- 10,000 square miles
- 25% of Virginia
- Home to 1/3 of Virginians – 3 million people
- Encompasses 38 counties and 21 cities
River At Risk Campaign - 2014

LEGEND

Threats to the river:
- Toxic Storage Sites
- Coal Ash Storage Sites
- Railroads

Hope for the river:
- Advocates

James River & Tributaries

River at Risk Campaign Map

- Covington Mill
- Buchanan
- Lynchburg
- Charlottesville
- Scottsville
- Bremo Power Station
- Farmville
- Richmond
- Chesterfield Power Station
- Petersburg
- Hopewell Power Station
- Williamsburg
- Yorktown
- Hampton
- Norfolk
- Chesapeake Energy Center
State lawmakers passed legislation that calls for the full removal of 28 million tons of coal ash from leaking ponds across the Chesapeake Bay watershed.
BREAKING NEWS

SIX ADDITIONAL CHEMICAL STORAGE CONTAINERS COULD EXPLODE AT ANY TIME AT FLOODED TX PLANT
Toxic Floodwaters Model

- **Geography:**
  - James Watershed
  - CDC SOVI

- **Sites:**
  - EPA FRS
  - DEQ VEGIS

- **Exposures:**
  - NOAA SLOSH
  - NOAA SLR
  - FEMA flood-zones
Flood-Exposed Hazardous Chemical Facilities in Census Tracts Scoring in the Highest Quartile Nationally for Social Vulnerability Located in the James River Watershed
Flood-Exposed Hazardous Chemical Facilities in Census Tracts Scoring in the Highest Quartile Nationally for Social Vulnerability Located in Hampton Roads, Virginia

849 Flood-Exposed Facilities

- Flood Exposed Facility
Figure 1: Industrial Facilities Exposed to Flooding from Hurricane Storm Surge, James River Watershed

- Category 1 Hurricane Storm Surge: 138 flood-exposed facilities
- Category 2 Hurricane Storm Surge: 352 flood-exposed facilities
- Category 3 Hurricane Storm Surge: 779 flood-exposed facilities

Figure 2: Industrial Facilities Exposed to Flooding from Rainfall Events, James River Watershed

- 587 flood-exposed facilities in 100-year flood zones
- 819 flood-exposed facilities in 500-year flood zones
Context for State Action on Toxic Floodwaters

❖ Clean Water Act, Clean Air Act, and Superfund not well-tailored to sudden flooding events
❖ Federal spill response plans apply only to the largest industrial facilities and oil storage tank sites.
❖ Chemical storage tanks still federally unregulated, despite 2016 consent decree ordering EPA to establish standards.
❖ The Virginia Code has comprehensive regulations for oil storage tanks, but not for chemical storage tanks.
Why focus on above-ground storage tanks (ASTs)?
2014 West Virginia Legislation on ASTs
2014 West Virginia Legislation on ASTs

- Inventory and registration of every tank holding 1320 gallons or more
- Permitting requirements including leak detection, monitoring & labeling
- Annual inspections by professional engineer for ASTs containing hazardous chemicals
- Notice to local governments and public water systems if a company has a tank within a water supply’s “Zone of Critical Concern” (ZCC)
West Virginia -- Focus on Protecting Water Supplies

![Map of West Virginia with river and town names: Charleston, Pinch, and Elkview.]

<table>
<thead>
<tr>
<th>Type of potential significant contaminant source in the ZCC: Charleston</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car dealerships</td>
<td>10</td>
</tr>
<tr>
<td>Gas stations</td>
<td>7</td>
</tr>
<tr>
<td>Permitted discharge pipes (outfalls)</td>
<td>5</td>
</tr>
<tr>
<td>Auto repair shops</td>
<td>4</td>
</tr>
<tr>
<td>Repair shops (engine, appliances, etc.)</td>
<td>4</td>
</tr>
<tr>
<td>Car washes</td>
<td>3</td>
</tr>
<tr>
<td>Equipment rental/repair shops</td>
<td>3</td>
</tr>
<tr>
<td>Sewage sludge/biological solids applications</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>23</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>62</strong></td>
</tr>
</tbody>
</table>

DEQ polled other states and found many state laws on chemical ASTs:
- Minnesota 20,000 chemical ASTs
- Pennsylvania 18,000 chemical ASTs
- West Virginia 44,000 chemical ASTs

DEQ reported there are over 3800 facilities in the Commonwealth storing fuel or chemicals above 10,000 pounds (or above 50 pounds for Extremely Hazardous Substances)

“There is a general lack of siting requirements for chemical storage tanks in near proximity to source [drinking] water areas”

A “key step” for regulation is “inventorying and registering a defined universe of chemical storage facilities and inventory of materials in Virginia.”

General Assembly should consider “information disclosure requirements” about “emergency response plans and chemical inventories” for tanks located in water supply areas.
VCN Proposal for Legislative Reform on ASTs

- Establish a program for registration and regulation of chemical ASTs
- Model the program on the Commonwealth’s existing regs for oil tanks:
  - Registration, reporting, and inspections
  - Standards for siting and construction of new tanks
  - Spill response planning that takes into account flood exposure
  - Financial responsibility requirements for operators of tanks

- HB1860 was previously introduced on this topic in 2017