



Washington State Ban on Coal Tar Sealants

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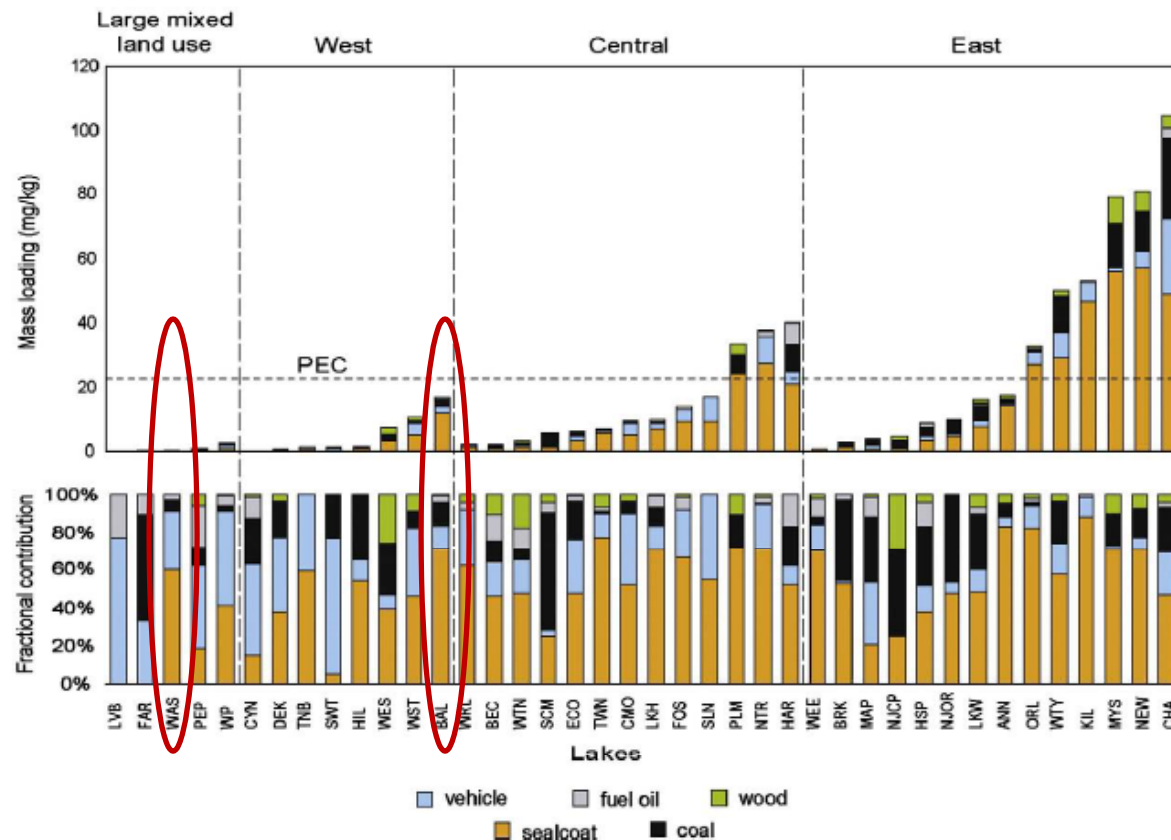
Joshua Grice

Timeline

- Dec 2010- Peter Van Metre and Barbara Mahler. Contribution of PAHs from coal-tar pavement sealcoat and other sources to 40 U.S. lakes. Sci. Tot. Env. 409 334-344.
- Jan 2011- HB1721 based on the USGS paper.
- Ecology publically supported it.
- Apr 2011 passed legislature then signed.



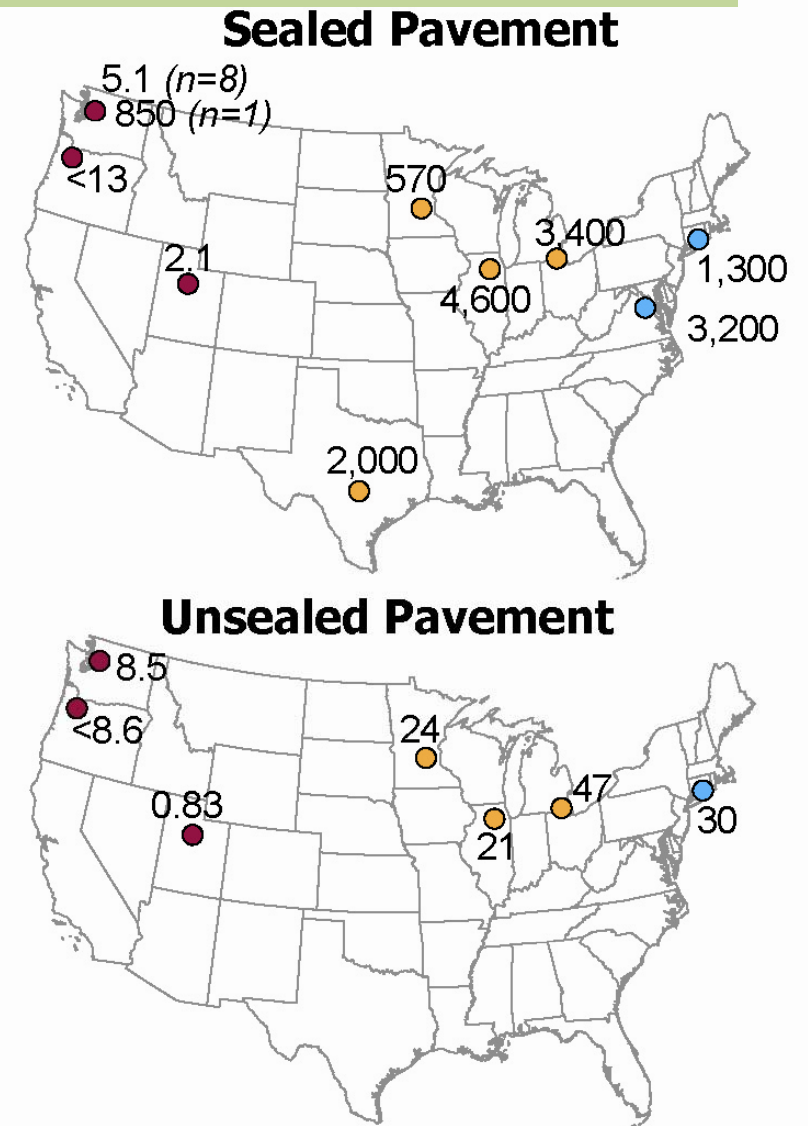
2010 USGS modeling study- fig 4



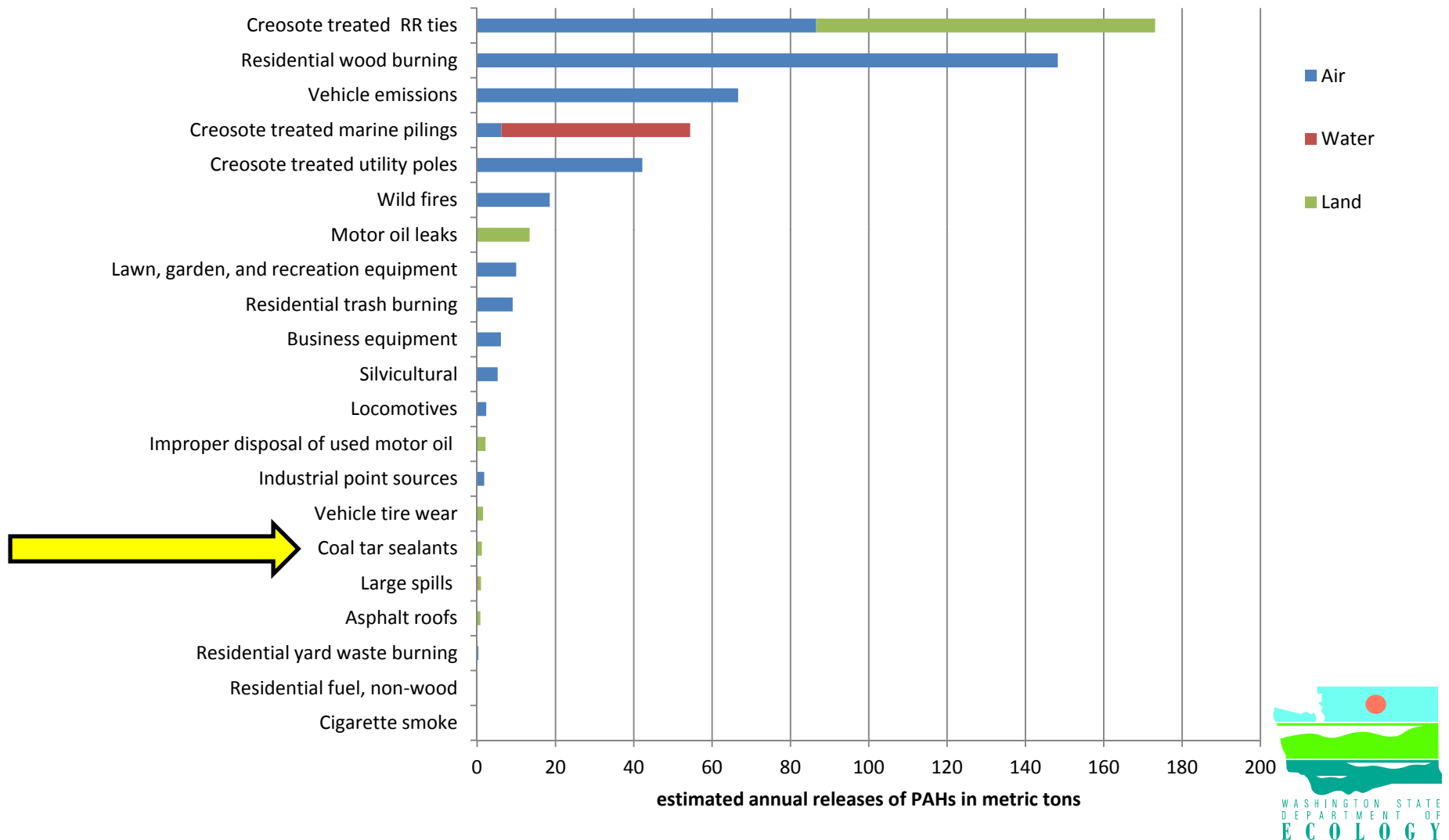
- Figure is surprising based on what we know about
- The use of coal tar sealants and
 - The sources of PAHs

What we know about use of coal tar sealants in Washington

- Van Metre *et al.* 2009 seemed to limit major impacts to east of the Rockies.
- WSDOT stopped using them.
- Some people are rumored to be using them, but these people were not willing to speak publically.



What we know about releases of PAHs in Washington



Ecology support for ban

- Even though we don't think coal tar sealants are the largest source of PAHs in Washington State
- PAHs are bad
 - Persistent, bioaccumulative and toxic (PBTs)
 - Human carcinogens
 - Wildlife carcinogens
 - PAHs also affect survival, growth and reproduction
 - Local examples
- There are safer alternatives



How much PAH in each source?

Fresh asphalt	1.5
Weathered asphalt	3
Fresh motor oil	4
Brake particles	16
Road dust	24
Tire wear particles	86
Diesel engine	102
Gasoline engine	370
Used motor oil	440

Pavement Sealcoat

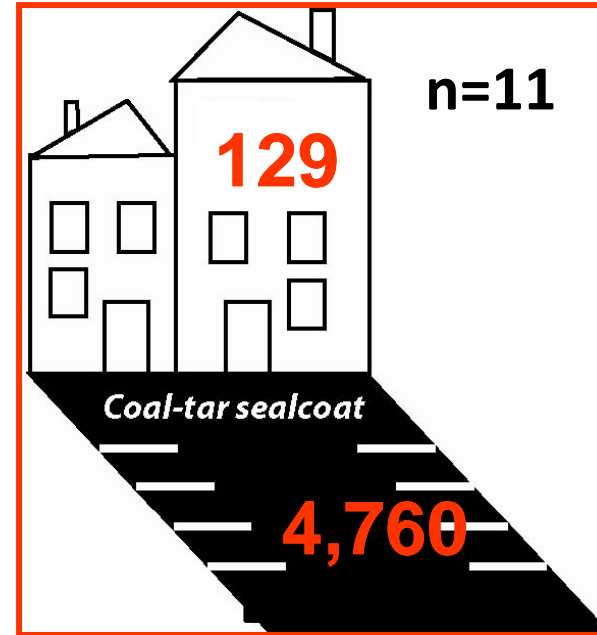
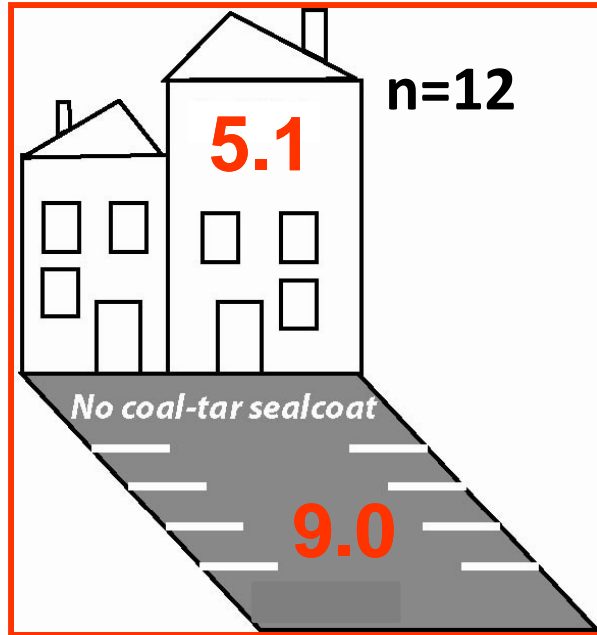
Asphalt Based
~ 50

Coal-tar-based
~ 100,000

All concentrations in mg/kg (averages of 1-6 studies)

Human Health

PAH in house dust [mg/kg]



Mahler, Van Metre, Wilson and Musgrove
2010. EST 44: 894-900

Williams, Mahler, and Van Metre 2012. Coal-tar pavement sealants might substantially increase children's PAH exposures. Environmental Pollution 164: 40-1.

Chapter 70.295 RCW

Storm water pollution — coal tar

- (1) "Coal tar" means a viscous substance obtained by the destructive distillation of coal and containing levels of polycyclic aromatic hydrocarbons in excess of ten thousand milligrams per kilogram. "Coal tar" includes, **but is not limited to**, refined coal tar, high temperature coal tar, coal tar pitch, or any substance identified by **chemical abstract number 65996-93-2**.
- (2) "Coal tar pavement product" means a material that contains coal tar that is intended for use as a pavement sealant.



Chapter 70.295 RCW

Storm water pollution — coal tar

- After Jan. 1, 2012 sales ban

“no person may sell at wholesale or retail a coal tar pavement product **that is labeled** as containing coal tar”
- After July 1, 2013 use ban

“a person may not apply a coal tar pavement product on a driveway or parking area”



Chapter 70.295 RCW

Storm water pollution — coal tar

- A city or county may adopt an ordinance providing for enforcement of the requirements of subsection (1) or (2) of this section. A city or county adopting an ordinance has jurisdiction concurrent with the department to enforce this section.
- Requests for exceptions
 - FAA, DOT

