



Fugitive Dust Management for Roads and Lots

March 26, 2009

Overview

- What is Particulate Matter?
- What are Possible Health Effects?
- Sources of Particulate Matter
- Overview of Air and Water Regulations
- Fugitive Dust Control Methods for Roads/Lots

What is Particulate Matter (PM)?

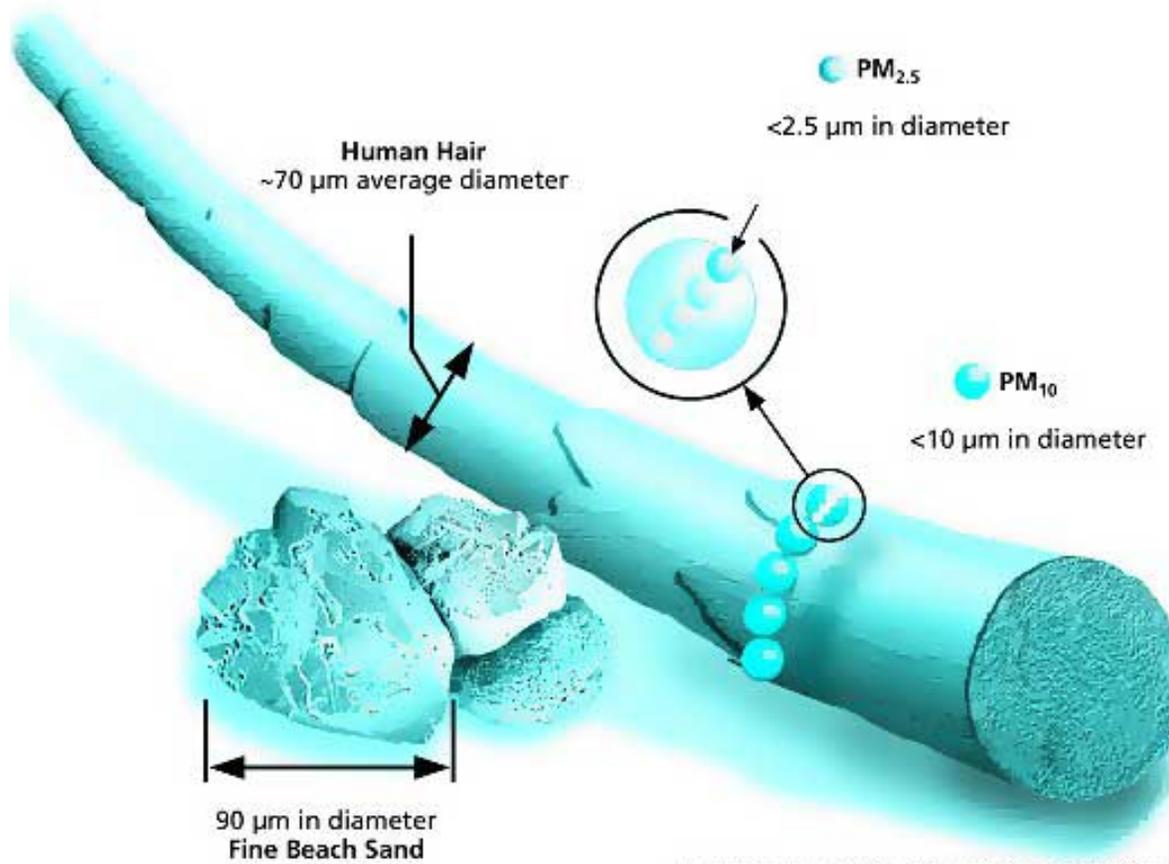


Image courtesy of EPA, Office of Research and Development

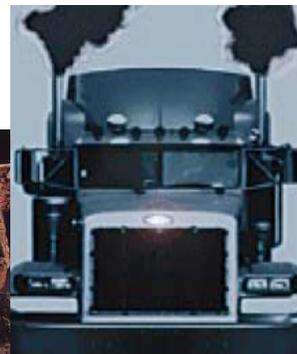
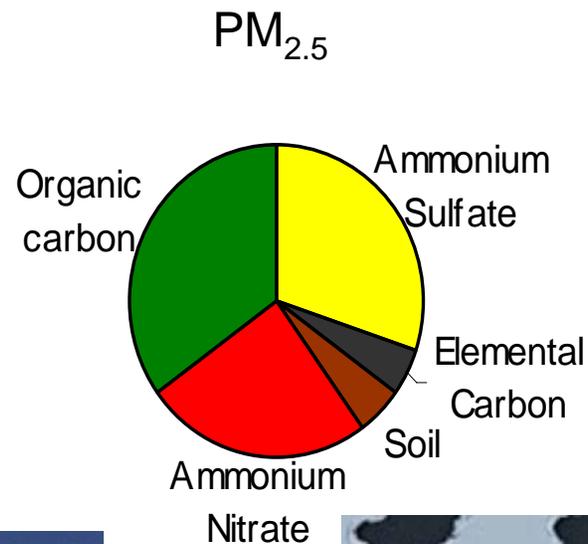
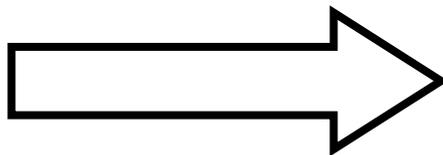
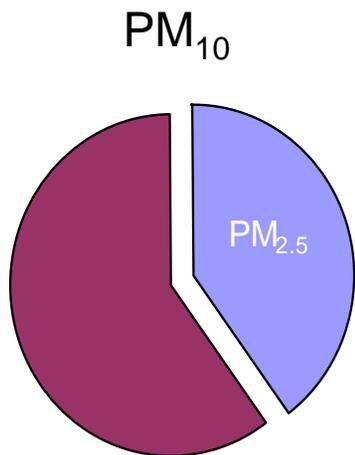
Health Effects of Particulate Matter (PM)

Possible health effects include:

- Respiratory issues
- Heart problems
- Premature death



Sources of Particulate Matter (PM)



Nonattainment Areas in Michigan

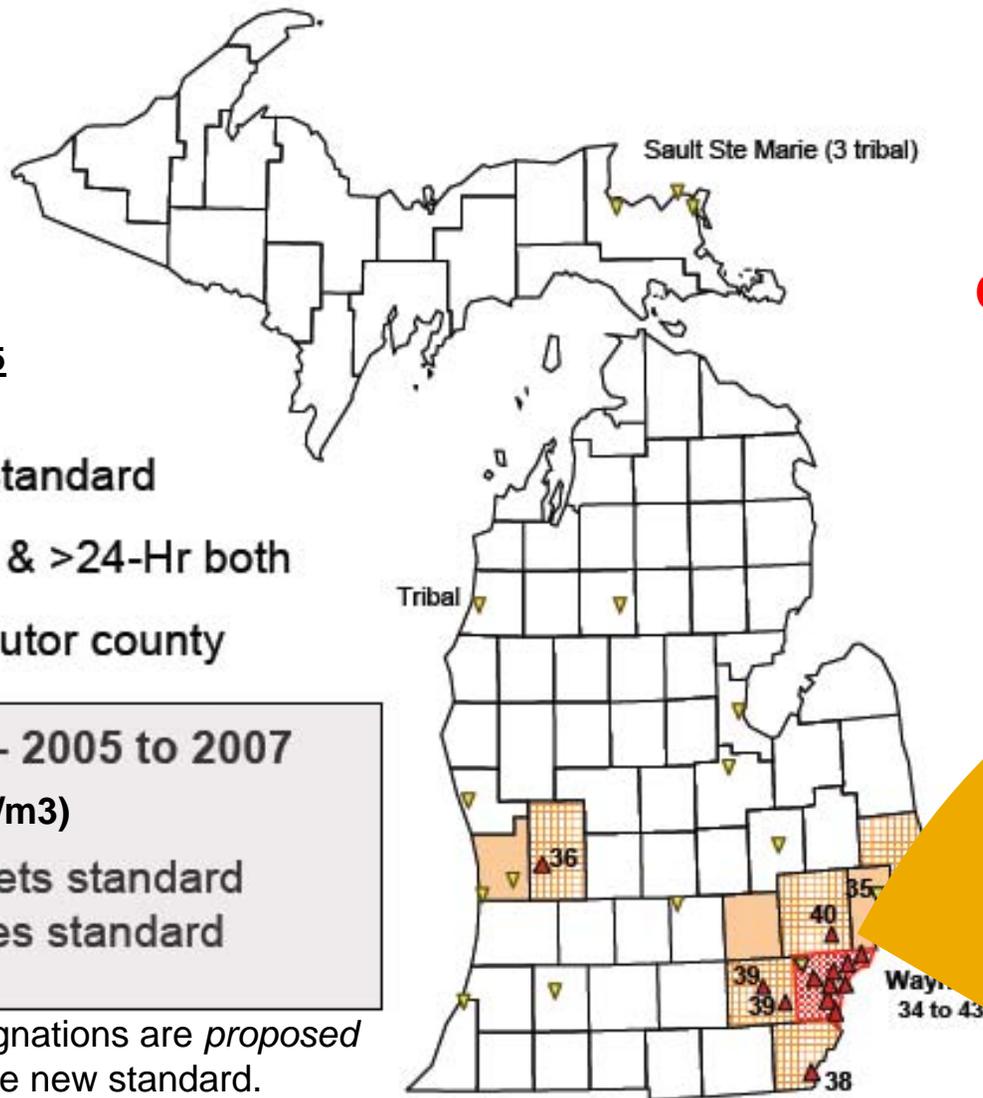
PM_{2.5}

-  > 24-Hr standard
-  > Annual & >24-Hr both
-  = Contributor county

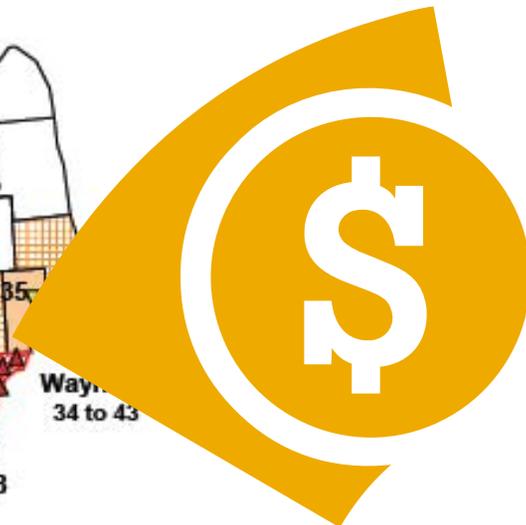
24-hour PM_{2.5} – 2005 to 2007
(>35ug/m³)

-  = Yellow meets standard
-  = Red violates standard

Note: 24-hour designations are *proposed* by EPA for the new standard.



Currently all areas of Michigan meet the PM₁₀ daily standard of >150ug/m³.



Fugitive Dust Regulations

AQD

- Part 55 , ACT 451
 - » 324.5524 Fugitive Dust Sources or Emissions
- Michigan Air Pollution Control Rules
 - » R 336.1301 Standards for Density of Emissions
 - » R 336.1371 Fugitive Dust Control programs other than areas listed in Table 36
 - » R 336.1372 Fugitive Dust Control Program
 - » R 336.1901 Air Contaminant or Water Vapor, when prohibited

324.5524

Fugitive Dust Sources or Emissions

- Required by the Natural Resources and Environmental Protection Act
- Applies to certain facilities
- Requires Dust Suppression for certain source activities.
- Area is now in attainment, it is still applicable requirement

324.5524

Fugitive Dust Sources or Emissions

- SIC CODES

- 10 to 14, mining
- 20 to 39, manufacturing
- 40, railroad transportation
- 42, motor freight and warehousing
- 491, electric services
- 495, sanitary services
- 496, steam supply

Table 36- Wayne County

Wayne Area included within the following (counter clockwise): Lake St. Clair to Moross Road to Seven Mile Road to Vandyke Road to Eight Mile Road to Wyoming Road to Seven Mile Road to Schaeffer Road to Fenkell Road to Greenfield Avenue to Joy Road to Southfield Expressway to Ford Road to Telegraph Road to Cherry Hill Road to Beech-Daly Road (extended) to Michigan Avenue to Inkster Road to Carlyle Street to Middle Belt Road to Vanborn Road to Wayne Road to Pennsylvania Road to Middle Belt Road to Sibley Road to Telegraph Road to King Road to Grange Road to Sibley Road to Jefferson Avenue to Bridge Street (Grosse Ile) extended to Detroit River. Also included is that

R 336.1371

3-23

As Amended 3/19/2002

portion of the City of Riverview which is south of Sibley Road and the City of Trenton.



Table 36- Wayne County

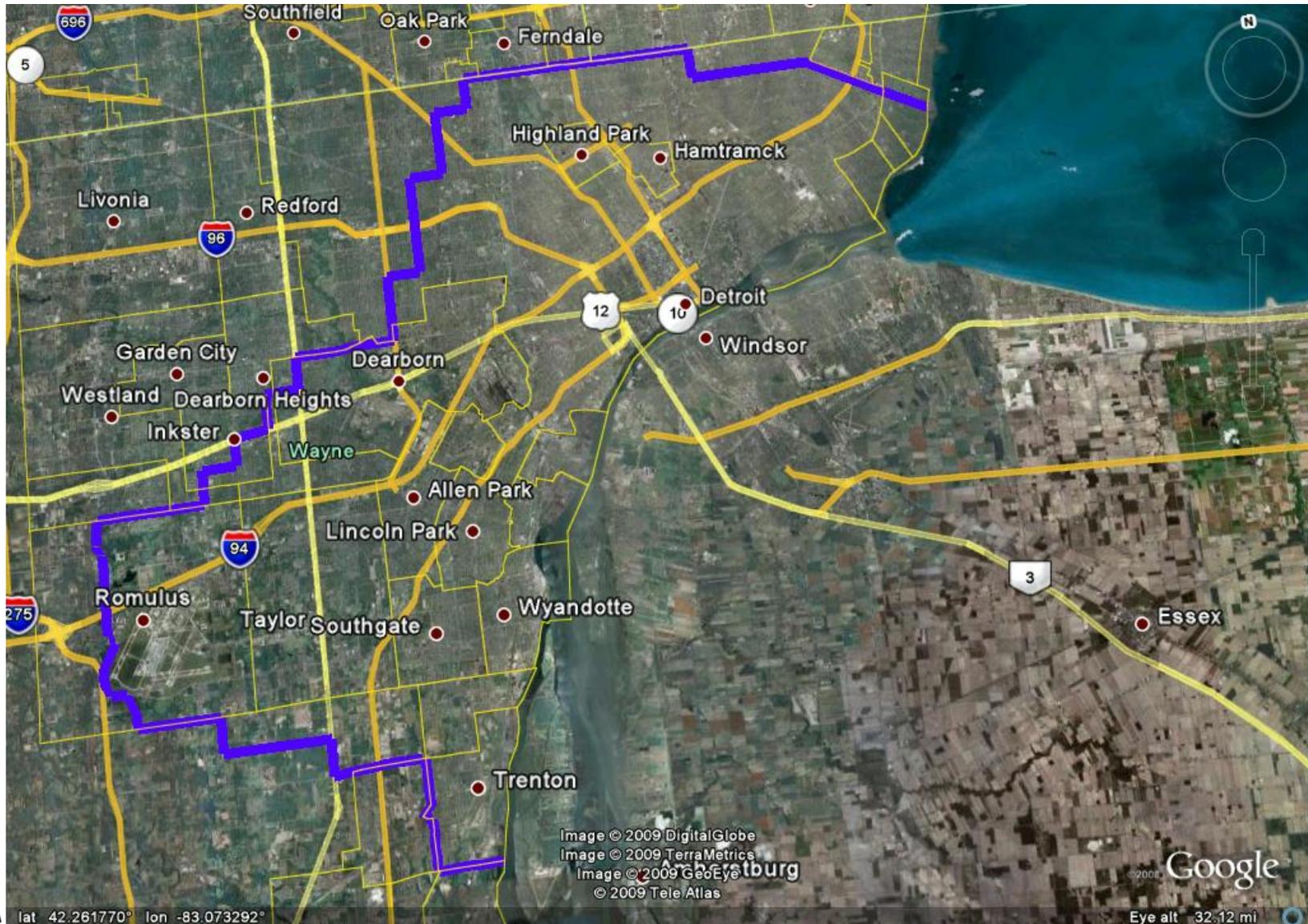
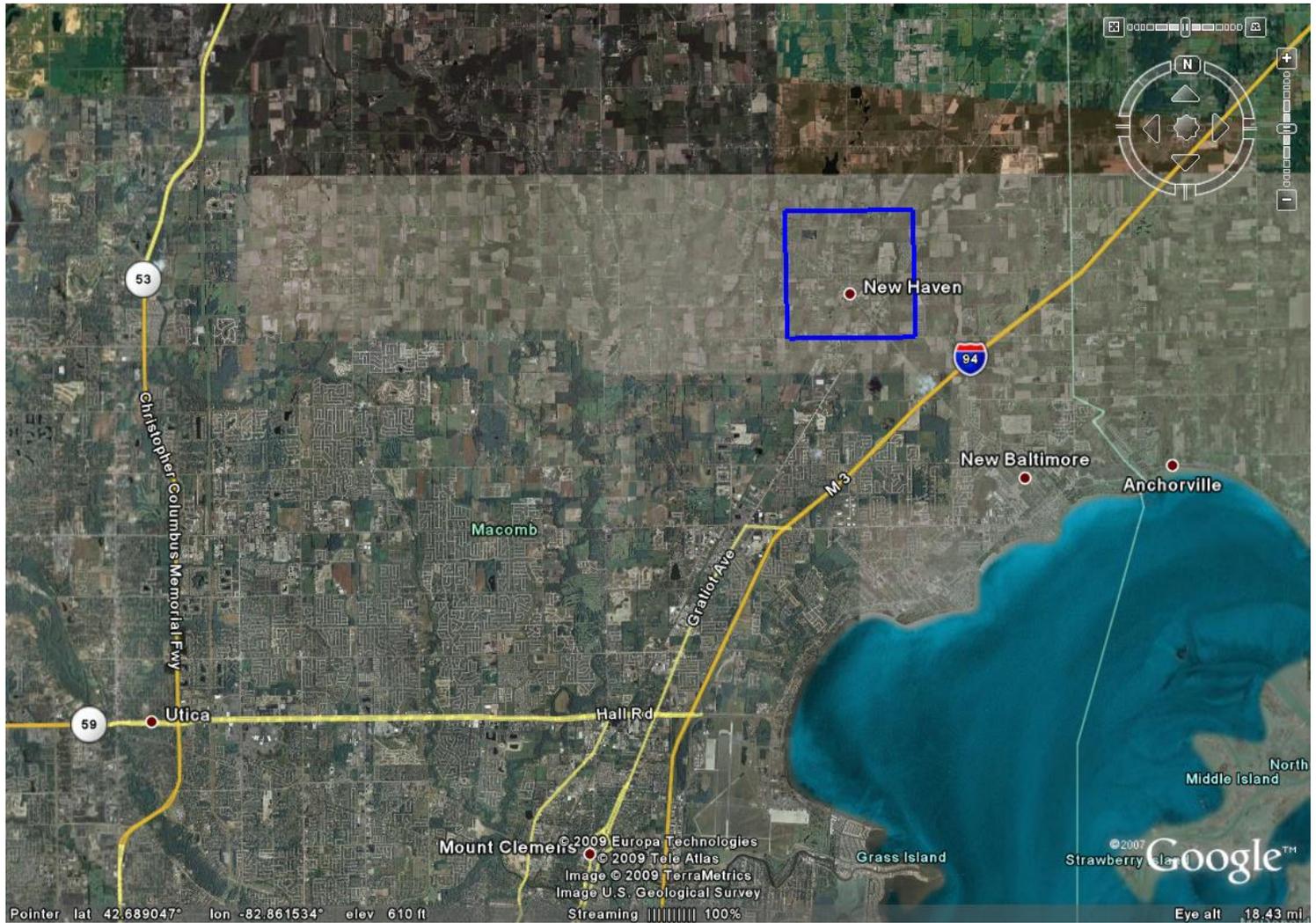
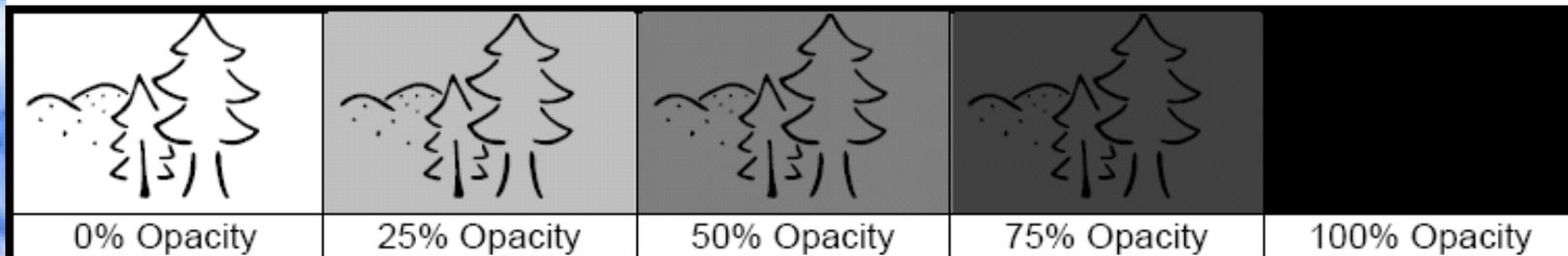


Table 36- Macomb



R 336.1301 Standards for Density of Emissions

- Opacity



- Fugitive Dust visible emission limits

Visible Emissions - 0% opacity



Visible Emissions - 50% opacity



Visible emissions - 100% opacity



R 336.1371 Fugitive Dust Control programs other than areas listed in Table 36

- May be based on air emission measurements or citizen complaints
- If requested, facility has 6 months to submit a Fugitive Dust Plan to AQD

R336.1371 Fugitive Dust Control Programs Other Than Areas Listed in Table 36

- Works together with rule R 336.1372

Type of Fugitive Dust Source	
Loading and unloading of open storage piles	Inactive storage piles
Transporting bulk material	Building ventilation
Outdoor conveying	Roads and lots*
Construction, renovation, and demolition	

Fugitive Dust Plan Elements

- The reasonably necessary fugitive dust control operating practices, methodologies, or available technologies as detailed in Michigan Rule R 336.1372
- The type of fugitive dust control methods that would be the most effective, taking into account the quantity, moisture content, specific gravity, and particle size distribution of the bulk materials on-site

Fugitive Dust Plan Elements- Cont'd

- The level of recordkeeping and maintenance requirements for activities that are implemented under the dust program
- The type of control technologies, methods, and equipment to be implemented or installed, as well as the progress schedule for implementation or installation.

R 336.1372

Fugitive Dust Control Program

- Activities Required
- Applies to Different Sources of Fugitive Emissions

Michigan Administrative Rule 901

Rule 901. Notwithstanding the provisions of any other department rule, a person shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:

- (a) Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.
- (b) Unreasonable interference with the comfortable enjoyment of life and property.

Fugitive Dust Complaints



Fugitive Dust Complaints



Why Comply?

- Law
- Health
- Environment
- Nonattainment
= less highway \$
- Public Image
- Profits



Managing Fugitive Dust

A Guide for Compliance with
the Air Regulatory Requirements
for
Particulate Matter Generation



Michigan Department of Environmental Quality
Environmental Science and Services Division
Clean Air Assistance Program

Jennifer M. Granholm, Governor
Steven E. Chester, Director
www.michigan.gov/deq
(800) 652-9278
February 2006

<http://www.deq.state.mi.us/documents/deq-ead-caap-genpub-FugDustMan.pdf>

