

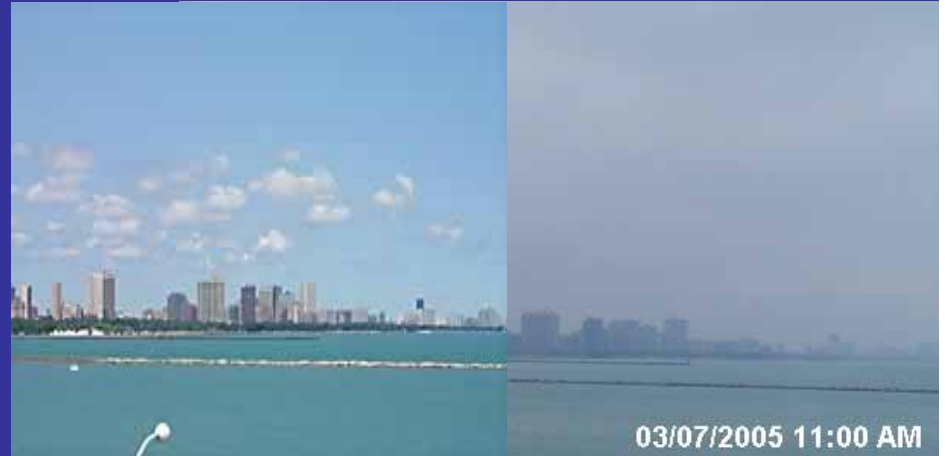


Midwest Clean Diesel Initiative



Diesel emissions contribute to:

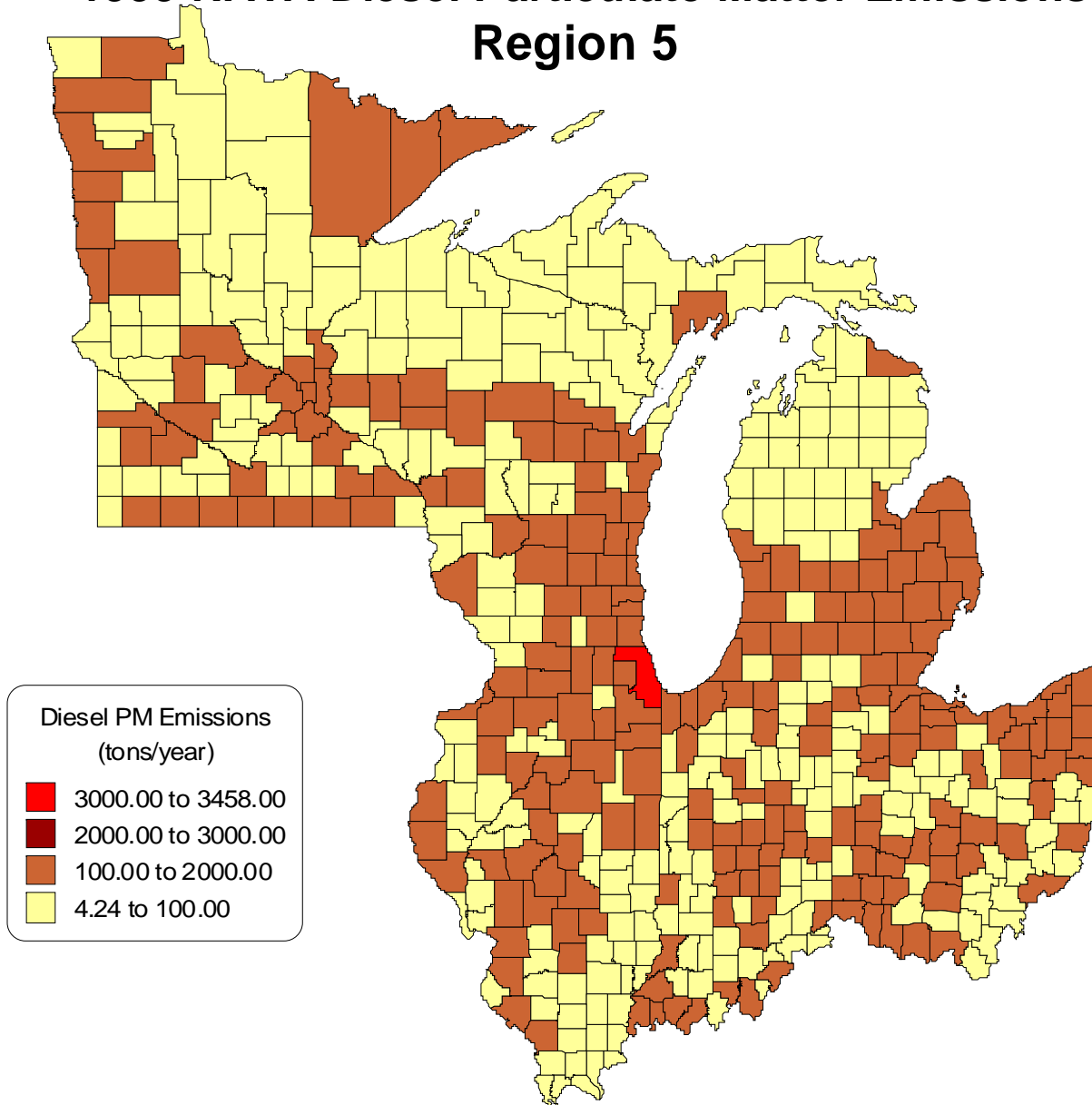
- Ozone (NOx)
- Particulate Matter/Haze
- Air Toxics



Diesel Emissions pose significant public health concerns

- exacerbates asthma, causes respiratory and cardiovascular illness and premature death
- Possible human carcinogen

1999 NATA Diesel Particulate Matter Emissions Region 5



Goal: To reduce diesel emissions in the Midwest by working with our Federal, State and local partners, private sector, and non-profit organizations

- To leverage resources to maximize environmental impact
- To accelerate market for clean diesel technologies and fuels

What We Have Accomplished

Region 5 Clean School Bus USA Program

\$1.7 Million in grants

Retrofit technologies on at least 625 buses

- Bellwood School District, IL
- Cleveland Public Schools, OH
- Montgomery County Board of Mental Retardation and Developmental Disabilities, OH
- Hamilton County, OH
- Carbondale, IL; Kettle-Morain, WI; Mankato, MN
- Chicago Public Schools
- Evansville and Washington Township, IN
- Okemos Public Schools & Partners (Lansing, East Lansing, Dewitt, Grand Ledge, Howell, Leslie, Mason, St. Johns, Waverly & Williamston)
- Ann Arbor Public Schools

38 buses with ULSD – Cleveland Public Schools

20 buses with B20 (20% biodiesel) – Manchester, MI

Region 5 Garbage Truck Retrofits

\$400,000 Great Cities Partnership

City of Chicago – \$200K

Diesel Oxidation Catalysts 75 garbage trucks

City of Detroit – \$100K

Diesel Oxidation Catalysts 44 garbage trucks

City of Indianapolis – \$100K

Diesel Oxidation Catalysts:

37 garbage truck

9 roll-off trucks

9 pieces of construction equipment

Supplemental Environmental Projects

\$1.1 million retrofit technologies school buses –
ADM settlement

\$150,000 retrofit technologies – East Chicago
municipal fleet/school buses – Inland settlement

\$65,000 retrofit technologies South Washington
County School, MN – 3M settlement

\$1.5 million for Advance Truck Electrification in
East St. Louis – Midwest/Dynergy settlement

Congestion Mitigation and Air Quality (CMAQ)

\$2.5 million Chicago Transit Authority –
ULSD for buses

\$1 million Wisconsin School Bus Retrofit
Program – 700 retrofit technologies SE
Wisconsin

\$225,000 for Advanced Truck Stop
Electrification in Gary, IN

Advanced Truck Stop Electrification (ATSE)

- First ATSE in Midwest installed in Gary, Indiana I-90 targeted for completion this Summer
- 5 sites proposed in Illinois (CMAQ) Bolingbrook and Plainfield I-55, Monee I-57; Hampshire I-90, and Russell I-94.
- 1 site proposed in Wisconsin (CMAQ) Racine County (I-94/Highway 20) or Southern Milwaukee County (I-94)



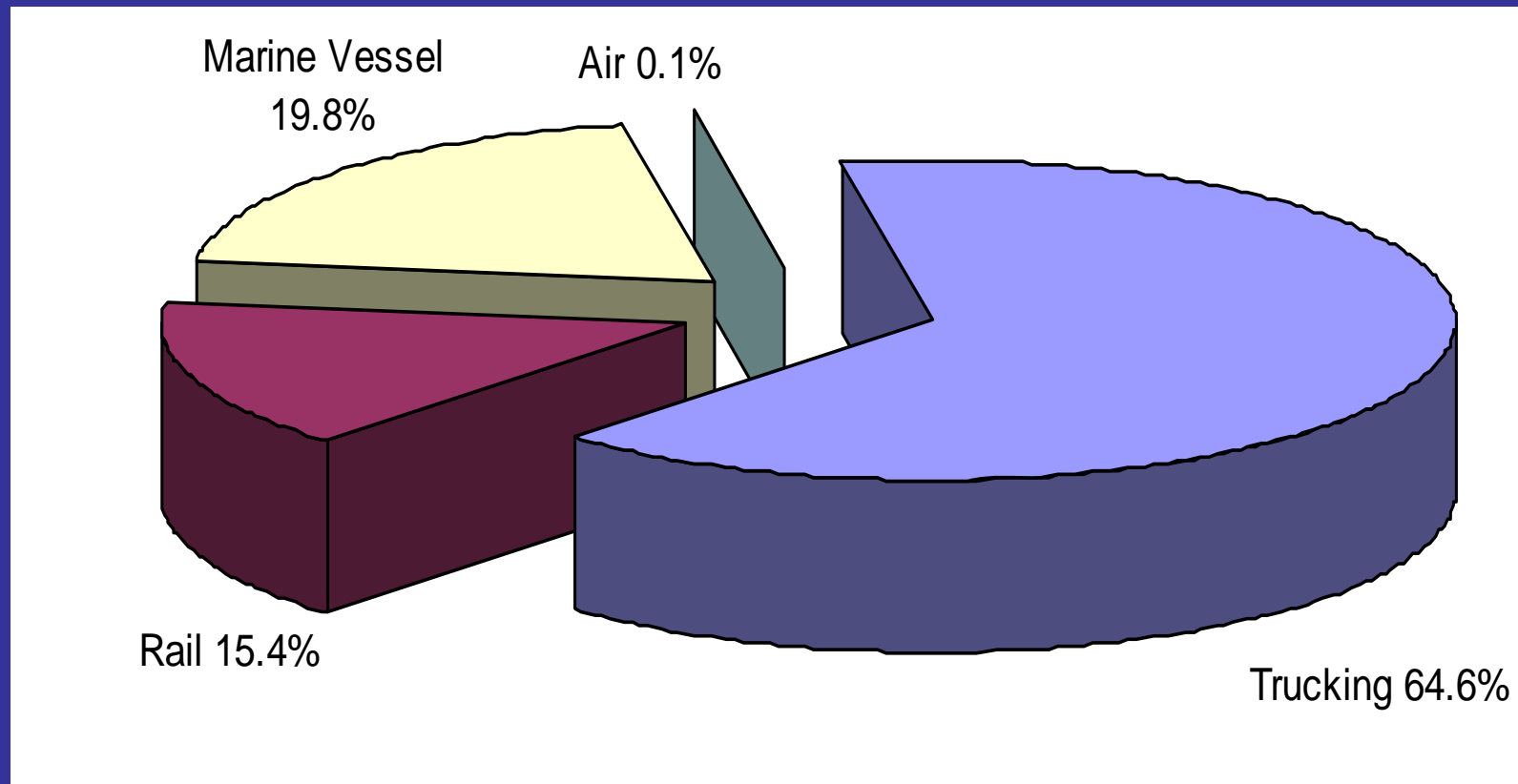
“PAR”

* Ports * Agriculture * Rail

Sectors are unique to the Midwest

- Midwest is the Agricultural Grain Belt
- Region 5 is home to the Great Lakes and the Great Lakes National Program Office
- Midwest has significant rail corridors

US Modal Share of Freight Tonnage, 2002



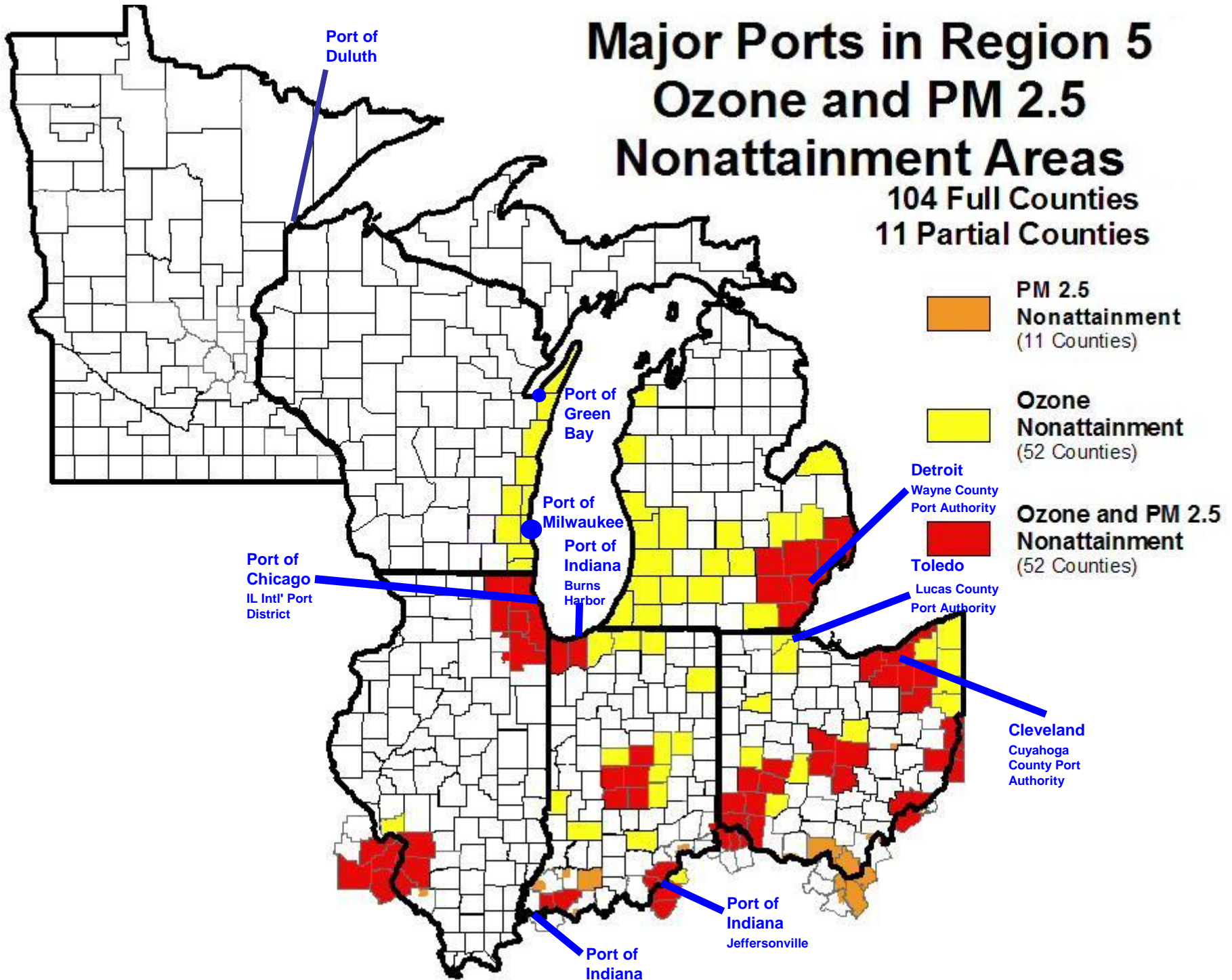
Source: Bureau of Transportation Statistics, *National Transportation Statistics 2004*.

Major Ports in Region 5

State	Port
IL	Illinois International Port District, Port of Chicago
IN	Port of Indiana - Burns Harbor
IN	Port of Indiana - Mt. Vernon - (Southwind Maritime Center) – Ohio River
IN	Port of Indiana - Jeffersonville (Clark Maritime Center) – Ohio River
MI	Detroit/Wayne County Port Authority
MN	Duluth Seaway Port Authority
OH	Cleveland-Cuyahoga County Port Authority
OH	Toledo-Lucas County Port Authority
WI	Port of Milwaukee
WI	Green Bay Port Authority

Major Ports in Region 5 Ozone and PM 2.5 Nonattainment Areas

104 Full Counties
11 Partial Counties



Agriculture

Major Agricultural Operations in Region 5

1. Archer Daniels Midland – Decatur, IL
2. Cargill, - Minneapolis, MN
3. Bunge North America - St. Louis, MO
4. CHS – St. Paul, MN
5. Peavey (Div. of ConAgra) – Omaha, NE
6. The Andersons – Maumee, OH
7. ADM Milling – Overland Park, KS
8. ConAgra Food Ingredients – Omaha, NE
9. General Mills – Minneapolis, MN

Sources of Diesel Agricultural Emissions

- Marine Vessels transport about 63% of grain
- Rail transports about 25% of grain
- Trucks transport about 12% of grain

Improved Transport Strategies

- Driver Comfort Stations (designated facilities where drivers can wait in comfort until they are called to deliver/pick-up shipment)
- Idle reduction policies
- Improved Pickup and Delivery Scheduling
- Full truckloads
- Diesel Retrofits

Agricultural Sector – Next Steps

- Recruit grain companies to Smartway Transport Partnership
- Obtain more specific information from one or more grain companies
- Determine ton-miles for both company's and carrier's marine vessels, rail cars and trucks and determine emissions
- Determine nature of marine vessel activity along with potential benefits for retrofit technologies and idle reduction and other strategies
- Assess potential benefits for rail and truck by application of various improved transport strategies

Smart Way Transport Partnership

- Voluntary partnership with the ground freight industry
- Challenges companies to improve the environmental performance of their freight operations





32 partners and growing in the Midwest

ADM Trucking, Decatur, IL

Baxter Healthcare, Deerfield, IL

Freichs Freight Lines, Swansea, IL

Hub Group, Inc. Downers Grove, IL

Styline Transportation Inc. Huntingburg, IN

Summit Trucking, LLC; Clarksville, IN

Arfsten Transfer, Inc., Clearwater, MN

Bartels Truck Line, Inc. Winthrop, MN

Floyd Wild Trucking, Inc. Marshall, MN

Genmar Transportation, Minneapolis, MN

Hunkes Transfer, Inc. Wadena, MN

J & R Schugel Trucking, New Ulm, MN

Lakeville Motor Express, St. Paul, MN

Langford Inc., St. Cloud, MN

McFarland Truck Lines, Inc. Austin, MN

Midwest Specialized Transportation, Inc.
Rochester, MN

Overnite Express, ST. Paul, MN

Phillips & Temro Industries, Eden Prairie, MN

R + E Enterprises, Mankota, MN

Trailwood Transportation, Mounds View, MN

Transport America, Eagan, MN

BND Automotive, LLC Sagamoer Hilles, OH

Garufi logistics, LLC, Orient, OH

Linde Gas, LLC Independence, OH

YellowRoadway Corporation, Akron, OH

H.O. Wolding, Co., Amherst, WI

Quad/Graphics, inc. Susses, WI

Roehl Transport, Inc. Marshfield, WI

Schneider National, Inc. Greenbay, WI

Wausau Carriers, Inc. Wausau, WI

Smart Way Transport Partnership

- Shippers:
 - Commit to ship a majority of their goods with SmartWay Transport Partner carriers within 3 years
 - Assess and commit to improve their facility transportation emissions within 3 years:
 - Forklifts, generators, loaders, amount of truck idling at facility, intermodal
 - Sign the Partnership Agreement
- Carriers:
 - Measure current environmental performance with the FLEET Performance Model
 - Commit to improve environmental performance within 3 years
 - Sign the Partnership Agreement

Technological Strategies

Technological Strategies for Improving Freight Fuel Efficiency –
Applicable to Rail, Ports, and Ag

Trucking	Rail	Marine
Fuel efficient lubricants	Tare weight reduction	Larger vessels
Tare weight reduction	Low-friction bearings	Improved hull design
Aerodynamic improvements	Steerable rail car trucks	
Reduced tire rolling resistance	Improved track lubricants	

Source: *Assessing the Effects of Freight Movement on Air Quality at the National and Regional Levels*, April 2005, Prepared for U.S. Federal Highway Administration, Compiled and calculated by ICF Consulting,

Operational Strategies

Operational Strategies for Reducing Freight Fuel Use and Emissions—
Applicable to Rail, Ports, and Ag

Trucking	Rail	Marine
Reduced overnight idling	Reduced switchyard idling	Cold ironing (electrification)
Reduced pick-up/drop-off idling	Reduced line haul speeds	Reduced port equipment idling
Port access improvements	Reduced empty mileage	Reduced hotelling time
Reduced highway speeds	Double tracking	Reduced vessel speeds
Arterial signal synchronization	Train clearance improvement	Use of larger ships
Grade crossing separation	Elimination of circuitous routings	Hull cleaning
Driver training		
Reduced empty mileage		

Source: *Assessing the Effects of Freight Movement on Air Quality at the National and Regional Levels*, April 2005, Prepared for U.S. Federal Highway Administration, Compiled and calculated by ICF Consulting,