



ARKANSAS DEPARTMENT OF HEALTH

HEALTH IMPACT ASSESSMENT OF THE CLEAN POWER PLAN

STAKEHOLDERS MEETING - AUGUST 28, 2014

JIM PHILLIPS, MD, PRESENTER

HARMFUL HEALTH IMPACTS OF DECREASED AIR QUALITY

- PRECRADLE TO EARLY GRAVE
- OZONE - PM_{2.5} - MERCURY
- CNS - ASTHMA - COPD - CAD - CANCER - COGNITIVE DECLINE
- PREMATURE DEATH

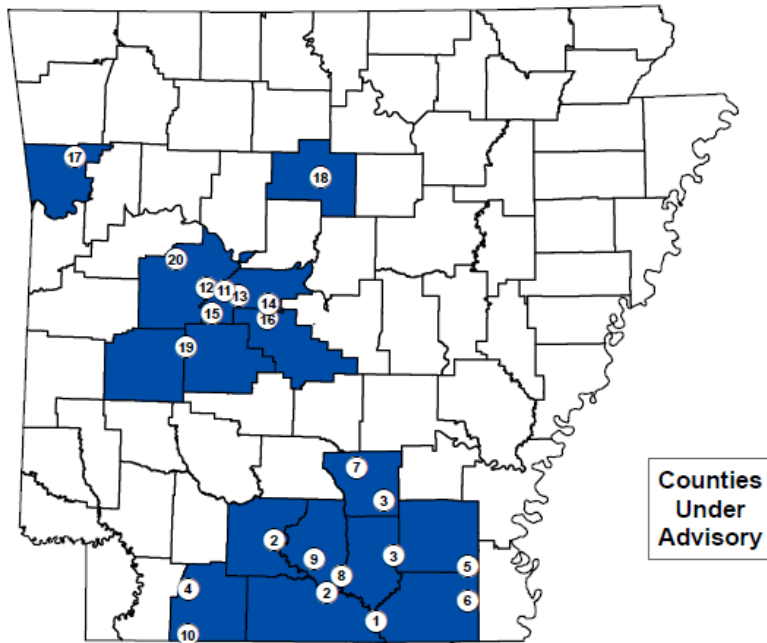
THE 1% RULE

ELECTRIC POWER INDUSTRY EMISSIONS, ARKANSAS

CARBON DIOXIDE	1.7%
SULFUR DIOXIDE	2.3%
NITROGEN OXIDE	1.8%

U.S. ENERGY INFORMATION ADMINISTRATION (2012). STATE ENERGY DATA SYSTEM.

MERCURY IN FISH ADVISORIES



Map Legend

- | | | |
|-------------------------------|--------------------------|---------------------|
| 1. Felsenthal Wildlife Refuge | 8. Moro Bay Creek | 15. Dry Fork Lake |
| 2. Ouachita River | 9. Champagnolle Creek | 16. Lake Winona |
| 3. Saline River | 10. Dorcheat Bayou | 17. Lake Fort Smith |
| 4. Lake Columbia | 11. Fouche La Fave River | 18. Johnson Hole |
| 5. Cut-off Creek | 12. Nimrod Lake | 19. Lake Ouachita |
| 6. Bayou Bartholomew | 13. Cove Creek Lake | 20. Spring Lake |
| 7. Grays Lake | 14. Lake Sylvia | |

This much mercury can contaminate a 20-acre lake

U.S. coal-fired power plants produce 48 tons of it each year



MERCURY IS THE NEW LEAD

CORD BLOOD CONCENTRATIONS AT BIRTH

- $> 5.8 \mu\text{g/L}$ \longrightarrow IQ REDUCED
- 15.7% OF BIRTHS ABOVE $5.8 \mu\text{g/L}$

TRASANDE, L., LANDRIGAN, P.J., AND C. SCHECHTER (2005). "PUBLIC HEALTH AND ECONOMIC CONSEQUENCES OF METHYL MERCURY TOXICITY TO THE DEVELOPING BRAIN." ENVIRON HEALTH PERSPECT **113**(5): 590-596.