
MSAT and Other Air Quality Considerations

NEPA Requirements

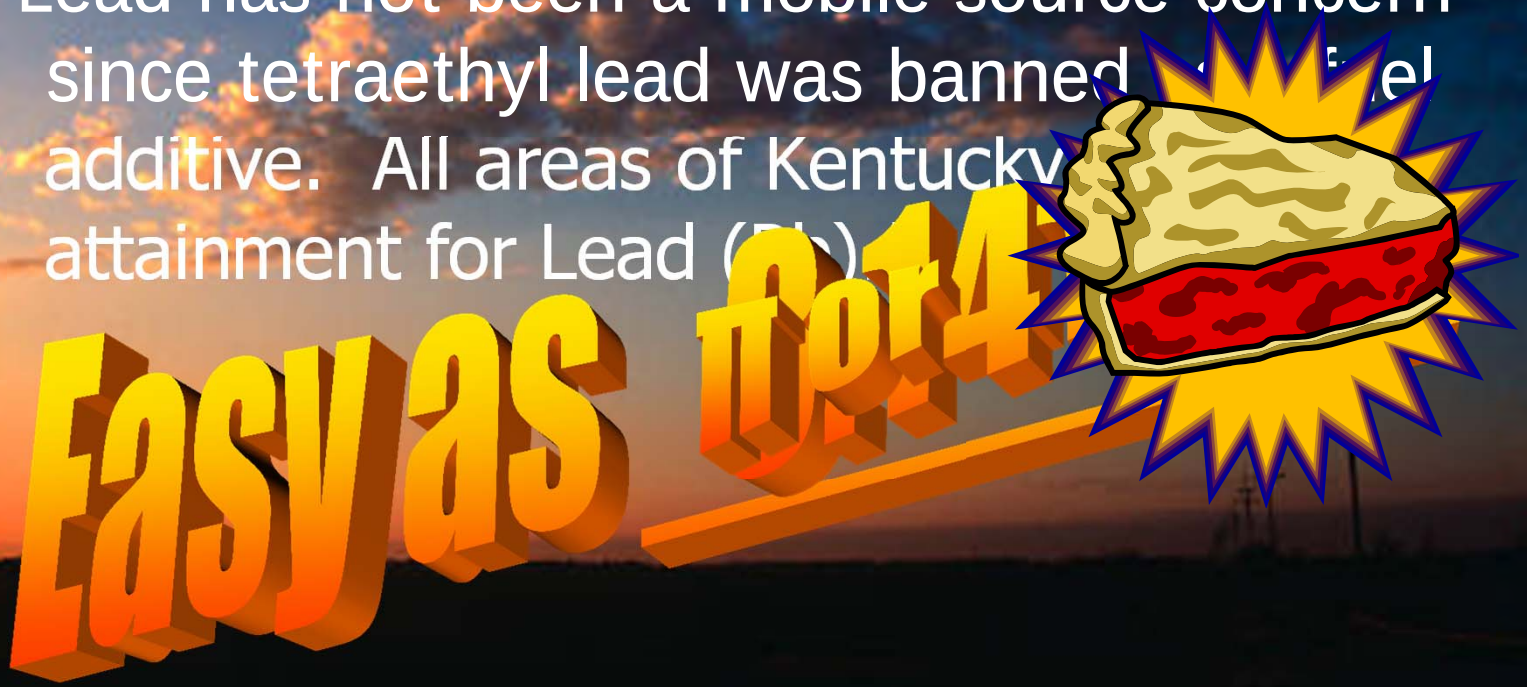
- Highway Project Potential Air Quality Effects

Lead
Sulfur Dioxide
Nitrogen Dioxide
Carbon Monoxide
8 hour Ozone
Particulate Matter ($PM_{2.5}$, PM_{10})
Mobile Source Air Toxics (MSATs)

Lead (PB)

- Include the following in NEPA document:

"Lead has not been a mobile source concern since tetraethyl lead was banned [illegible] additive. All areas of Kentucky [illegible] attainment for Lead (Pb)."



Sulfur Dioxide (SO_2)

- Include the following in NEPA document:

"Sulfur Dioxide (SO_2) is primarily an industrial source concern and not a mobile source concern. All areas of Kentucky are in attainment for SO_2."

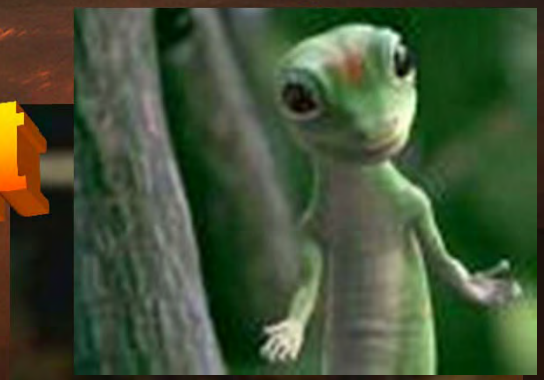
Nitrogen Dioxide (NO_2)

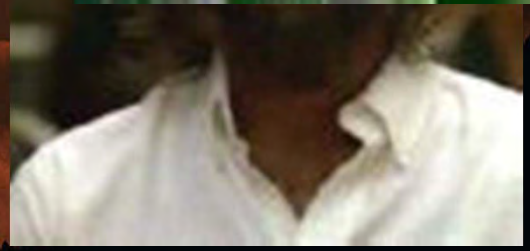
- Include the following in NEPA document:

  " All areas of Kentucky are in attainment for Nitrogen Dioxide (NO_2)"

So Easy ... Hint

A Caveman Can Do It!






(Big Horn Intro!)

Mobile Source Air Toxics (MSATs)

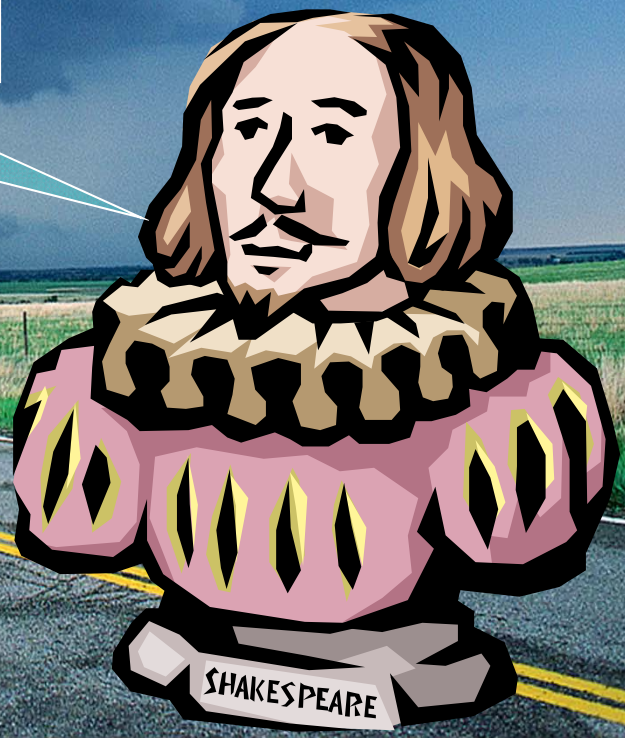
- Clean Air Act identified 188 air toxics AKA hazardous air pollutants
- 21 identified as **M**obile **S**ource **A**ir **T**oxics
- 6 contaminants identified as Priority Pollutants

1. Benzene
2. Formaldehyde
3. Acetaldehyde
4. Diesel particulate/org. gas
5. Acrolein
6. 1,3-Butadiene

MSAT (cont)

Much Ado About Nothing????

- With new EPA restrictions (cleaner fuels and engines), MSAT reductions of 57-87% predicted even if VMT increase 64% between 2000-2020

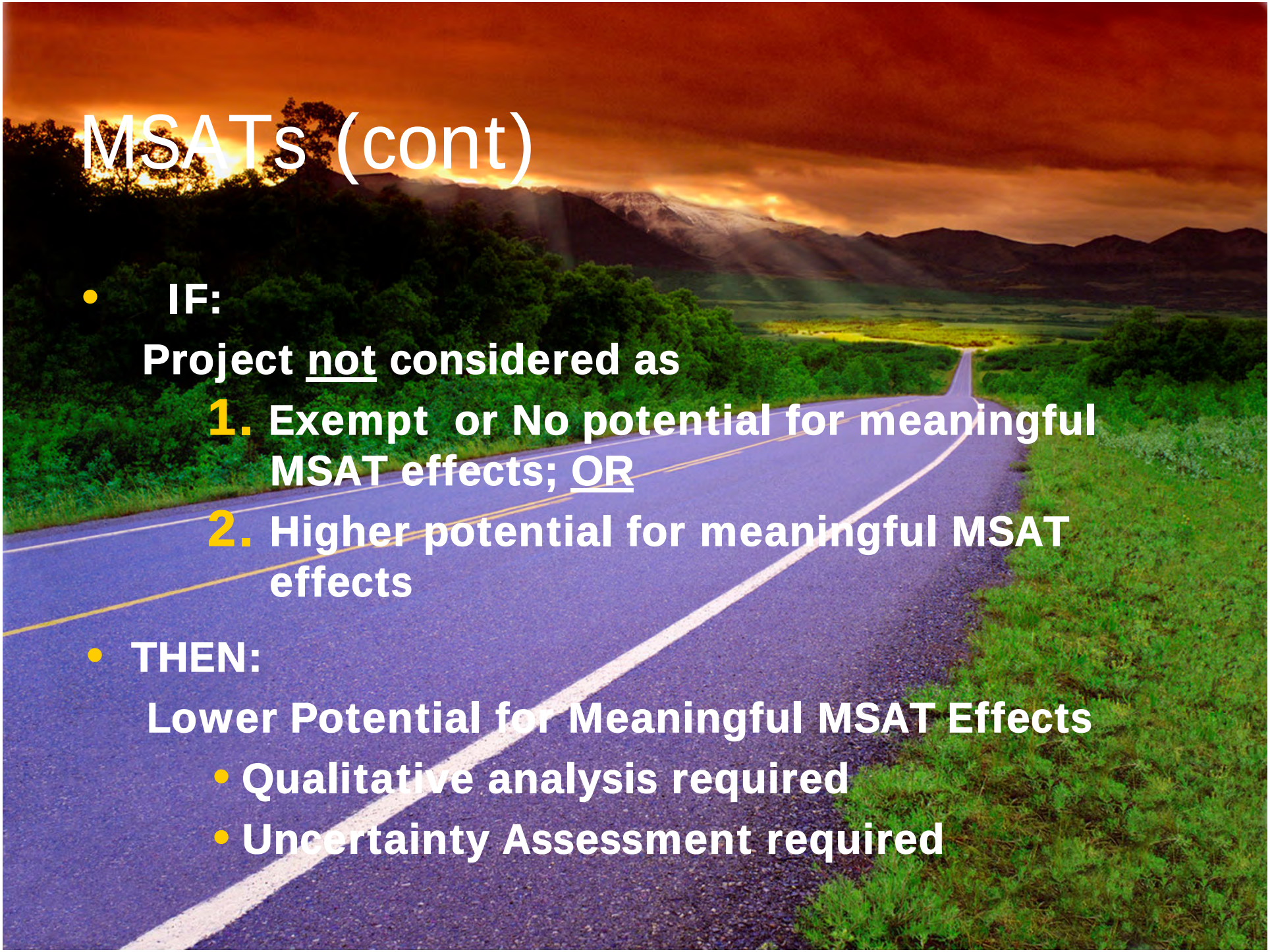


MSAT Degrees of Concern

- **Exempt or No potential for meaningful MSATeffects**
- **Lower potential for meaningful MSAT effects**
- **Higher potential for meaningful MSAT effects**

MSATs (cont)

- IF:
  - Project is a
    1. "C List" Cat. Ex. (23 CFR 771.117(c)) **OR;**
    2. Conformity Reg. Exempt (40 CFR 93.126) **OR;**
    3. Project with no meaningful impact to traffic volumes or mix
- THEN:
  - Exempt or No Potential for Meaningful MSAT Effects
  - No analysis required
  - Description of why project qualifies is needed (see 2/3/06 FHWA Interim Guidance)



MSATs (cont)

- **IF:**

  Project not considered as

  1. **Exempt or No potential for meaningful MSAT effects; OR**
  2. **Higher potential for meaningful MSAT effects**

- **THEN:**

  Lower Potential for Meaningful MSAT Effects

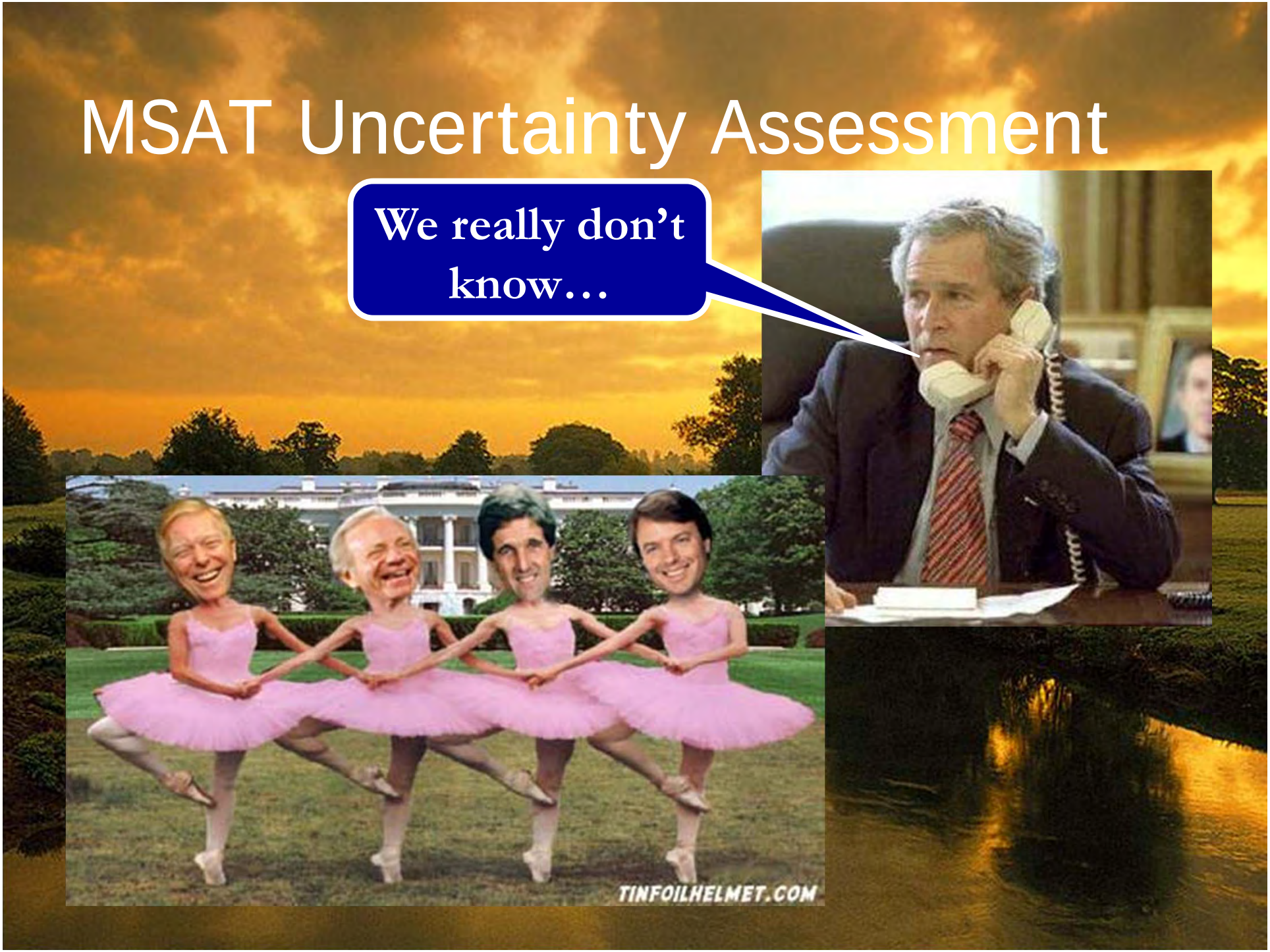
  - **Qualitative analysis required**
  - **Uncertainty Assessment required**

MSAT Qualitative Analysis

- Interim Guidance on Air Toxic Analysis in NEPA Documents (FHWA, February 3, 200
- Qualitative analy
  - Compar e the project on Traffic volumes,
  - ges in M ffic
    - each alte
    - ehicle Miles Trav
    2. Vehicle mix
    3. Speed
  - National data trends
  - No appreciable differ ernatives
  - No credible useful re alysis

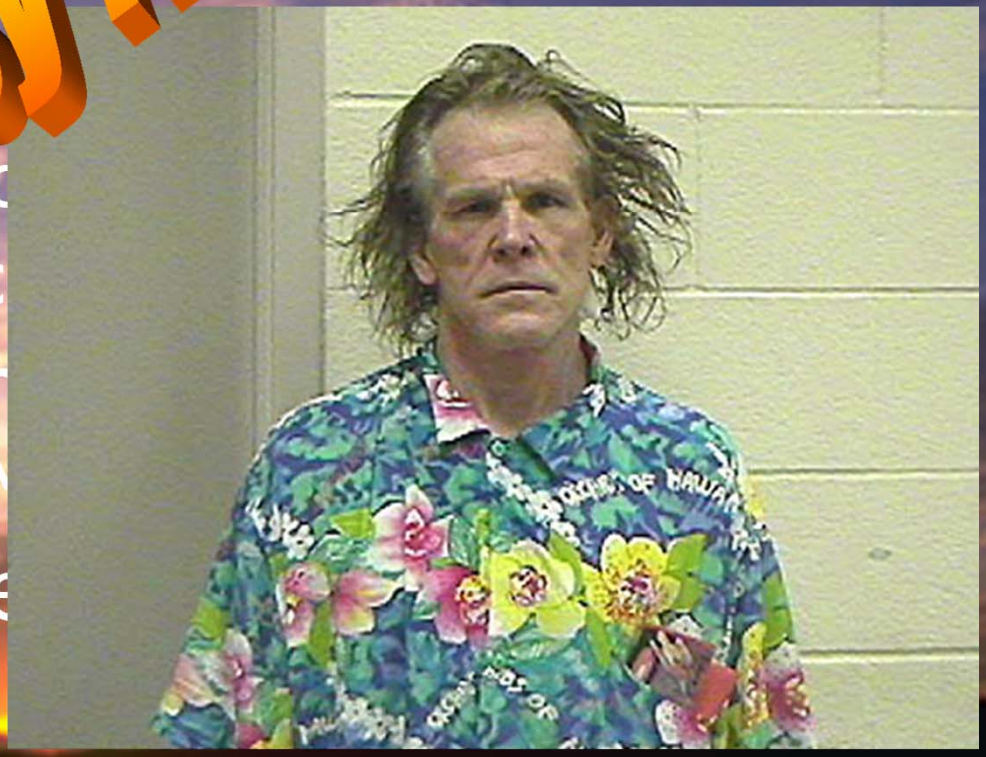
Some thought required…

MSAT Uncertainty Assessment



MSAT Uncertainty Assessment

- Discussion of "Incom[illegible]or Unavailable" information for pro[illegible]ecific analysis
  - Emerging Fi[illegible]
  - Lack of [illegible] human h[illegible]ec
  - Not of va[illegible]n dec
- Summary of curren[illegible] health impacts of N[illegible]
- Prototype language



Be sure to insert appropriate project information!!!

Higher MSAT Effects

- Project will either
  - Construct or modify a major intermodal freight facility with potential to concentrate high levels of diesel particulate in single location ; **OR**
  - New/Increased capacity to address design year 140,000 ADT or more for a highway

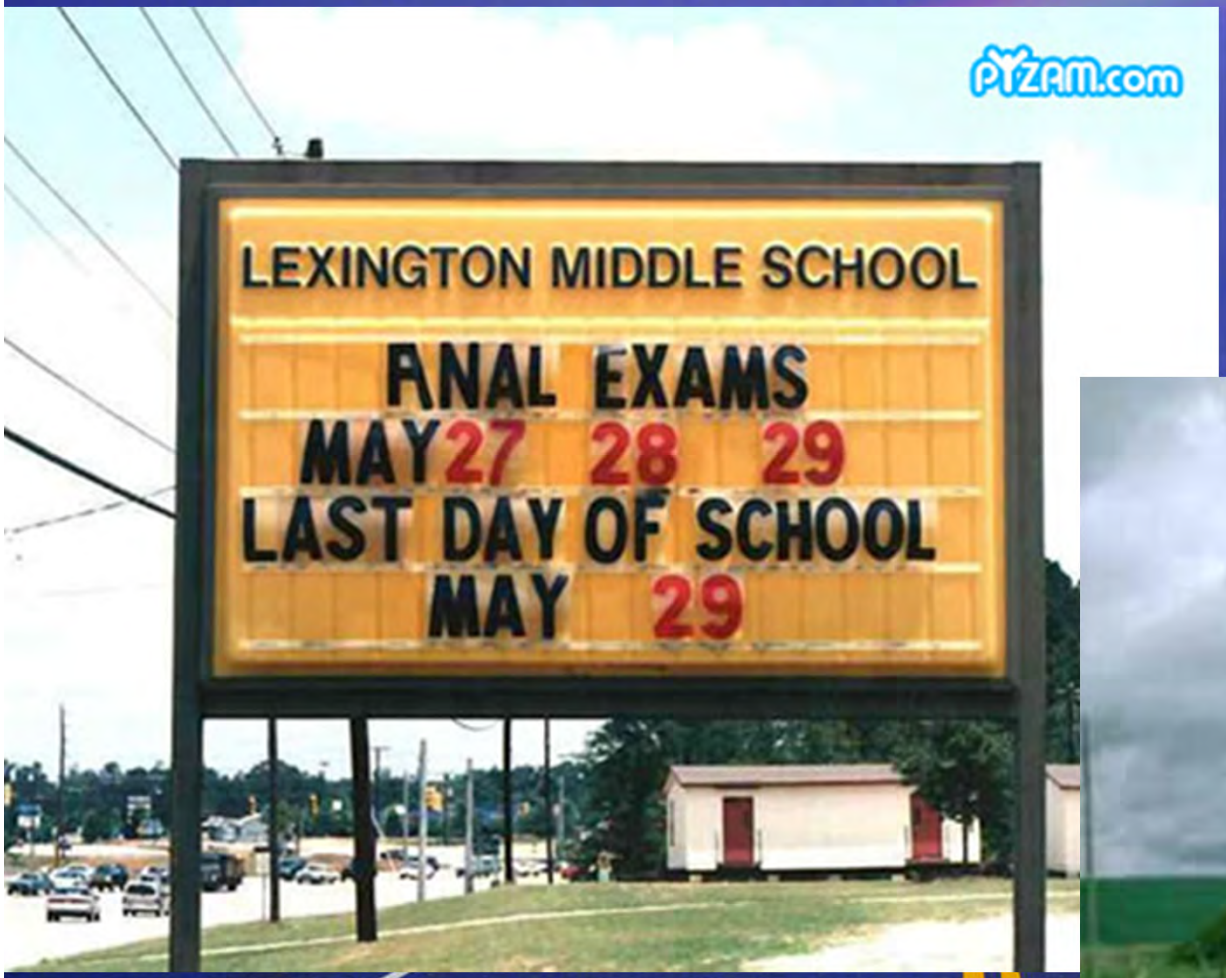
  AND

  Project is proximate to populated areas or vulnerable populations (schools, nursing homes, hospitals)

Greenhouse Gas/Global Warming

- **Evolving**
- **No FHWA guidance issued to date**
- **Difficulties assessing project level impacts**
- **CEQ being asked to address**
- **KYTC will be providing guidance**

Questions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KEEP
RIGHT

The New KYR10 General Stormwater Construction Permit

Dave Harmon

Environmental Analysis

KYR10

- KYR10 is the General Stormwater Permit for Construction
- General Permit expired in 2007
- Administratively Extended
- New Permit issued June 29, 2009

What took so long?

- Antidegradation Review
  - 6th Court of Appeals remanded a lawsuit to DOW requiring the agency to address antidegradation in their general permits
  - Antideg review requires project to be socially and economically justified
  - DOW created a workgroup to gain concensus
  - Antidegradation addressed in the KYR10 for all projects covered by the permit

Changes in the New KYR10

- Requires specific info about the size and scope of the construction project and receiving waters impacted
- More stringent requirement to minimize disturbance
- 25 foot buffer zone from receiving waters

Changes in the New KYR10

- Control a 2 year/24-hour storm event
- Installation of erosion control measures, in critical areas within 24 hours (or as soon as practical) after completion of the disturbance

Changes in the New KYR10

- No automatic coverage within 48 hours of submittal of the Notice of Intent (NOI)
- After e-Permit submittal, DOW will notify the applicant of coverage or issue a Notice of Deficiency
- 7 days after e-Permit submittal or 30 days after submittal of a paper NOI

Changes in the New KYR10

- Allows KYTC to use our BMP Plan as the Stormwater Pollution Prevention Plan
- Requires Inspections every 7 days and within 24 hours after a 0.5 inch storm event

The New KYR10 Eligibility

- Coverage **not** extended if discharge is to:
  - Special Use Waters
  - Waters the have an approved Sediment Total Maximum Daily Load (TMDL)
    - Currently No Approved Sediment TMDLs in Kentucky
- Discharge to Special Use Waters requires an **Individual KPDES Permit**

Special Use Waters

- Waters that are offered additional protection because of quality, endangered, species, or state/federal designation

- Cold Water Aquatic Habitat
- Outstanding State Resource Water
- Exceptional Waters
- Reference Reach Waters
- Wild Rivers
- Outstanding National Resource Waters

Individual KPDES Permits

- Determine if there is a direct discharge
- Will likely require a field visit with DOW
- Above and Beyond for Antidegradation
  - Grass swales
  - Detention basins
  - Energy Dissipation
- Need detailed plans
- 5-6 months for issuance of permit
- KYTC was the first to apply for an Individual KPDES Stormwater permit

Impacts of KYR10 on Preconstruction

- Identify SUWs early in the project development process
- Discussion needed in NEPA document to address permit needs and mitigation requirements
- Identify project needs like additional ROW
- Have drainage and erosion plans developed for submittal 6 months prior to letting
- Bid documents will need to note that the contractor will be responsible for submitting a Stormwater Pollution Prevention Plan to DOW

Questions?

KYTC MS4 UPDATE

Division of Water Permits

- Issued KYR10
  - eNOI (DOW website)
  - http://www.water.ky.gov/
  - FREE DCA Training 8/12 & 8/19
  - http://dca.ky.gov/
- Issued LFUCG MS4 PERMIT
- Public Notice Draft MS4 Phase II GP

Draft MS4 Phase II General Permit

- Structural BMPs
  "new developments....manage runoff associated with 80% of the estimated annual rainfall on the site"
- Monitoring
- Mapping

KYTC Permit Status

- Currently Co-permittee
- New Individual Permit
  KYTC will “Partner”
- MCM I – Public Education
  Media Outreach Program (MOP)

Questions?