	
Priority (High, Moderate, Low):	Moderate	
Estimated Cost:	None	
Potential Funding Sources:	N/a	
Lead Agency/Department Responsible:	County Administration, local VDEM office	
Implementation Schedule:	Short term	
Status: Ongoing. The County participates in Tornado Preparedness day each March.		

Lunenburg County Mitigation Action 8	Review all permits for new development and substantial improvements for compliance with the County's ordinances as they relate to flood areas.	
Category:	Prevention/Property Protection	
Hazard(s) Addressed:	Flood	
Priority (High, Moderate, Low):	Moderate	
Estimated Cost:	None	
Potential Funding Sources:	N/A	
Lead Agency/Department Responsible:	County Planning Department	
Implementation Schedule:	Short/near term	
Status: Ongoing – enforced through the County's Zoning Ordinance (has a section on flood hazard areas).		

Town of Kenbridge

Kenbridge Mitigation Action 1	Develop plan to better control storm water drainage and inflow into sewer lines that constantly cause flooding problems to the Town's wastewater treatment plant.
Category:	Prevention
Hazard(s) Addressed:	Flood
Priority (High, Moderate, Low):	High
Estimated Cost:	Planning plus any required construction
Potential Funding Sources:	Town would likely seek grant funding
Lead Agency/Department Responsible:	Town staff
Implementation Schedule:	Dependant on availability of funding
Status: No action taken – lack of funding/staff resources	

Kenbridge Mitigation Action 2	Continue to track and identify impacts from severe weather events to determine if storm water flooding occurs and, if so, assist appropriate agencies in determining appropriate actions including possible FIRM development.
Category:	Prevention/Property Protection
Hazard(s) Addressed:	Flood
Priority (High, Moderate, Low):	High
Estimated Cost:	Minimal – work done by Town staff
Potential Funding Sources:	N/A
Lead Agency/Department Responsible:	Town staff
Implementation Schedule:	Short term
Status: Ongoing	

Town of Victoria

Victoria Mitigation Action 1	Purchase generators for critical facilities and shelter to provide emergency power during a blackout (i.e. medical centers).
Category:	Emergency Services
Hazard(s) Addressed:	Multiple
Priority (High, Moderate, Low):	High
Estimated Cost:	\$50,000 - \$75,000
Potential Funding Sources:	Town would seek grant funds to help offset costs
Lead Agency/Department Responsible:	Town staff
Implementation Schedule:	Dependant on availability of funding
Status: Completed. The Town has acquired a portable generator, which can be used for the water filtration plant, and pumping stations at Nottoway Falls and Modest Creek Reservoir.	

Victoria Mitigation Action 2	Install/replace storm water drainage system to prevent flooding of houses/buildings
Category:	Prevention/Property Protection
Hazard(s) Addressed:	Flood
Priority (High, Moderate, Low):	High
Estimated Cost:	Depends on size of project and areas to be served – could range from Approx. \$100,000 to \$500,000
Potential Funding Sources:	FEMA grant, with local funding match
Lead Agency/Department Responsible:	Town staff
Implementation Schedule:	Dependant on availability of funding
Status: No action taken – awaiting funding	

Victoria Mitigation Action 3	Continue to track and identify impacts from severe weather events to determine if storm water flooding occurs and, if so, assist appropriate agencies in determining appropriate actions including possible FIRM development.
Category:	Prevention/Property Protection
Hazard(s) Addressed:	Flood
Priority (High, Moderate, Low):	High
Estimated Cost:	Minimal – work done by Town staff
Potential Funding Sources:	N/A
Lead Agency/Department Responsible:	Town staff
Implementation Schedule:	Short term
Status: Ongoing	

Victoria Mitigation Action 4	Implement community early warning systems designed to notify the general public during weather related emergencies.
Category:	Emergency Services
Hazard(s) Addressed:	Multiple
Priority (High, Moderate, Low):	High/Moderate
Estimated Cost:	Depends on what new equipment, staffing, and training would be required
Potential Funding Sources:	Grant Funding plus local/state funds
Lead Agency/Department Responsible:	Town Manager/Public Works/Fire Department
Implementation Schedule:	Dependant on availability of funding
Status: Completed – system installed by the Town in the Summer of 2016.	

The Town added one (1) mitigation action, as listed below.

Victoria New Mitigation Action	Develop plan to better control storm water drainage and inflow into sewer lines that constantly cause flooding problems to the Town's wastewater treatment plant.
Category:	Prevention
Hazard(s) Addressed:	Flood
Priority (High, Moderate, Low):	High
Estimated Cost:	Planning plus any required construction
Potential Funding Sources:	Town would likely seek grant funding
Lead Agency/Department Responsible:	Town staff
Implementation Schedule:	Dependent on availability of funding
Status: No action taken – seeking funding to implement	

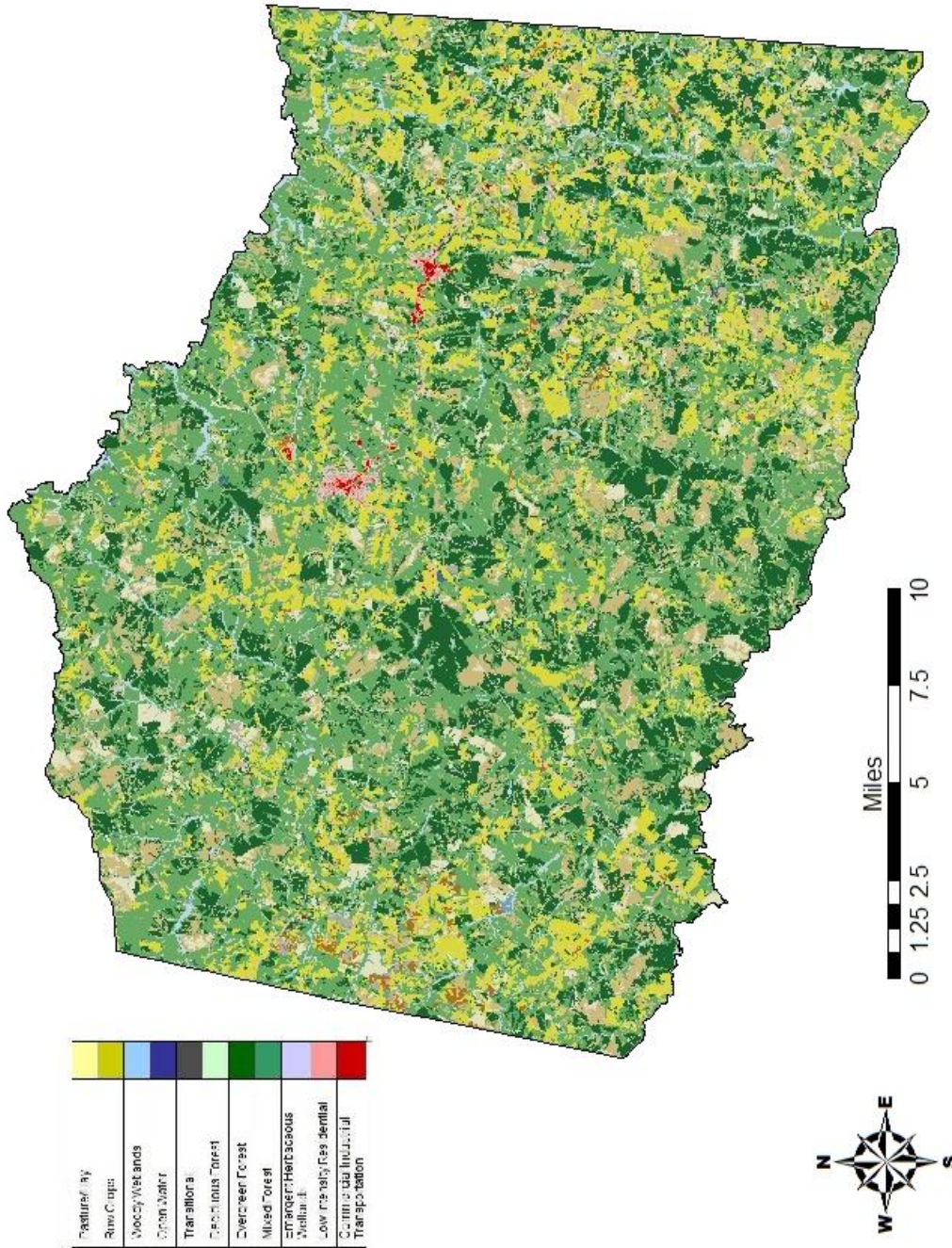
NOTE: Lunenburg County and the Towns of Kenbridge and Victoria have determined that acquisition, relocation, elevation, or floodproofing is not a priority for them, due to the lack of flooding issues in those localities. Consequently, they do not have a mitigation strategy addressing this.

Building Permit Data – Lunenburg County

Year	Residential Permits Issued	Commercial Permits Issued
2004	105	4
2005	112	4
2006	108	5
2007	93	3
2008	75	4
2009	64	3
2010	189	16
2011	151	7
2012	131	17
2013	124	11
2014	121	14
2015	138	12

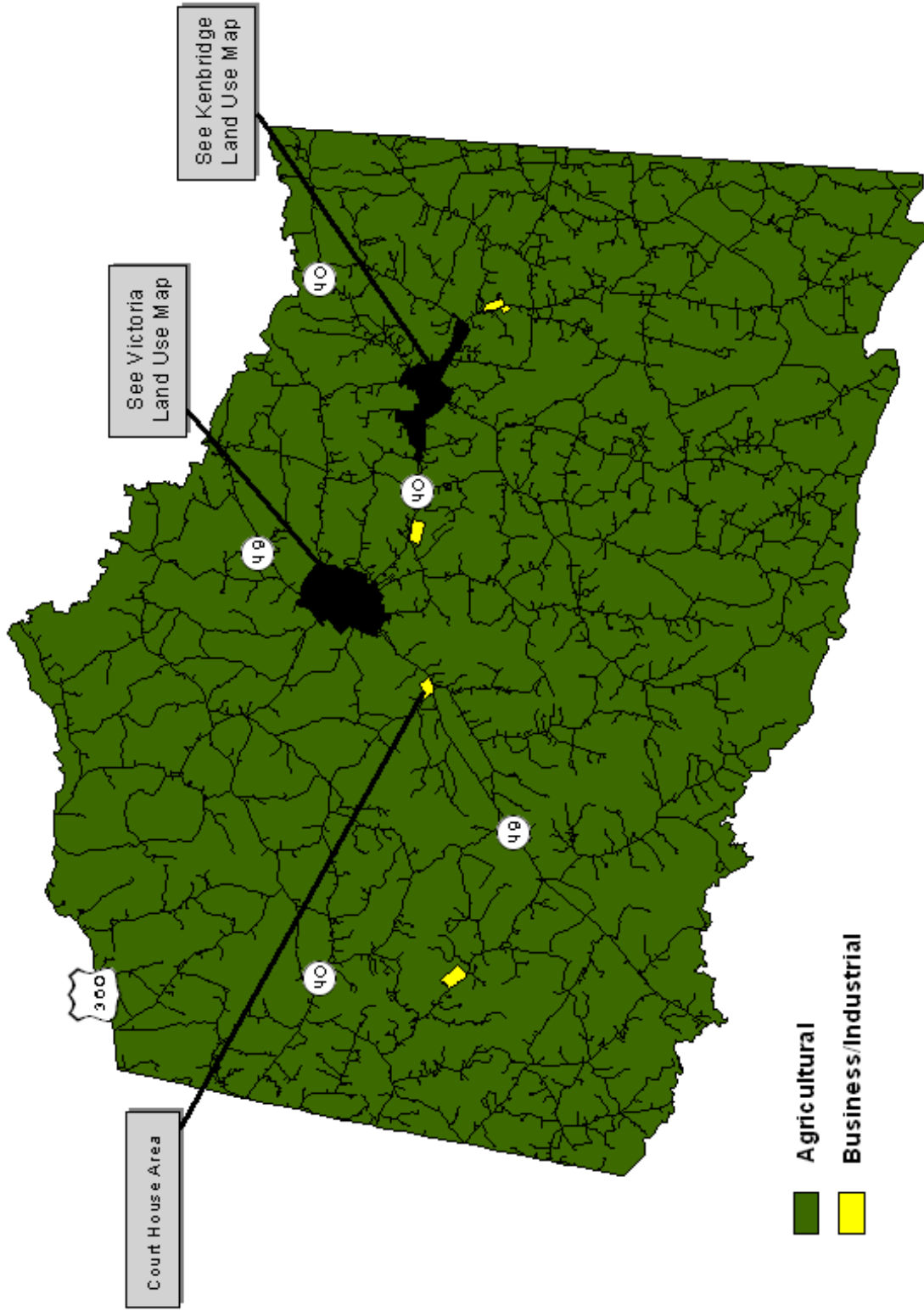
NOTE: Building permits for the Towns of Kenbridge and Victoria are handled through the Lunenburg County Building Inspector's Office.

Lunenburg County Land Use Cover Map



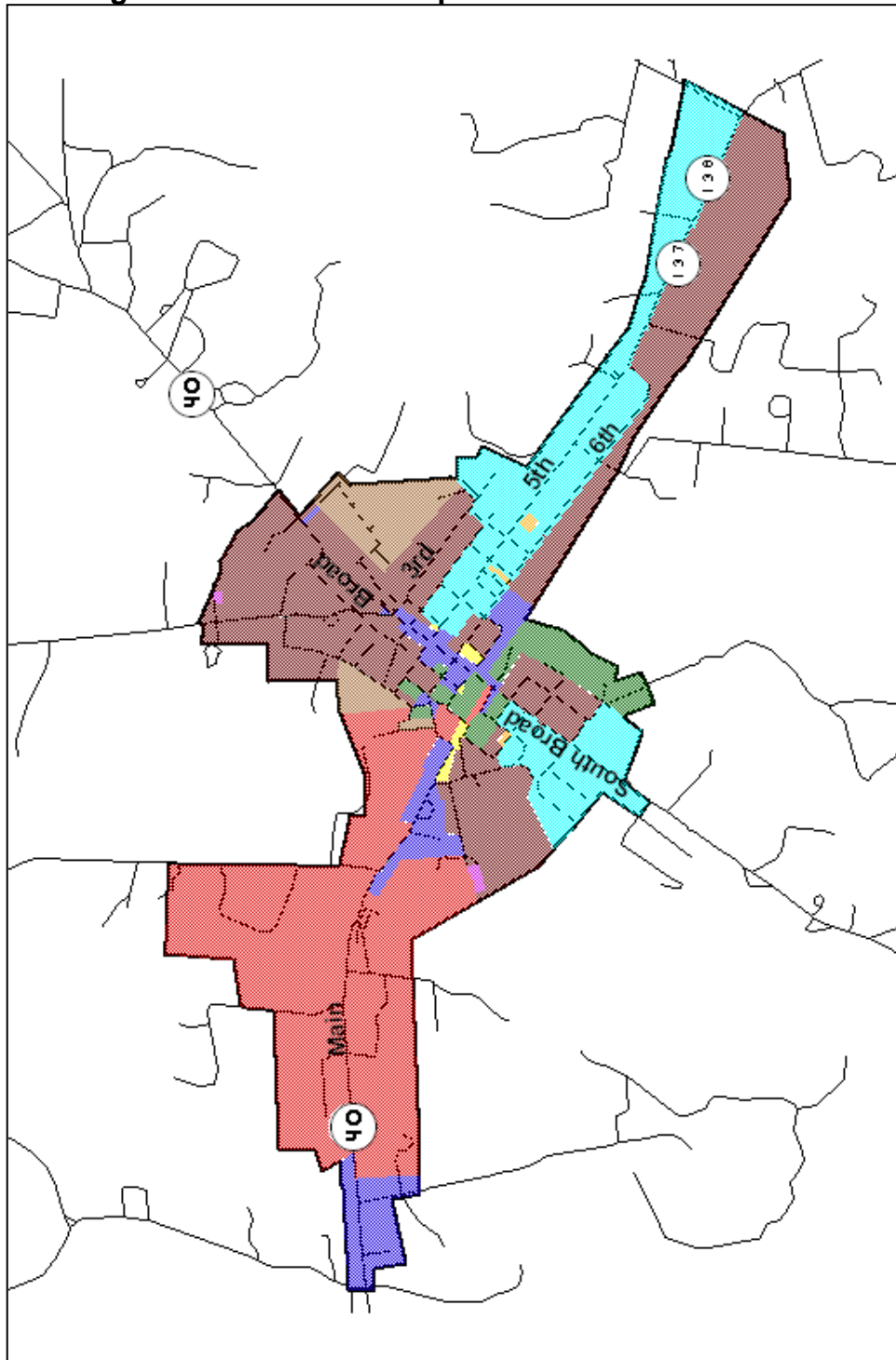
Map created by CRC - October 2015
 Source: 2011 National Land Use Cover Dataset










Lunenburg County Future Land Use Map



Map created by CRC – May 2006

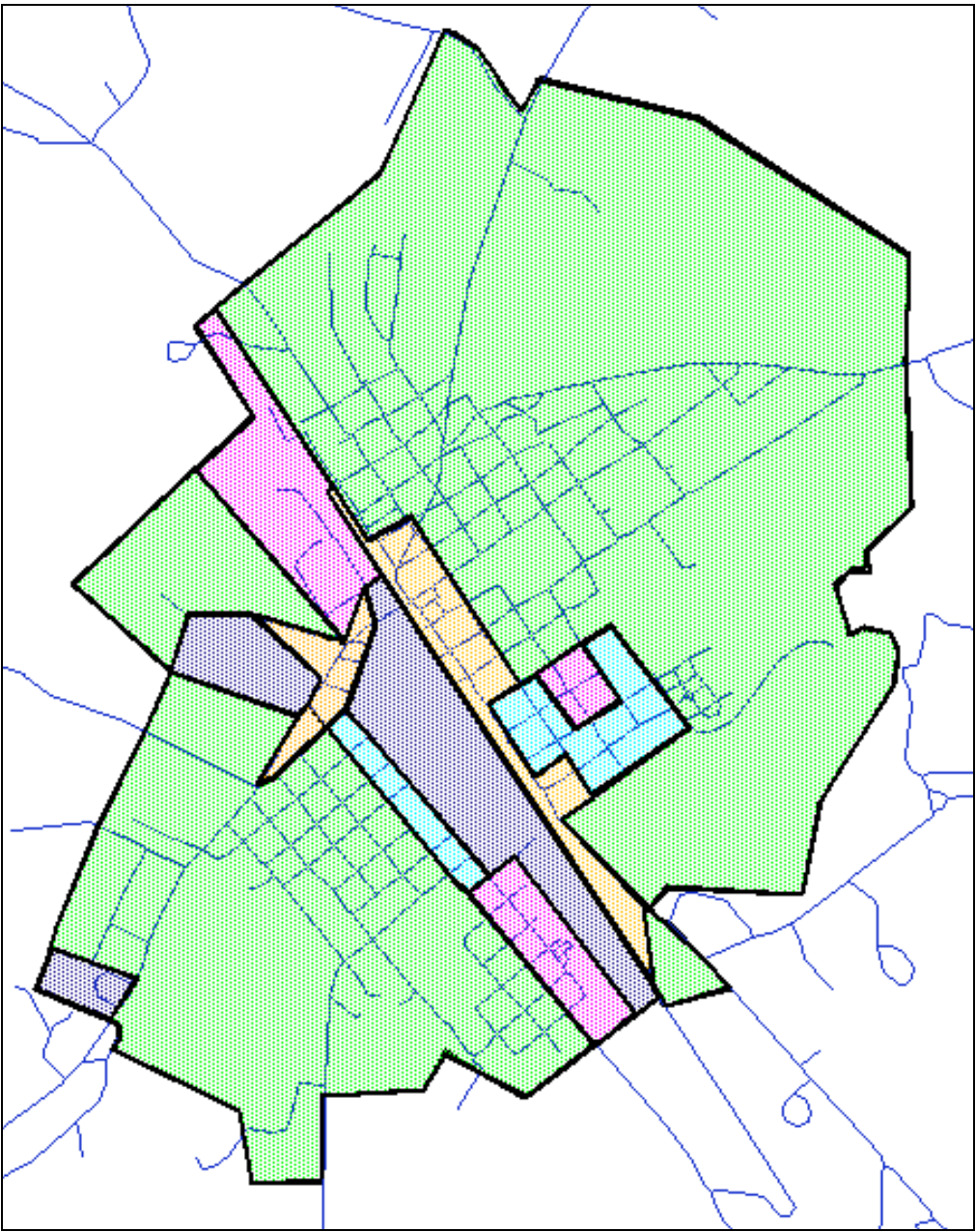
Town of Kenbridge Future Land Use Map








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|---|------------------|---|------------------|--|--------------|---|----------------|---|----------------|
|  | R-20 Residential |  | R-6 Residential |  | Cemetery |  | B-1 Business |  | M-1 Industrial |
|  | R-10 Residential |  | R-6 Multi-Family |  | B-2 Business |  | M-2 Industrial | | |

Map created by CRC – May 2006

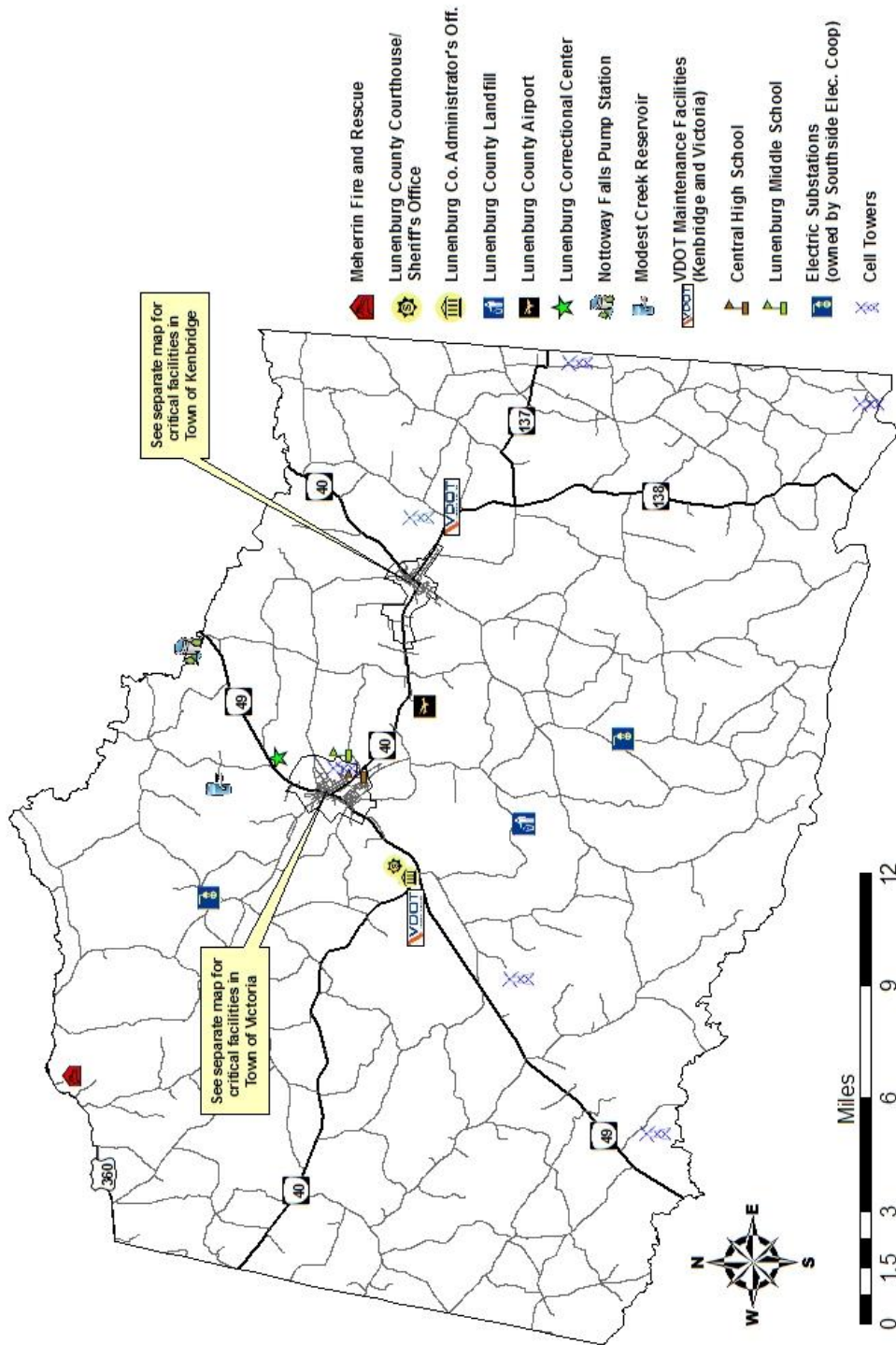
Town of Victoria Future Land Use Map



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|---|--|--|
|  R-1 Residential |  R-MH Residential |  I-1 Industrial |
|  R-2 Residential |  C-1 Commercial | |

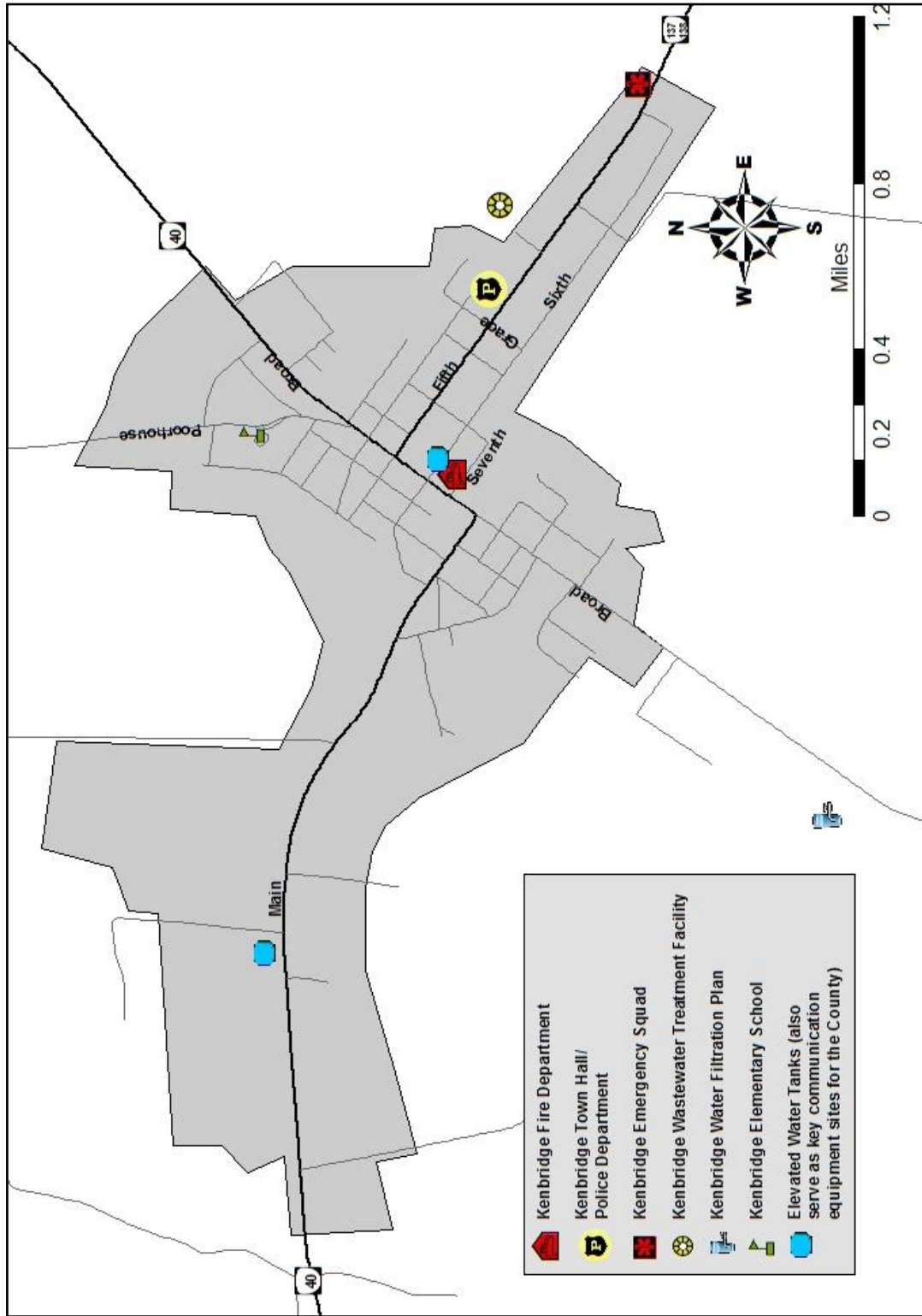
Map created by CRC – April 2006

Lunenburg County Critical Facilities Map



Map created by CRC – February 2011 (updated June 2016)
 Source: Lunenburg County

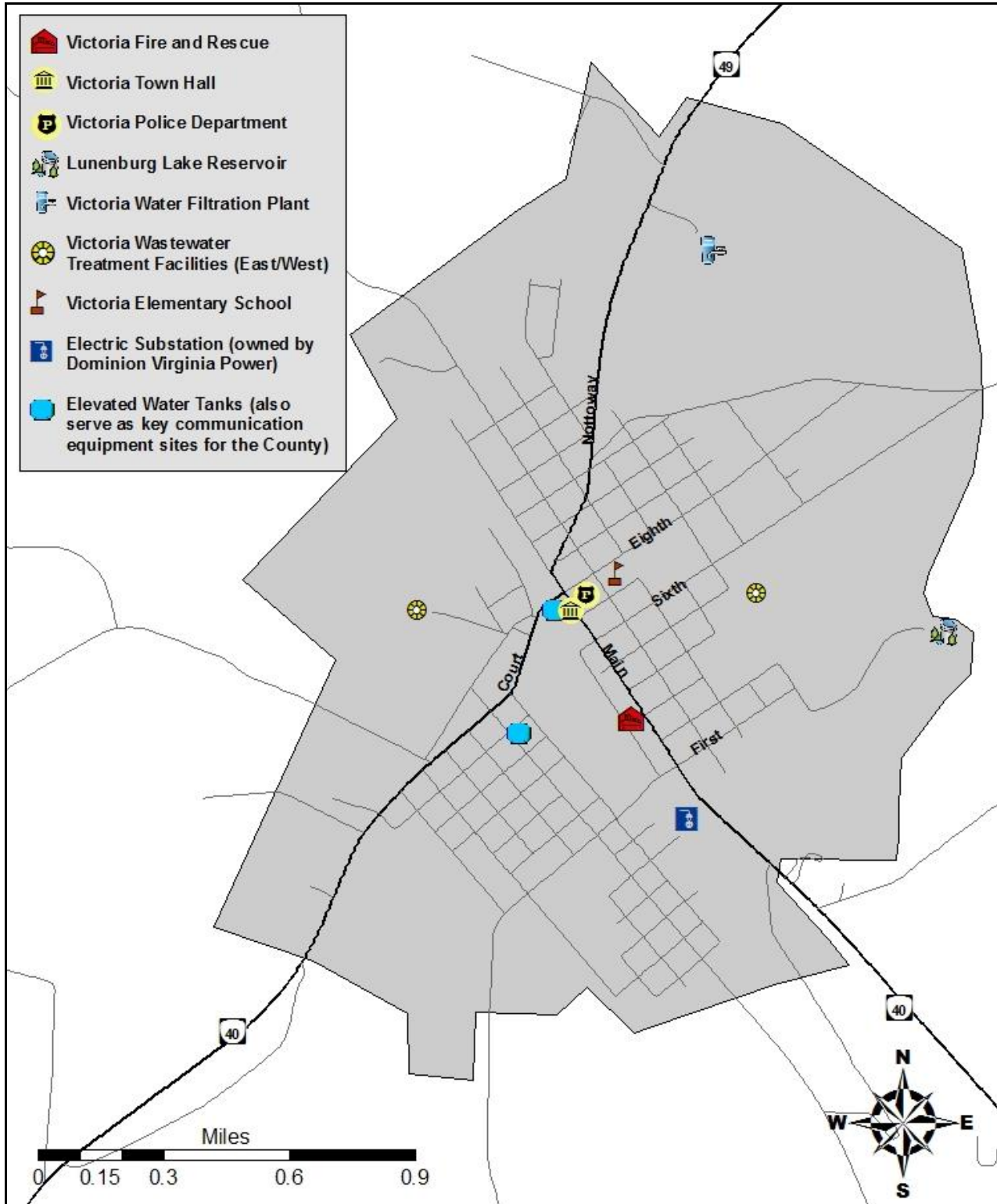
Town of Kenbridge Critical Facilities Map



Map created by CRC – February 2011 (updated June 2016)

Source: Town of Kenbridge

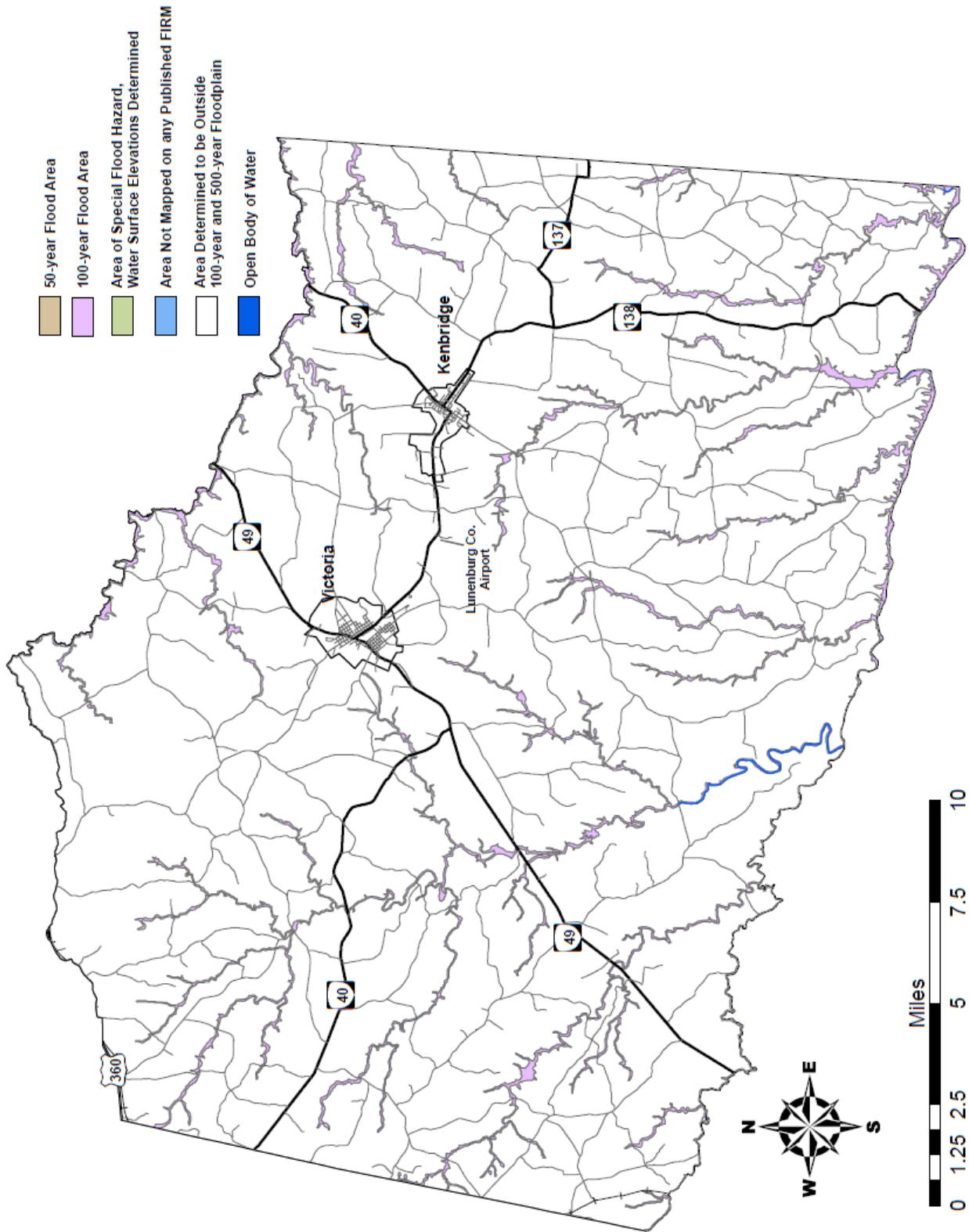
Town of Victoria Critical Facilities Map



Map created by CRC – February 2011 (updated June 2016)

Source: Town of Victoria

Lunenburg County Flood Zone Map



Map created by CRC – February 2011

NFIP Survey Results

NATIONAL FLOOD INSURANCE PROGRAM (NFIP) SURVEY

MUNICIPALITY: LUNENBURG COUNTY, TOWNS OF KENBRIDGE AND VICTORIA

1. FLOODPLAIN IDENTIFICATION AND MAPPING			
<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
a. Does the municipality maintain accessible copies of an effective Flood Insurance Rate Map (FIRM)/Digital Flood Insurance Rate Map (DFIRM)? Does the municipality maintain accessible copies of the most recent Flood Insurance Study (FIS)?	Place these documents in the local libraries or make available publicly.	yes	Available at County and Town Government Offices
b. Has the municipality adopted the most current DFIRM/FIRM and FIS?	State the date of adoption, if approved.	no	
c. Does the municipality support request for map updates?	If yes, state how.	no	
d. Does the municipality share with Federal Emergency Management Agency (FEMA) any new technical or scientific data that could result in map revisions within 6 months of creation or identification of new data?	If yes, specify how.	no	No revisions have been necessary.
e. Does the municipality provide assistance with local floodplain determinations?	If yes, specify how.	yes	Case by case basis as very little of our county is in the flood plain
f. Does the municipality maintain a record of approved Letters of Map Change?	If yes, specify the responsible office.	no	To my knowledge we have not received revisions

2. FLOODPLAIN MANAGEMENT			
<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
a. Has the municipality adopted a compliant floodplain management ordinance that, at a minimum, regulates the following:	If yes, answer questions (1) through (4) below.	yes	
(1) Does the municipality issue permits for all proposed development in the Special Flood Hazard Areas (SFHAs)?	If yes, specify the office responsible.	no	
(2) Does the municipality obtain, review, and utilize any Base Flood Elevation (BFE) and floodway data, and/or require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres?	If yes, specify the office responsible.	yes	Requesting and confirming all data for compliance.
(3) Does the municipality identify measures to keep all new and substantially improved construction reasonably safe from flooding to or above the BFE, including anchoring, using flood-resistant materials, and designing or locating utilities and service facilities to prevent water damage?	If yes, specify the office responsible.	yes	Requesting and confirming all data for compliance.
(4) Does the municipality document and maintain records of elevation data that document lowest floor elevation for new or substantially improved structures?	If yes, specify the office responsible.	yes	Information is obtained on case by case basis. To date we have no construction in Flood Plain.
b. If a compliant floodplain ordinance was adopted, does the municipality enforce the ordinance by monitoring compliance and taking remedial action to correct violations?	If yes, specify how.	yes	If necessary, permit holder would be required to pay for third party testing to ensure compliance.

2. FLOODPLAIN MANAGEMENT

<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
<p>c. Has the municipality considered adopting activities that extend beyond the minimum requirements? Examples include:</p> <ul style="list-style-type: none"> • Participation in the Community Rating System • Prohibition of production or storage of chemicals in SFHA • Prohibition of certain types of structures, such as hospitals, nursing homes, and jails in SFHA • Prohibition of certain types of residential housing (manufactured homes) in SFHA • Floodplain ordinances that prohibit any new residential or nonresidential structures in SFHA 	If yes, specify activities.	no	

3. FLOOD INSURANCE

<i>Requirement</i>	<i>Recommended Action</i>	<i>Yes/No</i>	<i>Comments</i>
a. Does the municipality educate community members about the availability and value of flood insurance?	If yes, specify how.	no	
b. Does the municipality inform community property owners about changes to the DFIRM/FIRM that would impact their insurance rates?	If yes, specify how.	no	
c. Does the municipality provide general assistance to community members regarding insurance issues?	If yes, specify how.	no	