Land Cover Dataset Workshop

December 15, 2017
VGIN 1-m resolution Land Cover Data

differences from previous land cover datasets? (NLCD)

• **Accuracy**
  
  • 900 times more information than previous NLCD in Bay model (1 meter vs. 30 meter pixel)
  • Baseline spatial and classification accuracy of data targeted at 85%
  • For many land classification categories a level of 95% accuracy achieved
  • Statewide accuracy of certain classes in NLCD has been found by independent studies to be less than 10% such as in case of shrubland in Kansas

  -VGIN Applications of the Virginia Statewide Land Cover Database- Scheibe & Ellsworth

• **Cohesiveness**
  
  • Standardized product is preferable to conglomeration
  • Redundancy of data reduced due to lack off data collection coordination
  • Temporal inconsistency reduced
  • Varying quality- quality still varies but less so than in the NLCD
RAPPAHANNOCK-RAPIDAN REGION'S LAND COVER

- Open Water: 6.6%
- Impervious: 2.3%
- Barren: 0.6%
- Forest/Tree: 60.3%
- Scrub/Shrub: 0.1%
- Harrosted/Disturbed: 0.5%
- Cropland: 0.8%
- TurfGrass: 0.5%
- Pasture: 21.8%
- Wetlands: 5.0%
Possible Regional Uses for the Land Cover Dataset

• Regional Green Infrastructure Plan Update
• Regional Wildfire Risk Assessment
• Regional Identification & Prioritization of RBZs
• Regional Solar Energy Propensity Study
Regional Wildfire Risk Assessment

- 2003 VDOF_WRA
- Percent Slope
- 30M National Land Cover Dataset
- Density of Historic Wildfires from National Parks & DOF 1995-2001
- Slope Orientation/Aspect
- Population Density
- Distance to Roads
- Railroad Buffer
- Road Density to Developed Areas
## Regional Wildfire Risk Assessment

<table>
<thead>
<tr>
<th>County</th>
<th># of Incidents in High Risk Area (2002-2016)</th>
<th># of Incidents in Moderate Risk Area (2002-2016)</th>
<th># of Incidents in Low Risk Area (2002-2016)</th>
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<tbody>
<tr>
<td>Culpeper</td>
<td>28</td>
<td>60</td>
<td>23</td>
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<tr>
<td>Fauquier</td>
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<td>87</td>
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<td>Madison</td>
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<td>Orange</td>
<td>32</td>
<td>97</td>
<td>14</td>
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<tr>
<td>Rappahannock</td>
<td>30</td>
<td>39</td>
<td>1</td>
</tr>
</tbody>
</table>
Regional Wildfire Risk Assessment

Vulnerability of buildings, utilities & critical facilities derived from HAZUS

Slope Orientation/Aspect

Population Density

Protected Lands Model

2018 RRRC_WRA

Percent Slope

Distance to Roads

VA 1M Land Cover Data NLCD

Railroad Buffer

Prime Agricultural Lands Model

Proximity to Fire Hydrants (buffer)

Density of Historic Wildfires from National Parks & DOF 2002-2016

Road Density to Developed Areas
Regional Identification & Prioritization of RBZs

- Drainage Area
- VA 1-M Res. Land Cover Dataset
- DEM
- Soil Capability
Regional Solar Energy Propensity Study

- LIDAR derive viewsheds from historic points/SN
- Parcel Size
- LIDAR derive solar insolation value
- Land Use
- Structures
- VA 1-M Res. Land Cover Dataset
- Substation service area(s)
- Zoning
- Slope
- Prime Agricultural Lands Model
Regional Solar Energy Propensity Study

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