Environmental and Public Health Disparities in Rural Appalachia
Where is “Appalachia?”
<table>
<thead>
<tr>
<th>State</th>
<th>Total number of counties</th>
<th>Appalachian counties</th>
<th>% Appalachian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>67</td>
<td>37</td>
<td>55.2</td>
</tr>
<tr>
<td>Georgia</td>
<td>159</td>
<td>37</td>
<td>23.3</td>
</tr>
<tr>
<td>Kentucky</td>
<td>120</td>
<td>54</td>
<td>45</td>
</tr>
<tr>
<td>Maryland</td>
<td>24</td>
<td>3</td>
<td>12.5</td>
</tr>
<tr>
<td>Mississippi</td>
<td>82</td>
<td>24</td>
<td>29.3</td>
</tr>
<tr>
<td>New York</td>
<td>57</td>
<td>14</td>
<td>24.5</td>
</tr>
<tr>
<td>North Carolina</td>
<td>100</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>Ohio</td>
<td>88</td>
<td>32</td>
<td>36.4</td>
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<tr>
<td>Pennsylvania</td>
<td>67</td>
<td>52</td>
<td>77.6</td>
</tr>
<tr>
<td>South Carolina</td>
<td>46</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>Tennessee</td>
<td>95</td>
<td>52</td>
<td>54.7</td>
</tr>
<tr>
<td>Virginia*</td>
<td>95</td>
<td>25</td>
<td>26.3</td>
</tr>
<tr>
<td>West Virginia</td>
<td>55</td>
<td>55</td>
<td>100</td>
</tr>
<tr>
<td>Totals</td>
<td>1055</td>
<td>420</td>
<td>39.8</td>
</tr>
</tbody>
</table>

* Virginia also has 8 independent cities that are identified as Appalachian
Ohio Counties
Appalachian Perceptions

- Take out phone and open web browser
- Go to: Kahoot.it
- Enter code provided
What is Appalachia?

• What is the first word or phrase that comes to mind when you hear the word APPALACHIA?
First Impression of Appalachia

Rural Mountains

Poor
Defining Appalachia

• “...we cannot agree on a definition of Appalachia, nor can we definitively say who is Appalachian. Yet we can agree that Appalachia is an important concept because it often makes a difference in people’s lives, either personally or as a group.”

  — Obermiller, 2010
Do you think environmental conditions in Appalachia are different than others areas in the U.S.?
Are Appalachian EH Conditions Different?

- Yes
- Maybe
- No
- No opinion
Which of the existing and emerging issues from Healthy People 2020 is most important in Appalachia?
EH Components of HP 2020
(Avg. 1 = most; 6 = least)
Some Definitions

- Social Determinants of Health
- Health disparities
- Environmental health inequities
Social Determinants of Health

“"The social determinants of health (SDH) are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life.”

--World Health Organization
Health Disparities

• “a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage.”
  
  • Healthy People 2020
American Health Rankings, 2016
Environmental Health Inequities

• “Health inequities are *avoidable* inequalities in health between groups of people within countries and between countries.”
  
  • World Health Organization
Stories

- Forest County, PA: Built Environment
- Wyoming County, WV: Private Drinking Water
- Wise County, VA: Private Wastewater
- Athens County, OH: Food Security
Built Environment: 
Forest County, PA

- Population: 
  - 2000: 4,946
  - 2010: 7,716
SCI-Forest
2017 Health Factors
EH in Forest County

- 8,760 Housing units
  - 6,249 (71%) vacant
- Prison projects:
  - Since 2012: $22.9 million
  - Cost per inmate: $37,342
  - MHI: $35,533
Forest County Comprehensive Plan
Map 11: Public Water Service

Legend
- Aqua PA Forest SGI
- Aqua PA Marienville
- Cornell Abraxas
- Tionesta Borough Water Supply

Miles
• Forest Count Comprehensive Plan:
  – “prisoners do not contribute directly to the local economy, and pay no local taxes. The prison may very well cost the County more than it benefits.”
Private Drinking Water: Wyoming County, WV

- “Hidden gem of southern West Virginia”
- Unemployment:
  - 2008: 4.7 %
  - 2015: 10.4 %
Health Factors, 2017
Bud, West Virginia
(Winding Gulf Coalfield)
this is where everything connects
• “I know the Charleston water crisis made national headlines, but the scope and duration of this event affected the residents of Wyoming County as much or more than the Elk River Situation.”
  
  • State Senator Mike Green
Private Wastewater: Wise County, VA
Health Factors, 2017
Big Stone Gap Coalfield
Food Security: Athens County, OH

• “Home to one of the nation’s first ‘super-local’ food economies”
Food Environment
Inequities? SDOH? Disparities

- Natural disasters
- Mountaintop removal mining
- Toxic release inventory
- Coal ash impoundments
- Food security
- Uranium enrichment
• “The lower the socioeconomic position, the worse the health.”
  –WHO, Closing the Gap, 2008