Vermont Agriculture
1840 - 2024

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Vermont Agency of Agriculture, Food and Markets
Presentation to: VCSI – Ag Working Group Meeting
February 7, 2024
The number of ‘marketable’ trees in the Champlain Valley by 1840.

From: Mike Winslow, A Natural and Human History of Lake Champlain. VJEL Vol. 17 p. 492
Clearing trees for lumber and potash transformed Vermont.

1791: Vermont exported 2 million pounds of Potash to Great Britain.

1823 the Champlain Canal was constructed.

Burlington was the 3rd largest lumber port in the U.S. by the mid-1800s.

By the late 19th Century, Vermont was 70% Cleared and 30% forested.
### Table 1: Trends in Vermont Farming

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NUMBER</th>
<th>AVERAGE SIZE OF FARMS PER ACRE</th>
<th>PROPORTION OF LAND IN FARMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1850</td>
<td>29,763</td>
<td>139</td>
<td>71%</td>
</tr>
<tr>
<td>1860</td>
<td>31,556</td>
<td>136</td>
<td>73%</td>
</tr>
<tr>
<td>1870</td>
<td>33,827</td>
<td>134</td>
<td>78%</td>
</tr>
<tr>
<td>1880</td>
<td>35,522</td>
<td>138</td>
<td>84%</td>
</tr>
<tr>
<td>1890</td>
<td>32,573</td>
<td>135</td>
<td>75%</td>
</tr>
<tr>
<td>1900</td>
<td>33,104</td>
<td>143</td>
<td>81%</td>
</tr>
<tr>
<td>1910</td>
<td>32,709</td>
<td>143</td>
<td>80%</td>
</tr>
<tr>
<td>1920</td>
<td>29,075</td>
<td>146</td>
<td>72%</td>
</tr>
<tr>
<td>1925</td>
<td>27,786</td>
<td>141</td>
<td>67%</td>
</tr>
<tr>
<td>1930</td>
<td>24,898</td>
<td>156</td>
<td>67%</td>
</tr>
<tr>
<td>1935</td>
<td>27,061</td>
<td>149</td>
<td>69%</td>
</tr>
<tr>
<td>1940</td>
<td>23,582</td>
<td>156</td>
<td>62%</td>
</tr>
<tr>
<td>1945</td>
<td>26,490</td>
<td>148</td>
<td>66%</td>
</tr>
<tr>
<td>1950</td>
<td>19,043</td>
<td>185</td>
<td>59%</td>
</tr>
<tr>
<td>1954</td>
<td>15,981</td>
<td>208</td>
<td>56%</td>
</tr>
<tr>
<td>1959</td>
<td>12,099</td>
<td>243</td>
<td>50%</td>
</tr>
<tr>
<td>1964</td>
<td>9,247</td>
<td>273</td>
<td>43%</td>
</tr>
</tbody>
</table>

Source: Central Planning Office, Montpelier, Vermont

70% to 16%

Change from Late 1800’s open land to Agricultural land in the Champlain Valley by 2012.

From: Mike Winslow, A Natural and Human History of Lake Champlain. VJEL Vol. 17 p. 492
The Vermont Statehouse

Natural & Working Lands (NWL) cover 94% of Vermont

*Other perennial vegetation includes grasslands, shrub/scrublands, and turf

Data source: 2016 National Land Cover Database; Images courtesy FPR
Vermont had the highest agricultural sales of any New England state, largely due to milk production.

In 2021, Vermont produced almost half of the country’s maple syrup (1.75 million gallons).

Cropland decreased from 1.3 million acres in 1945 to 458,000 acres in 2017.

Pastureland decreased from 1.0 million acres in 1945 to 158,000 acres in 2017.

Acreage for animal feed equaled 93.6% (391,420 acres) of harvested cropland and 32.8% of total land in agriculture. Boosting vegetable, fruit, and grain production—whether in the open or indoors—is one way Vermont could help the region.

Act 250 reports through the years

1968

VISON AND CHOICE
Vermont's Future

1988

Report of the Governor's Commission on Vermont's Future: Guidelines for Growth

2019

State of Vermont

2023

Natural Resources Board

Necessary Updates to Act 250

Act 250 reports through the years

1968

1988

2019

2023

Is a farmer

To undertake this review, VHCB and ANR convened a working group of experts from state agencies and non-governmental conservation organizations. This group comprised:

- Gannon Osborn – Vermont Department of Forests, Parks, and Recreation
- Katie Michels – Vermont Housing and Conservation Board
- Robert Zaino – Vermont Fish and Wildlife Department
- Gus Goodwin – The Nature Conservancy
- Elizabeth Thompson – Independent Ecologist
- Britt Haselton – Vermont Land Trust
- Rosalind Renfrew – Vermont Fish and Wildlife Department
- Hannah Phillips – Vermont Department of Forests, Parks, and Recreation
- Keith Thompson – Vermont Department of Forests, Parks, and Recreation
- Bill Dell’Isola – Vermont Housing and Conservation Board
- Zack Porter – Standing Trees
- Gunnar Nurme – Vermont Department of Forests, Parks, and Recreation

Act 250 reports through the years

1968

1988

2019

2023

Ag mentions / word:
0.42%
0.36%
0.24%
0.10%

-14.3%
-42.9%
-76.2%

1968 VT Land in Farms: 43%

1988 VT Land in Farms: 24%
-44%

2017 VT Land in Farms: 12%
-72%

2024 VT Land in Farms: ?%
Development Trends

Available data show that, statewide from 2008 to 2018, 83 percent of new residential structures and 60.63 percent of commercial structures were located outside existing centers. The spread of residential development outside the centers is underscored by map comparisons of Vermont’s population distribution, which show that Vermont’s daytime population is much more concentrated in the centers than its 24-hour population distribution.

Available data also show that, statewide from 2004 to 2016, Vermont lost 147,684 acres or approximately 15 percent of its undeveloped woodland parcels, and 53,406 acres, or 9.3 percent, of its farmland parcels to public ownership or another land classification. During the same period, the acreage classified as residential use increased by 162,670 acres, or seven percent.

Vermont has the highest percentage of agricultural land as a percentage of total land area, 20.5%, of any state in New England, but only a small percentage of agricultural land is used for crops to directly feed people.

Ag Perspective

1968

The commitment to a framework for organizing the expanding population and resources of the State could accomplish many specific objectives. It would:

- attract outside industrial and recreational investment
- reassure present investors and semi-residents of protection
- preserve the State's agricultural and forest base
- provide choice of urban, suburban and rural living throughout Vermont
- Preserve essential community life in the State
- foster rural area development on the concentration and space preservation concept that is classic to Vermont
- balance political concerns and mitigate against urban-suburban rural polarisation
- Provide the setting for establishment of new towns and planned expansion of satellite villages
- promote local control and initiative within guidelines of a State consensus built on a balance of benefits from State incentives and investments.

1988

All of the recommendations were based on four broad goals that spring from Vermont values:

1. To maintain a sense of community.
2. To support our agricultural heritage — the working landscape.
3. To protect environmental quality.
4. To provide opportunity for all Vermonters to obtain a quality job, a good education and decent, affordable housing.

Future policies and planning at the local, regional and state levels must be guided by these goals.

2019

Act 47, Sec. 2 (e)(2)(C)(i) — “Whether the criteria support development in areas designated under 24 V.S.A. chapter 76A, and preserve rural areas, farms, and forests outside those areas.”

Vs.

The repeal of the exemption for farming, logging, and forestry below 2,500 feet when these occur in areas that have been designated as critical resource areas.

2023

The Steering Committee recognizes that Vermont is facing a housing crisis in addition to the global climate crisis. The Steering Committee believes that facilitating the development of new housing while ensuring that we are maintaining our rural working lands and ecologically important natural resources are not mutually exclusive goals. In fact, exempting designated areas from Act 250 jurisdiction to increase the state’s housing stock, advance equity and diversity through affordable and workforce housing, and thus expand economic development opportunities while protecting rural lands and natural resources are the basis for these recommendations.

- wildlife, and agricultural soils and local government capacity to service new development. The longstanding vision of Act 250 has been to support compact development surrounded by forests and open lands, including farms and forestry operations.

Vs.

Recommendation: Enact the provisions in H.128 reducing the agricultural soils mitigation ratio for forest processing enterprises to 1:1, which is the same ratio that industrial parks need to provide.
National and Vermont Climate Impacts

**Projected Climate Risks**

**EXTREME RAIN**
Annual precipitation and extreme precipitation events in Vermont have been above average in recent years.

**HURRICANES**
Hurricanes Irene (2011), Floyd (1999), and Gloria (1985), were all billion-dollar disasters that impacted Vermont.

**WATER STRESS**
Vermont has experienced more abnormally dry days during the past 10 years than it did in the early 2000s.

**WILDFIRE**
Large wildfires are not very common in Vermont; but 200-400 small fires (1.5-2 acres) occur per year.

**HEAT STRESS**
Temperatures have risen about 3.0°F since the beginning of the 20th century, resulting in warmer nights, shorter freeze-free seasons, and longer growing seasons.

**SEA LEVEL RISE**
With no ocean coastline, Vermont is spared the direct impacts of sea level rise.

FIGURE 6: Projected Climate Change Risks by New England County

Can the 6 New England states provide 30% of their food from regional farms and fisheries by 2030?

Could the six New England states meet a goal of supplying 30% of the region’s food by 2030?

New England Regional Self-Reliance for Major Food Groups

- **Grains**: 1.6%
- **Vegetables**: 28.3%
- **Fruits**: 8.7%
- **Dairy**: 50.0%
- **Proteins**: 3.2%

Servings:

- **Grains**: 1.7%
- **Vegetables**: 41.0%
- **Fruits**: 6.9%
- **Dairy**: 47.4%
- **Proteins**: 2.6%

Source: [NEFNE Executive Summary](https://nefoodsystemplanners.org/wp-content/uploads/NEFNE_Executive-Summary.pdf)
National and Vermont Climate Impacts

Source: Ellen Kahler, VSIF Presentation to House Agriculture:
Figure 1: Acreage Enrolled in Current Use Program by Year

The underlying data for Figure 1 is included with the supplemental digital data provided with this report.

## Table 11: Annual Current Use Enrollment

<table>
<thead>
<tr>
<th>Tax Year</th>
<th>Parcels</th>
<th>Owners</th>
<th>Agricultural Acres</th>
<th>Forest Acres</th>
<th>Total Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>19,606</td>
<td>16,097</td>
<td>543,200</td>
<td>2,025,316</td>
<td>2,568,516</td>
</tr>
<tr>
<td>2022</td>
<td>19,535</td>
<td>15,954</td>
<td>545,477</td>
<td>2,014,163</td>
<td>2,559,641</td>
</tr>
<tr>
<td>2021</td>
<td>19,415</td>
<td>15,840</td>
<td>547,617</td>
<td>1,996,378</td>
<td>2,543,995</td>
</tr>
<tr>
<td>2020</td>
<td>19,258</td>
<td>15,669</td>
<td>547,019</td>
<td>1,984,714</td>
<td>2,531,733</td>
</tr>
<tr>
<td>2019</td>
<td>19,086</td>
<td>15,490</td>
<td>551,230</td>
<td>1,966,681</td>
<td>2,517,911</td>
</tr>
<tr>
<td>2018</td>
<td>18,910</td>
<td>15,307</td>
<td>549,319</td>
<td>1,949,198</td>
<td>2,498,517</td>
</tr>
<tr>
<td>2017</td>
<td>18,723</td>
<td>15,147</td>
<td>553,372</td>
<td>1,926,499</td>
<td>2,479,871</td>
</tr>
<tr>
<td>2016</td>
<td>18,457</td>
<td>14,905</td>
<td>556,489</td>
<td>1,900,188</td>
<td>2,456,636</td>
</tr>
<tr>
<td>2015</td>
<td>18,154</td>
<td>14,653</td>
<td>554,078</td>
<td>1,872,070</td>
<td>2,426,149</td>
</tr>
<tr>
<td>2014</td>
<td>18,020</td>
<td>14,553</td>
<td>558,320</td>
<td>1,853,765</td>
<td>2,412,096</td>
</tr>
<tr>
<td>2013</td>
<td>17,647</td>
<td>14,246</td>
<td>555,234</td>
<td>1,814,585</td>
<td>2,369,819</td>
</tr>
<tr>
<td>2012</td>
<td>17,190</td>
<td>13,831</td>
<td>551,055</td>
<td>1,776,153</td>
<td>2,327,208</td>
</tr>
</tbody>
</table>

4.5% of Vermont is a prime farmland soil

<table>
<thead>
<tr>
<th>County</th>
<th>Total Acres of Soil &amp; Water</th>
<th>Acres of &quot;All areas are prime farmland&quot;</th>
<th>% total acres prime farmland</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Addison</td>
<td>516,939</td>
<td>19,141</td>
<td>4%</td>
</tr>
<tr>
<td>2 Bennington</td>
<td>433,119</td>
<td>24,162</td>
<td>6%</td>
</tr>
<tr>
<td>3 Caledonia</td>
<td>420,101</td>
<td>15,080</td>
<td>4%</td>
</tr>
<tr>
<td>4 Chittenden</td>
<td>396,198</td>
<td>19,696</td>
<td>5%</td>
</tr>
<tr>
<td>5 Essex</td>
<td>429,359</td>
<td>3,514</td>
<td>1%</td>
</tr>
<tr>
<td>6 Franklin</td>
<td>440,776</td>
<td>24,755</td>
<td>5%</td>
</tr>
<tr>
<td>7 Grand Isle</td>
<td>126,978</td>
<td>13,109</td>
<td>10%</td>
</tr>
<tr>
<td>8 Lamoille</td>
<td>296,400</td>
<td>19,645</td>
<td>7%</td>
</tr>
<tr>
<td>9 Orange</td>
<td>442,545</td>
<td>30,119</td>
<td>7%</td>
</tr>
<tr>
<td>10 Orleans</td>
<td>462,291</td>
<td>24,521</td>
<td>5%</td>
</tr>
<tr>
<td>11 Rutland</td>
<td>604,394</td>
<td>42,932</td>
<td>7%</td>
</tr>
<tr>
<td>12 Washington</td>
<td>445,194</td>
<td>8,451</td>
<td>2%</td>
</tr>
<tr>
<td>13 Windham</td>
<td>510,962</td>
<td>6,700</td>
<td>1%</td>
</tr>
<tr>
<td>14 Windsor</td>
<td>625,310</td>
<td>24,196</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,150,565</strong></td>
<td><strong>276,121</strong></td>
<td><strong>4%</strong></td>
</tr>
</tbody>
</table>

### Act 250 – Critical Resource Areas

<table>
<thead>
<tr>
<th>Category</th>
<th>State Land</th>
<th>CRA</th>
<th>Agricultural Land</th>
<th>CRA</th>
<th>Farmsteads</th>
<th>CRA</th>
<th>Farmsteads</th>
<th>CRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acres</td>
<td>%</td>
<td>%</td>
<td>Acres</td>
<td>%</td>
<td>Acres</td>
<td>%</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Category Total</td>
<td>5,889,063</td>
<td>100%</td>
<td>657,998</td>
<td>100%</td>
<td>9,218</td>
<td>100%</td>
<td>1,263</td>
<td>100%</td>
</tr>
<tr>
<td>Critical Resource Area</td>
<td>3,883,340</td>
<td>66%</td>
<td>257,898</td>
<td>39%</td>
<td>2,281</td>
<td>25%</td>
<td>836</td>
<td>66%</td>
</tr>
<tr>
<td>River Corridors</td>
<td>205,531</td>
<td>3%</td>
<td>34,690</td>
<td>5%</td>
<td>295</td>
<td>3%</td>
<td>143</td>
<td>11%</td>
</tr>
<tr>
<td>Wetlands</td>
<td>1,328,282</td>
<td>23%</td>
<td>175,741</td>
<td>27%</td>
<td>1,743</td>
<td>19%</td>
<td>653</td>
<td>78%</td>
</tr>
<tr>
<td>Wetlands (Class I &amp; II)</td>
<td>291,919</td>
<td>5%</td>
<td>22,014</td>
<td>3%</td>
<td>230</td>
<td>2%</td>
<td>255</td>
<td>20%</td>
</tr>
<tr>
<td>Hydric Soils</td>
<td>1,034,740</td>
<td>18%</td>
<td>153,678</td>
<td>23%</td>
<td>1,513</td>
<td>16%</td>
<td>560</td>
<td>44%</td>
</tr>
<tr>
<td>Elevation (2000 ft)</td>
<td>708,154</td>
<td>12%</td>
<td>3,826</td>
<td>1%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Slope &amp; Shallow Bedrock</td>
<td>1,642,995</td>
<td>28%</td>
<td>43,690</td>
<td>7%</td>
<td>243</td>
<td>3%</td>
<td>279</td>
<td>22%</td>
</tr>
<tr>
<td>DEM Slope (15%)</td>
<td>2,844,544</td>
<td>48%</td>
<td>106,651</td>
<td>16%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shallow Bedrock (20 in)</td>
<td>2,455,521</td>
<td>42%</td>
<td>115,246</td>
<td>18%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Key Points:**

- Adding Hydric Soils to the CRA increases area across the State from 48% to 66%, and agricultural land that is within CRA from 16% to 39%.

- No farmsteads (acreage or points) are at or above an elevation of 2000 ft.

- Slope and Shallow Bedrock is the largest component of the CRA across the State, but Wetland is the largest component across agricultural land and farmsteads.