



2

SETTING OUR SIGHTS

VISION

Greater Des Moines will be a collaborative, vibrant, and dynamic region of lasting value, equity, and diversity.



MISSION

Ever mindful of future generations,
our mission is to cooperate across
political boundaries to achieve
social, economic, and environmental
resilience for Greater Des Moines.



SETTING OUR SIGHTS

The high-level goals outlined on the following pages work as a system to direct Greater Des Moines toward a more vibrant transportation system. When realized, these goals will ensure the region continues to support a strong economy while protecting the environment. Fulfilling these goals also will enhance the great quality of life residents already enjoy in Greater Des Moines.

The current conditions analysis, measures, and targets associated with each goal were identified by the plan's steering committee and through public involvement. They will allow the region to understand the progress made in achieving our goals between now and 2050. These goals will not be achieved over night. Rather, they will be achieved by continual collaborative efforts in which all stakeholders take an active role.

MOBILIZING TOMORROW TERMS

GOALS are broad aspirations for the region.

MEASURES are quantitative descriptions that help us understand how the transportation system is performing.

TARGETS are quantitative descriptions for how we hope the transportation system will perform by 2050.

The MPO identified four goals for Mobilizing Tomorrow. The MPO sought to maintain consistency with the goals identified in The Tomorrow Plan. The Tomorrow Plan's goals were as follows:

- Create a resilient regional economy.
- Improve the region's environmental health and access to the outdoors.
- Further the health and well-being of all residents in the region.
- Increase regional cooperation and efficiency at all levels.

The MPO also considered the eight planning factors, outlined by the US Code of Federal Regulations, that an MPOs is required to consider in its transportation planning process. These planning factors include:

1. Support economic vitality.
2. Increase safety of the transportation system.
3. Increase the security of the transportation system.
4. Increase the accessibility and mobility of people and freight.
5. Protect and enhance the environment and promote conservation.
6. Enhance the integration and connectivity of the system across and between modes.
7. Promote efficient system management and operations.
8. Emphasize the preservation of the existing transportation system.

Mobilizing Tomorrow Goals

1. Enhance multimodal transportation options.
2. Manage and optimize transportation infrastructure and services.
3. Improve the region's environmental health.
4. Further the health, safety, and well-being of all residents in the region.

Mobilizing Tomorrow Goals					
		Enhance multimodal transportation options	Manage and optimize transportation infrastructure and services	Improve the region's environmental health	Further the health, safety, and well-being of all residents in the region
The Tomorrow Plan Goals	Create a resilient regional economy	●	●		●
	Improve the region's environmental health and access to the outdoors.	●		●	●
	Further the health and well-being of all residents in the region.	●			●
	Increase regional cooperation and efficiency at all levels.	●	●		●
Planning Factors	Support economic vitality.	●	●	●	●
	Increase safety of the transportation system.	●	●		●
	Increase the security of the transportation system.	●		●	
	Increase the accessibility and mobility of people and freight.	●	●		●
	Protect and enhance the environment and promote conservation	●	●	●	●
	Enhance the integration and connectivity of the system across and between modes.	●			●
	Promote efficient system management and operations.	●	●		
	Emphasize the preservation of the existing transportation system.		●	●	

GOAL 1:

Enhance Multimodal Transportation Options

“Transportation Existing and Proposed Conditions,” a Nelson\Nygaard report developed as part of *The Tomorrow Plan*, found that 92 percent of trips in the planning area are made by personal automobile. Today, the average vehicle trip within the planning area takes 25 minutes and covers a distance of 15 miles. The natural and historical reaction to growth trends is toward the expansion of roadway capacity.

Like *The Tomorrow Plan*, *Mobilizing Tomorrow* envisions shifting from that historical model due to changing demographics, travel patterns, and rates of car ownership. This goal supports a greater mix of transportation choices, including a robust transit network, an active carpool culture, and land use and design that support walkability. To shift this perspective, *Mobilizing Tomorrow* lays out bold targets for the year 2050.

Current Conditions

The region's roadway network operates at enviable levels. In 2010, 72.1 percent of the roads operated in a free flowing manner, moving automobiles in a continuous, steady manner. Traffic generally flows at or above the posted speed limit, and motorists have mobility between lanes while also enjoying a high level of physical and psychological ease.

The network operates with significant capacity — in effect, as many people can move throughout the region as want to with almost no perceptible delay. Though the region expects to see a significant population increase by 2050, the MPO has found that, without any future capacity enhancements to the street system, the road network still would not experience unstable or broken flows. Over 90 percent of the roadways would still operate at a free flow.

While the road network provides efficient commutes and creates conveniences for motorists, this oversupply of capacity hinders the further development of other transportation modes. Greater Des Moines must invest in a complete transportation system — beyond one geared solely towards automobiles — if it is to become a more sustainable region.



Measures

The MPO has identified several measures to track the progress we make towards enhancing multimodal transportation options. These relate to all modes of surface transportation:

- Automobiles, including both single occupant vehicles as well as those that choose to carpool;
- Public transportation;
- Walking; and,
- Biking.

Specifically, the MPO is looking at miles of on-street bicycle facilities; transit ridership; and, mode choice/split during peak hour — That is to say, how are people getting to downtown using the various modes during the morning and evening commute times?



ALL ABOUT Choice



77 PERCENT OF PEAK HOUR TRIPS TO DOWNTOWN ARE MADE BY SINGLE OCCUPANT VEHICLES



12 PERCENT INVOLVE CARPOOLING

MODE SPLIT n 1 The varying proportions of different transportation methods that may be used at any one time. The choice of mode may be determined by the costs, destinations, capacities, and frequencies of the modes.

A mature transportation system offers a mix of transportation choices, including a robust transit network. Regional leaders are ready to invest in a complete transportation system that serves the region and prioritizes multimodal corridors. To maximize access and to operate a system most efficiently, the region should try to match transit service to where people live and work.



We define 'peak hour'
from **7:15 to 8:15 am** and
from **4:15 to 5:15 p.m.**

By 2050, the region wants to see these numbers at 55, 20, 15, and 10 percent, respectively.

7

PERCENT
ARE MADE
VIA TRANSIT



4

PERCENT ARE
POWERED BY
PEOPLE WALKING
OR BIKING

PEDAL Power

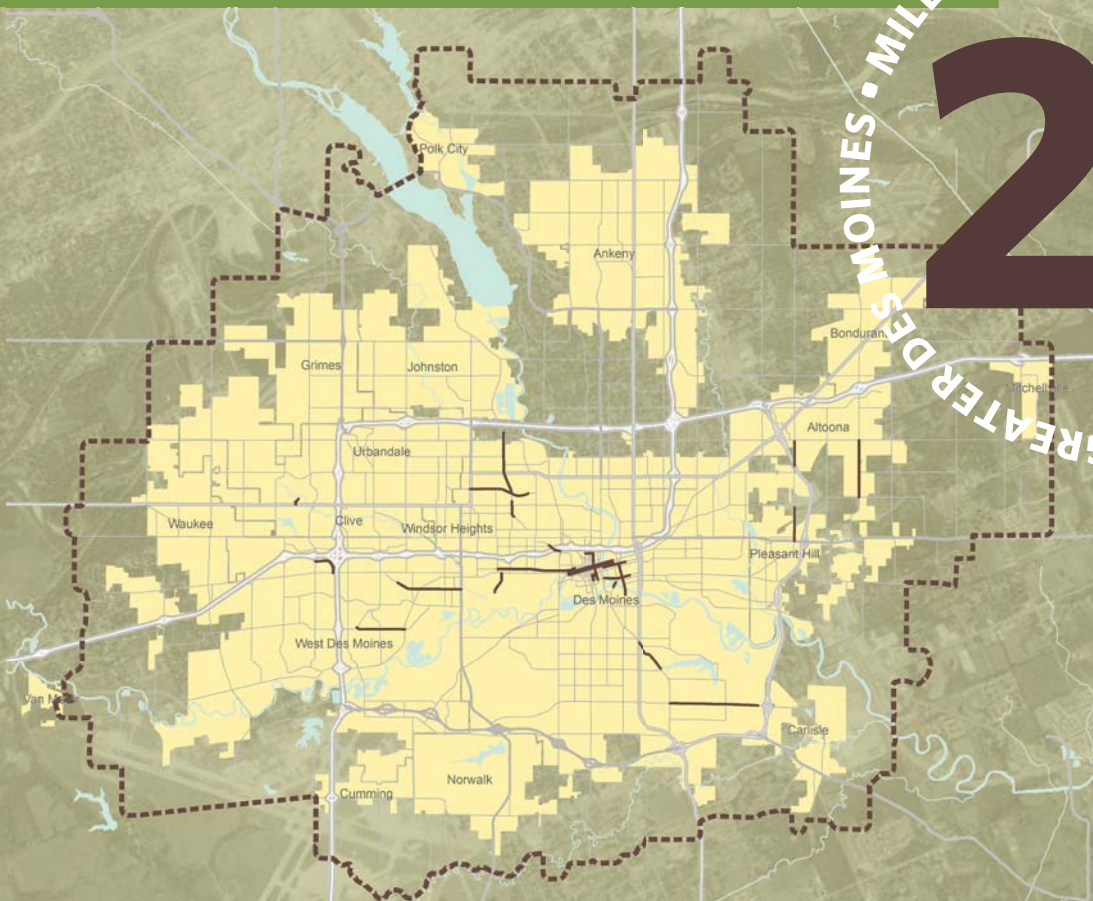
ON-STREET FACILITIES

On-street bicycle facilities enhance transportation options for a region. These facilities may include shared lane markings, which are used on roadways with low speed differentials between motorists and cyclists; bike lanes, which provide exclusive space for cyclists; buffered bike lanes; and, cycle tracks, which are physically separated from the roadway.



Source: Bicycling Magazine

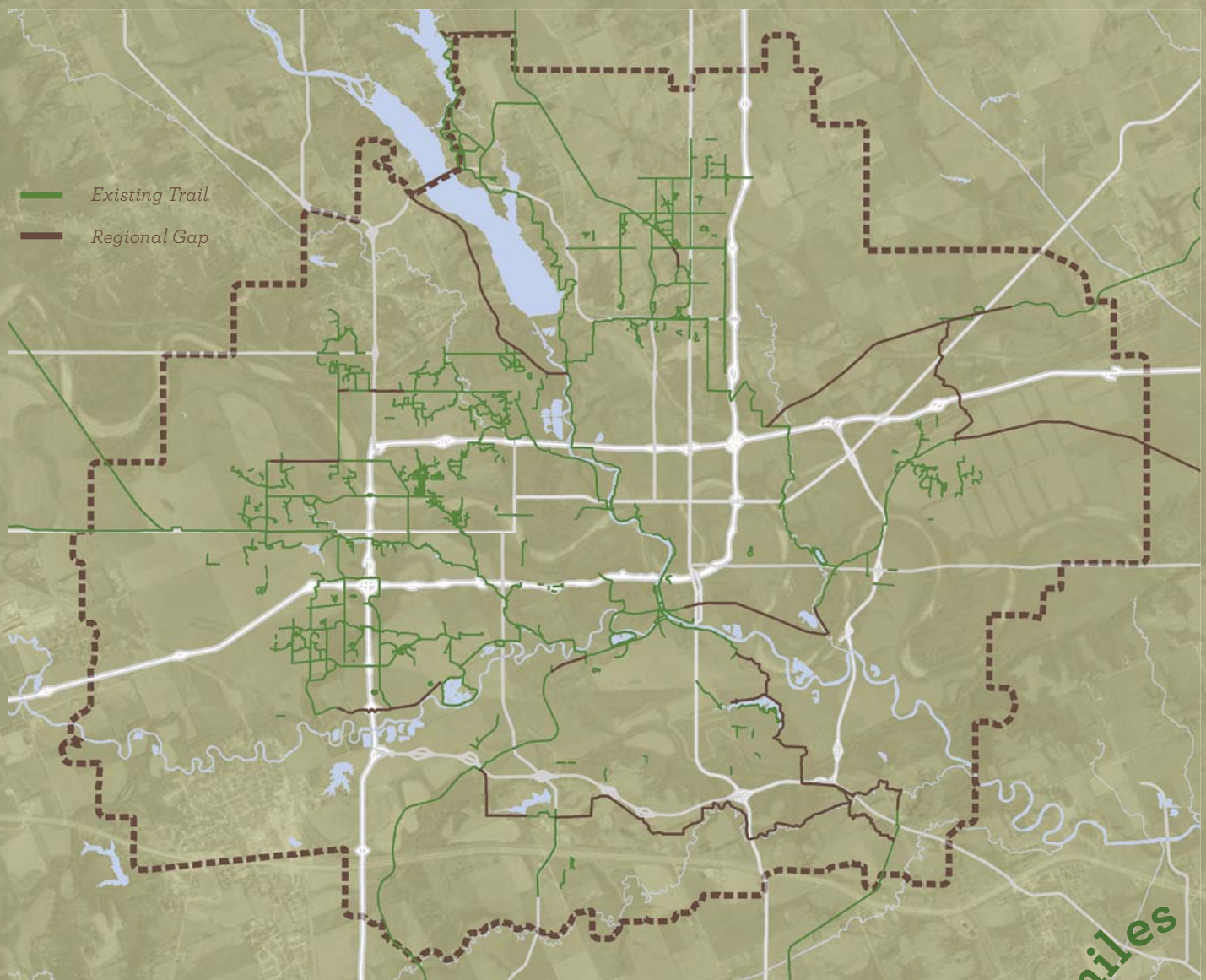
26 MILES OF EXISTING ON-STREET BICYCLE FACILITIES IN GREATER DES MOINES



The goal: 400 miles of on-street facilities by 2050.

On- and off-street bicycle facilities offer multiple benefits for a region. Determining where gaps exist in this network is critical in determining how the MPO allocates funds for trails as well as in where the region implements on-street solutions. Gaps in the bicycle system inhibit the use of cycling as a viable mode of transportation.

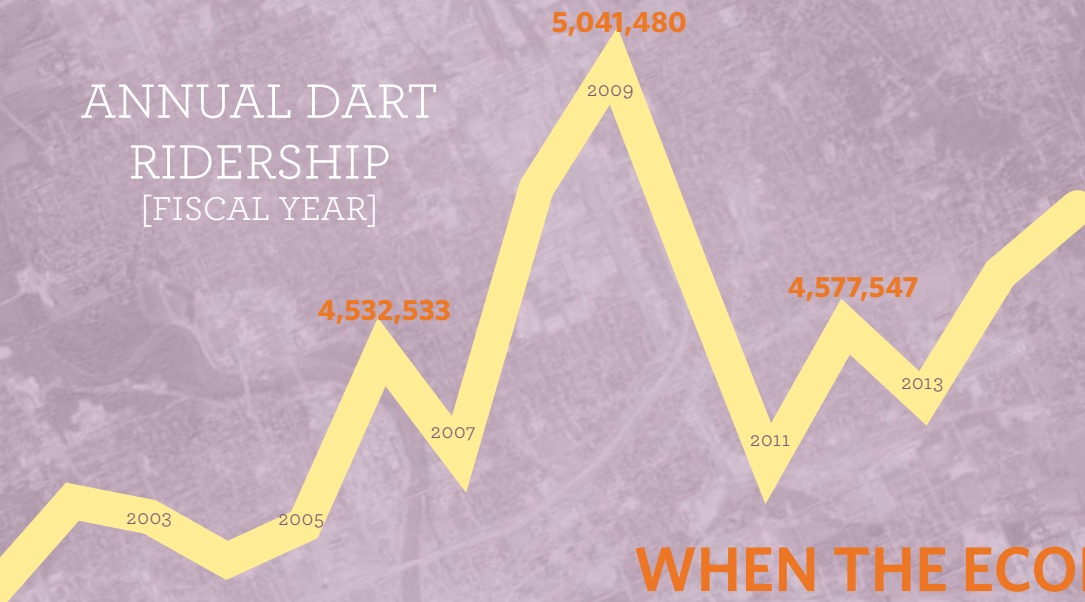
CYCLING ISN'T JUST FOR RECREATION; IT'S AN ACTIVE MEANS OF TRANSPORTATION.



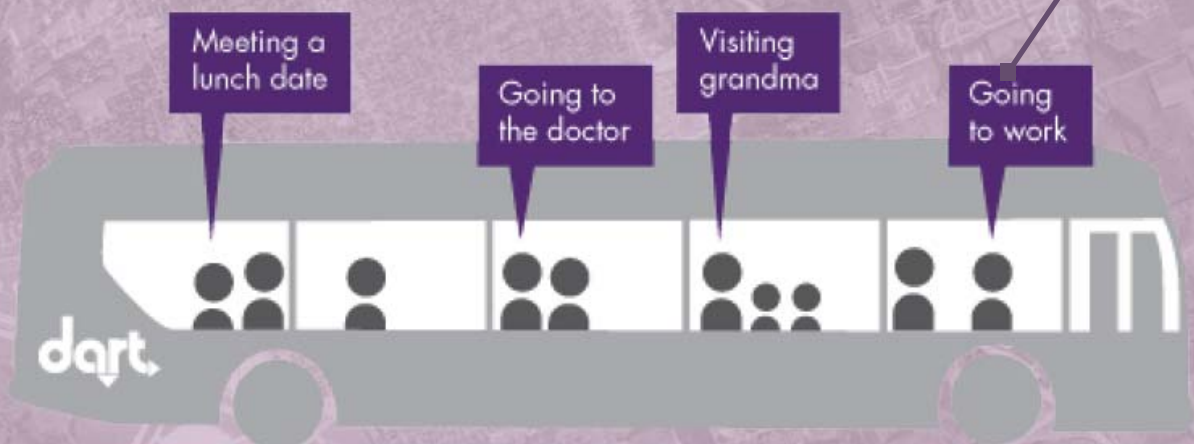
14 trail gaps totalling 66 miles

TRANSIT Trends

ANNUAL DART
RIDERSHIP
[FISCAL YEAR]



WHEN THE ECONOMY'S
DOWN, TRANSIT RIDERSHIP
OFTEN INCREASES — DART
HAD RECORD RIDERSHIP IN
2008-2009



One recurring desire that emerged from the public during the planning process was being able to take transit to important destinations. To accomplish this, the region is looking to align routes based on existing and planned densities of residents and employees. Matching transit service with where people live and work is the best way to maximize access and to operate a system most efficiently. It also is important that transit stops are accessible by bicycle and by foot.

Since 2006, bike + ride trips have more than tripled. In 2013, **over 52,000 trips included both bikes + buses.**

MULTIMODAL adj **1** characterized by several different modes of activity or occurrence **2** intermodal **3** combined transport **4** involving of using several modes or methods

Daily DART Mileage

2,777 miles one way
3.6 times daily

One weekday of DART mileage (10,000) = 3.6 trips between LA and NYC

Targets

Greater Des Moines aspires to offer a mature transportation system that empowers residents to choose which mode they want to use. To do so, the MPO has identified several targets for the region to work towards.

MEASURE	CURRENT	2050 TARGET
Bicycle System On-Street		
Miles of On-Street Facilities	23	400
Mode Choice/Split (Peak Hour Trips to Downtown) [%]		
Single Occupancy Vehicles	77	55
Transit	7	20
Carpool	12	15
Walk/Bike/Work from Home/Other	4	10
Transit		
Total Ridership (Fiscal Year 2014)	4,400,000	8,800,000

GOAL 2:

Manage and Optimize Transportation Infrastructure and Services

In 2012, *Moving Ahead for Progress in the 21st Century Act* (MAP-21) was signed into law as the nation's transportation authorization bill. MAP-21 transforms the framework for investments to guide growth and development of infrastructure.

"This is a good, bipartisan bill that will create jobs, strengthen our transportation system and grow our economy. It builds on our aggressive safety efforts, including our fight against distracted driving and our push to improve transit and motor carrier safety. The bill also provides states and communities with two years of steady funding to build the roads, bridges and transit systems they need. We look forward to working with Congress, states and local communities to put this bill to work quickly and effectively."

- Former US DOT Secretary Ray LaHood

MAP-21 focuses on a fix-it first mentality, encouraging regions to prioritize the protection of prior investments and to improve upon their safety and reliability.

Current Conditions

As previously mentioned, Greater Des Moines prides itself on its short travel times. Regional commute times are short, and roadway users rarely run into congestion. In fact, over 98 percent of Greater Des Moines roads are not congested. Thus, when commuters are forced to slow down a bit, they sometimes express frustration despite the fact that most people around the world would not consider area roads to be congested.

Poor bridge conditions, an aging public transportation fleet, deteriorating pavement conditions, and freight impediments balance the short travel times in Greater Des Moines. A recent study, *Rural Connections: Challenges and Opportunities in America's Heartland*, by the National Transportation Research Group found that Iowa bridges rank third worst in the nation. At the same time, 18 percent of DART's fleet is beyond its useful life.

Further, the MPO looks at the average Pavement Condition Index (PCI) across Greater Des Moines. This tells roadway users what level of quality they can expect when driving on roadways. PCI scores range from 0 to 100, with 100 being the best possible score. The average for the entire region is 60; the state aims to maintain an average of 62.5 — good condition — for the entire state-owned network.

A final consideration in understanding how well the regional transportation system operates is the freight network. The freight network plays a key role in moving goods in and out of the region, thus enhancing economic opportunity across the region. However, a number of transportation-related impediments prevent this system from operating at peak efficiency. It is the region's goal to eliminate all of these impediments by 2050.

Mobilizing Tomorrow seeks to balance investments in the different modes of transportation in hopes of bringing all aspects of the network in line with the plan's — and the region's — goals.

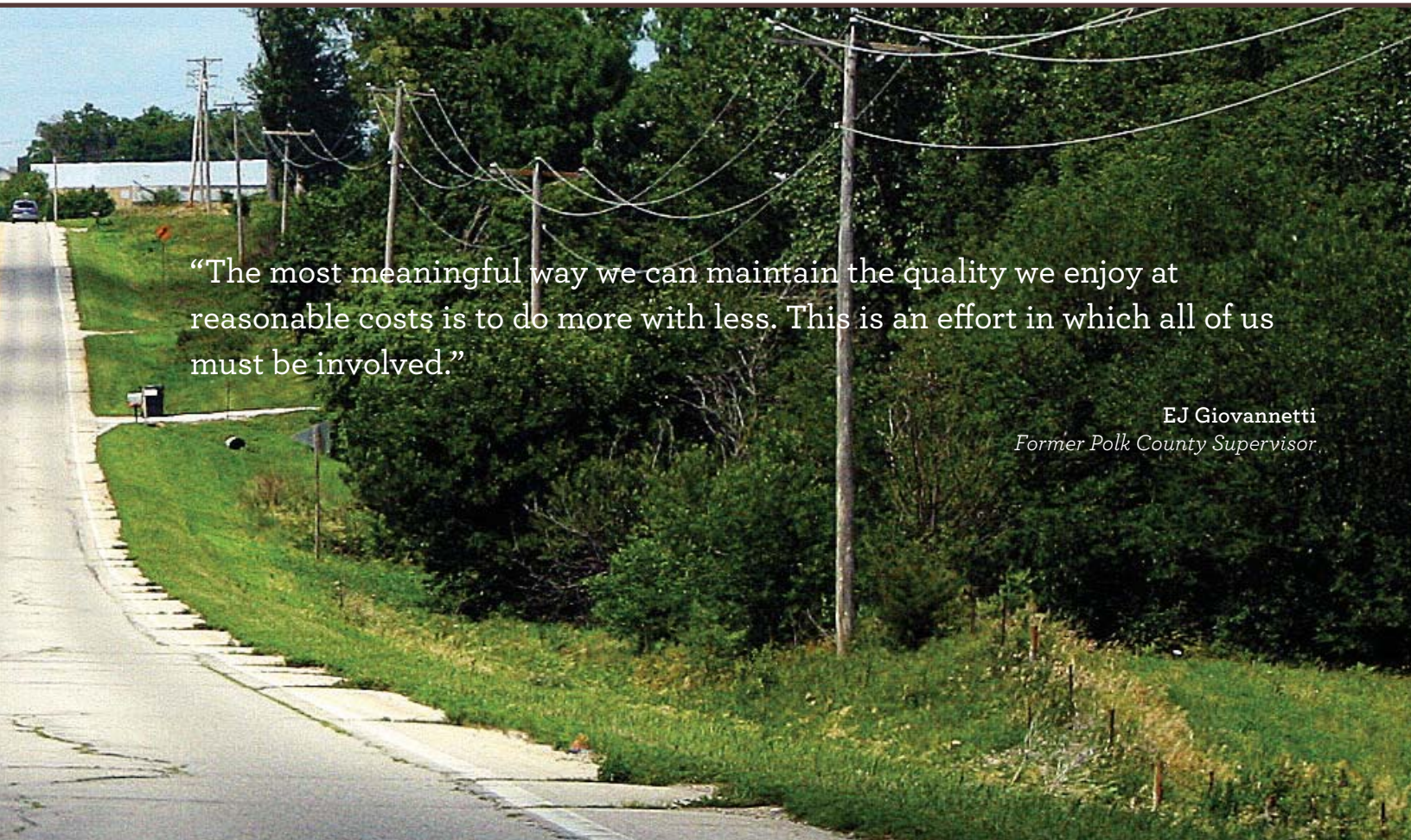


Measures

The MPO has established multiple measures to understand how well we are managing our transportation infrastructure. These cover all aspects of the transportation system, including bridge safety, public transportation vehicles, roadway capacity, and freight.

The MPO looks at these various elements in order to better understand how the transportation system as a whole is operating. This look at the condition of the following measures allows the region to determine what kinds of investments are most critical and where those investments should be made geographically. The measures that will help the MPO track its progress in managing and optimizing transportation infrastructure and services include:

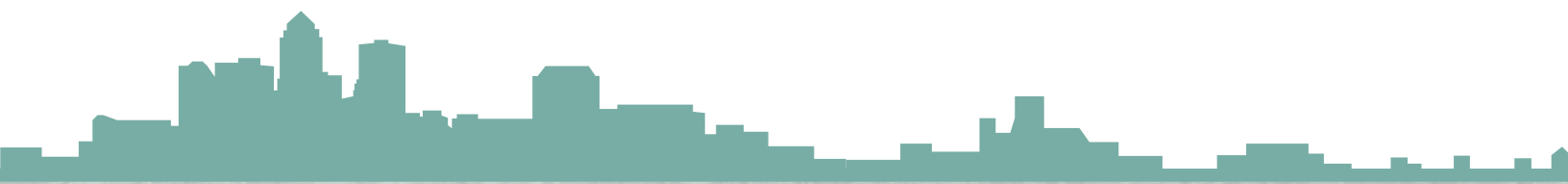
- Pavement condition;
- Average bridge sufficiency;
- Percent of deficient bridges;
- The average age of DART's fleet;
- The number of DART vehicles beyond their useful life;
- Non-congested roads; and,
- The number of freight impediments.



“The most meaningful way we can maintain the quality we enjoy at reasonable costs is to do more with less. This is an effort in which all of us must be involved.”

EJ Giovannetti
Former Polk County Supervisor

THE CONGESTION Question



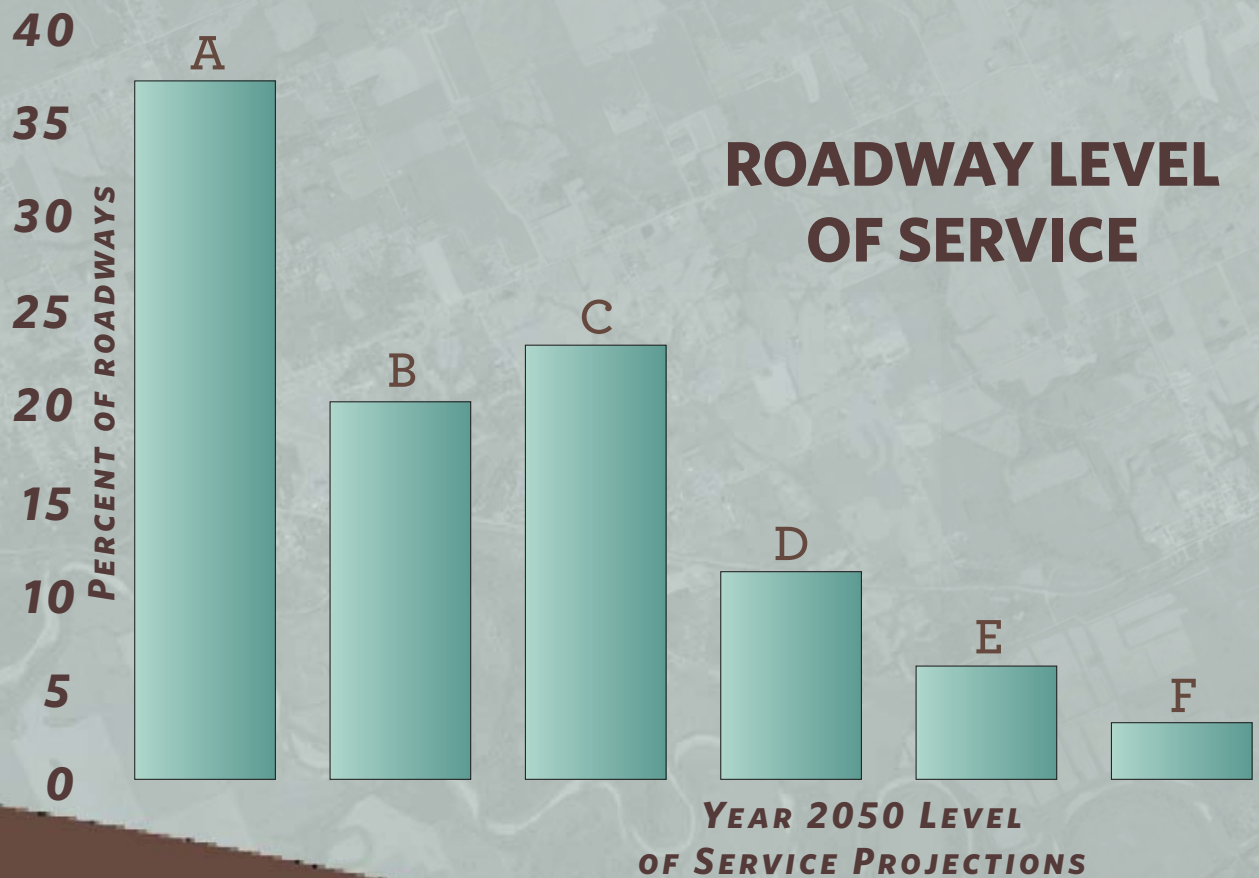
TRAFFIC CONGESTION is a condition on road networks that occurs as use increases, and is characterized by slower speeds, longer trips, and increased vehicle queueing. It is a situation in which the interaction between vehicles slows the speed of the traffic stream.

98.2

PERCENT OF ROADS IN
THE REGION THAT ARE
FREE OF CONGESTION

Even without roadway capacity additions, projections don't show significant congestion in Greater Des Moines.

Transportation planners and engineers frequently look at Level of Service (LOS) to evaluate how our roads are performing. Specifically, LOS indicates how well traffic is flowing. LOS is measured by calculating automobile volume to roadway capacity. LOS is represented using letters A through F, with A indicating free flowing traffic and F representing gridlock.



LEVEL OF SERVICE	WHAT'S IT MEAN?
A	Free flow. Motorists proceed at or above the posted speed limit and have total maneuverability between lanes at all times.
B	Reasonably free flow. Speed is maintained at A level of service, but maneuverability between lanes is somewhat restricted.
C	Stable flow. Traffic still flows at or near free flow conditions. Posted speed limit is maintained, but maneuverability between lanes requires noticeably more driver awareness.
D	Approaching unstable flow. Speeds begin to decrease and maneuverability is limited. Driver comfort diminishes.
E	Unstable flow. Traffic flow becomes inconsistent with rapid variations in speed. Almost no usable gaps remain in traffic. Any incident can cause significant delays.
F	Forced or breakdown flow. Traffic gridlock with frequent slowing and unpredictable travel time. Road is in a "traffic jam" condition.

FREIGHT Flaws

16 FREIGHT IMPEDIMENTS IN THE REGION

STRUCTURAL IMPEDIMENTS

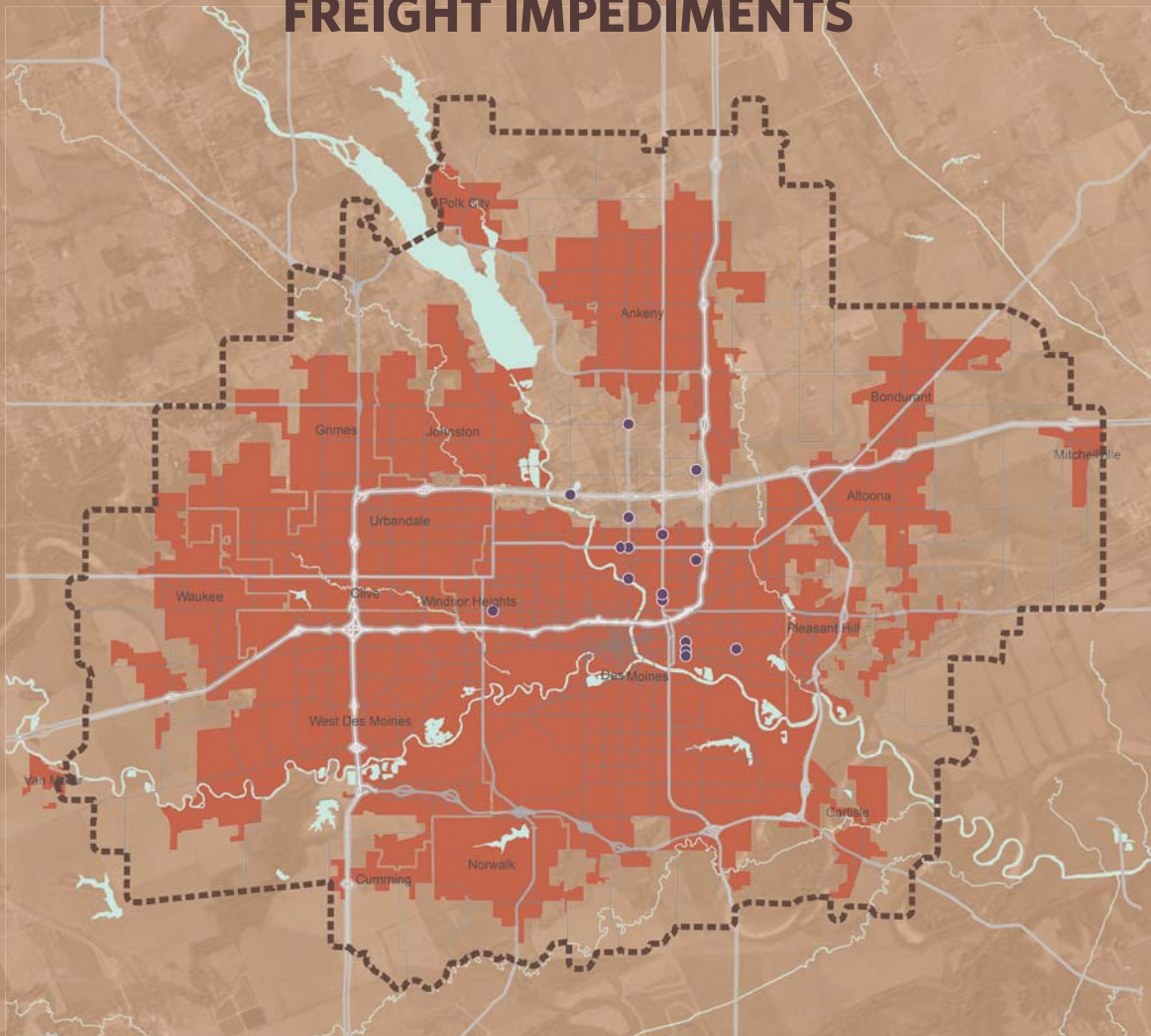
Structural impediments may include overpasses that are too low for trucks or trains to clear, intersections that trucks can't navigate, and bridges with weight restrictions that can't accommodate trucks and/or trains.

OPERATIONAL IMPEDIMENTS

Operational impediments may include corridors with traffic volumes that impede truck movement, one-way streets that restrict access, trips that result in empty trucks traveling long distances, or extended time at loading and unloading destinations.

Goods movement is the transportation of for-sale products from where they're manufactured and/or harvested to where they'll be sold. This can take place via ship, airplane, rail, truck, or some combination thereof. In Greater Des Moines, goods movement centers on rail and trucks. Though goods movement wouldn't be possible without it, our transportation system presents some challenges to this process.

FREIGHT IMPEDIMENTS

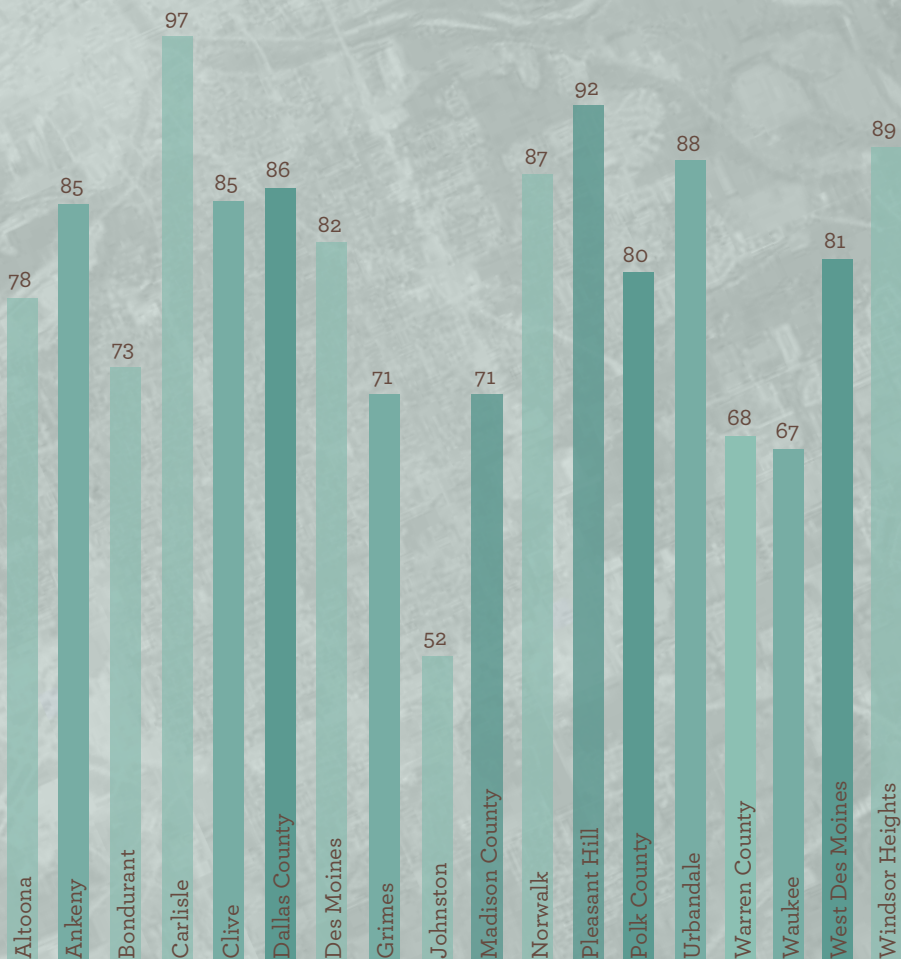


**ENHANCING THE REGION'S
FREIGHT NETWORK WOULD
SUPPORT GOODS MOVEMENT**

BRIDGING the Gap

Bridges are rated on a scale of 0 to 100, with 100 representing a bridge that meets all standards.

AVERAGE BRIDGE SUFFICIENCY RATINGS



MPO AVERAGE: 82

Bridges are given a sufficiency rating as well as a structurally deficient or functionally obsolete classification. *Sufficiency ratings* indicate a bridge's sufficiency to stay in service and help determine which bridges may need repair or replacement. *Structurally deficient* refers to bridges needing significant maintenance, rehabilitation, or replacement, while *functionally obsolete* refers to bridges that no longer meet the criteria for the system of which the bridge is a part.

DID YOU KNOW?

Only bridges categorized as structurally deficient or functionally obsolete with a sufficiency rating below 80 are eligible for certain federal funds. In 2012, 81 bridges in our region were eligible for this funding.

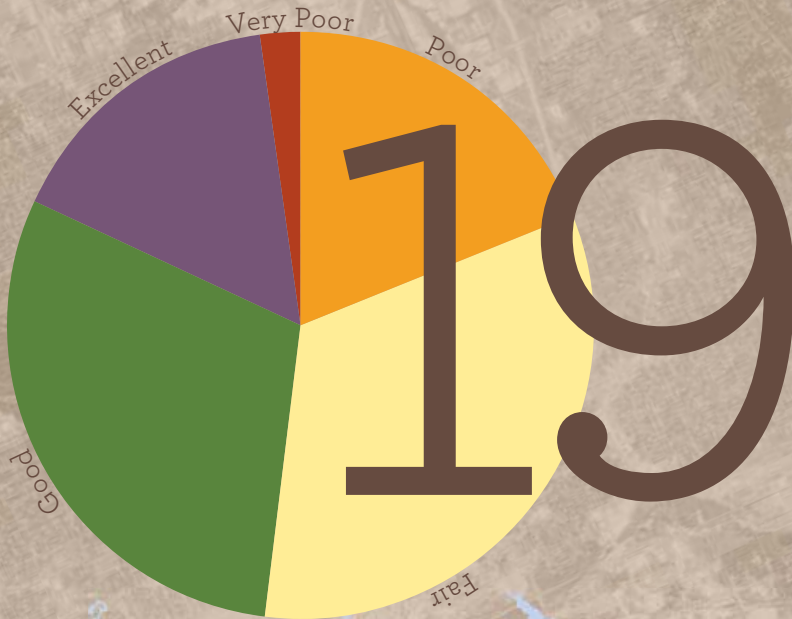


1 OF 3

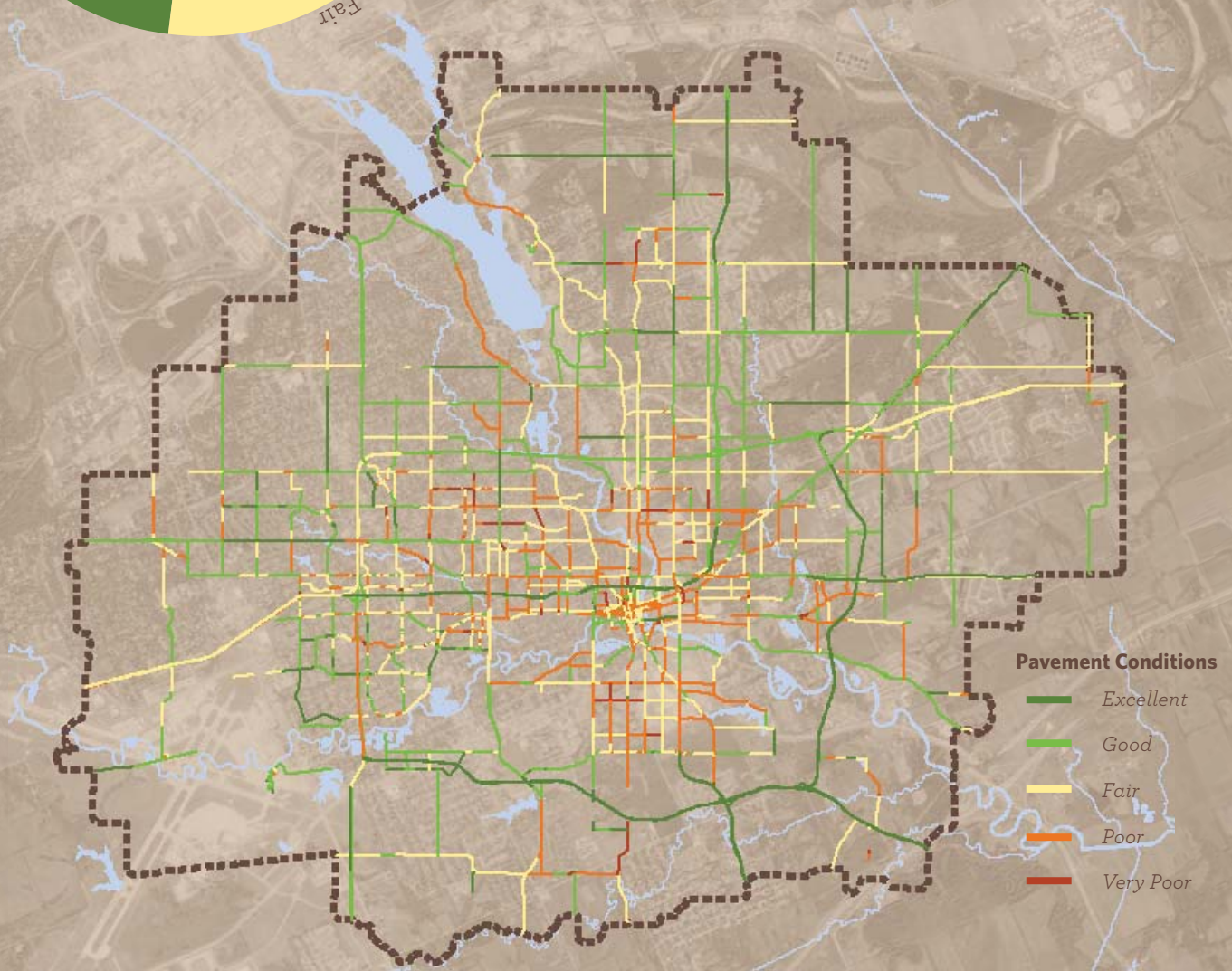
AREA BRIDGES ARE ELIGIBLE
FOR FUNDING BASED UPON
THEIR CONDITION

Data Sources:
2012 National Bridge Inventory,
2012 Iowa DOT Structure Data

STATE of the Roads



PERCENT OF OUR
ROADS ARE IN
EXCELLENT
CONDITION



The Iowa Department of Transportation (DOT) and the Institute for Transportation at Iowa State University (InTrans) annually collect pavement condition data for roads across the state. This data includes the Pavement Condition Index (PCI), which tells us the level of quality we can expect when driving on the roadways. PCI scores range from 0 to 100, with 100 being the best possible score.

IT'S NOT JUST A QUESTION FOR WINTER: HOW ARE THE ROADS?



Using a scoring system of 0 to 100, the average road conditions for Greater Des Moines area communities range widely. The average for the entire region is 60; the state aims to maintain an average rating of 62.5 — good condition — for the entire state-owned network.

Data Sources:
2012 Iowa Pavement Management Program,
2012 Iowa DOT GIMS Data

THE WHEELS on the Bus



7.7 AVERAGE AGE OF
FLEET IN YEARS

The Federal Transit
Administration's (FTA)
useful life of buses:

Heavy Duty **12 years**
Light Duty **7 years**

DART's fleet
replacement policy:

Heavy Duty **13 years**
Light Duty **8 years**

DART Bus and Van Fleet:

119 fixed route heavy duty buses

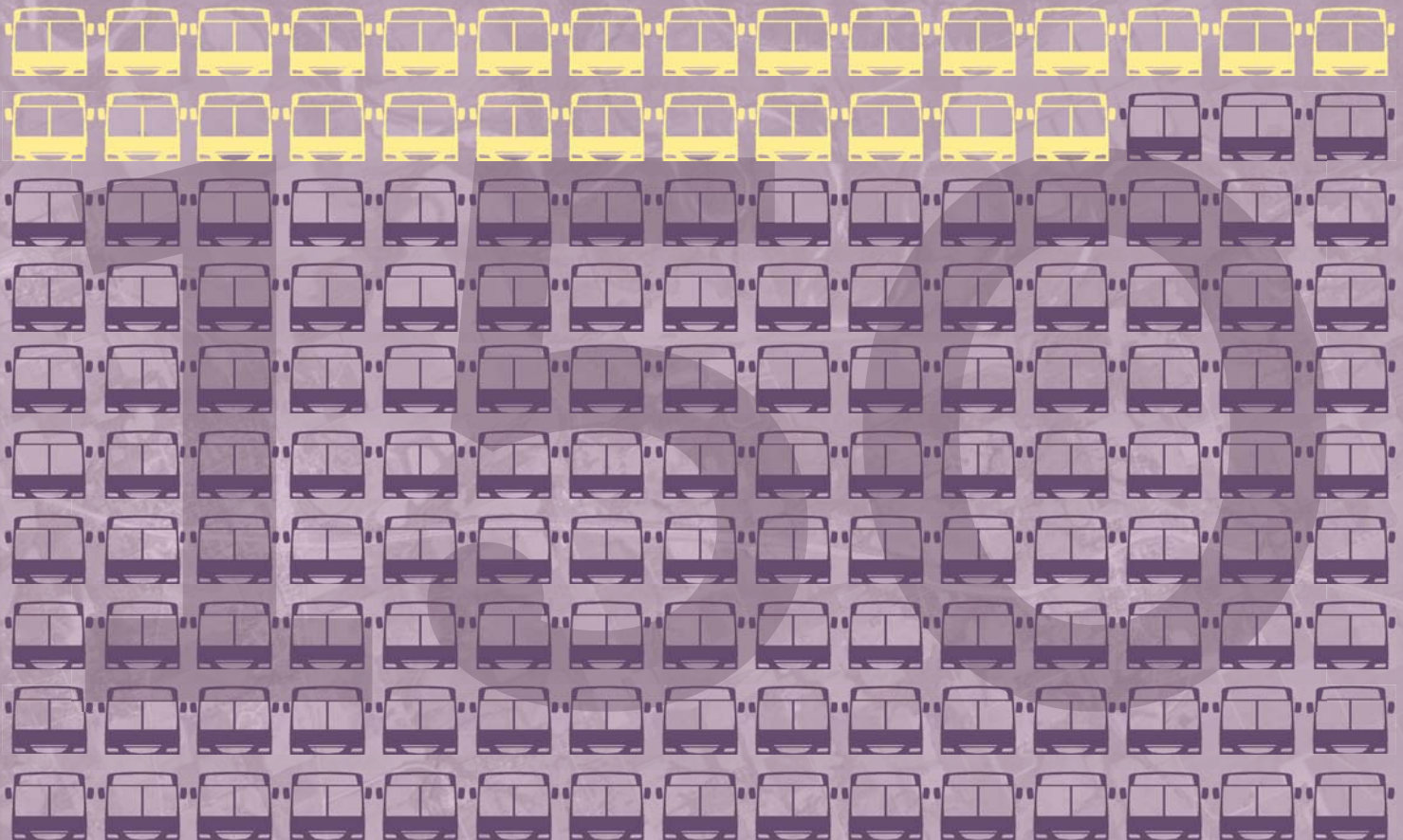
31 paratransit and flex route buses

Additional **108** rideshare vans

Maintenance is not limited to just roads and bridges. Considerable expense goes into maintaining and replacing transit infrastructure, particularly vehicles. The Federal Transit Administration and DART have policies that outlines the age at which transit vehicles should be replaced. A heavy-duty 40-foot bus costs \$450,000; hybrid fuel technology increases the cost by \$175,000. An articulated bus costs \$750,000, and a medium-duty bus costs \$156,000 (*Source: DART*).



18 PERCENT
OF DART BUSES
BEYOND THEIR
USEFUL LIFE



Targets

Greater Des Moines strives to maximize its previous investments to further the efficiency and effectiveness of the transportation system. To do so, the MPO has identified several targets for the region to work towards, as shown in the following table.

MEASURE	CURRENT	2050 TARGET
Bridge Sufficiency Rating		
Average Rating	82	-
Deficient Bridges [%]	25	Maintain
Transit		
Average Age of Fleet [Years]	7.7	6
Vehicles Beyond Useful Life [%]	18	0
Level of Service - Peak Hour		
Non-Congested Roads [% of Roadway Miles]	98.2	> 90
Freight Impediments		
Number of Impediments	16	0
Pavement Condition Index (PCI)		
Average PCI	60	-
Percent in Poor or Worse	18%	Maintain

Certain measures included in the chart do not have 2050 targets. These measures help give a clearer understanding of the current system without setting a goal for the future.

GOAL 3:

Improve the Region's Environmental Health

Creating and maintaining natural resource corridors, natural stormwater management systems, urban forest canopies, and parks embody the concept of natural stewardship. Good land stewardship ensures long-term environmental and economic health, and its effects improve the mental and physical well-being of people.

A green infrastructure network gives people access to nature, recreation, quiet, and views. Trees and other green infrastructure mitigate the negative environmental and economic impacts of natural disasters, climate change, and poorly designed developments. Ultimately, green systems make communities more resilient and help to attract people and employers. The transportation system can play a significant role in how Greater Des Moines residents experience the natural environment.

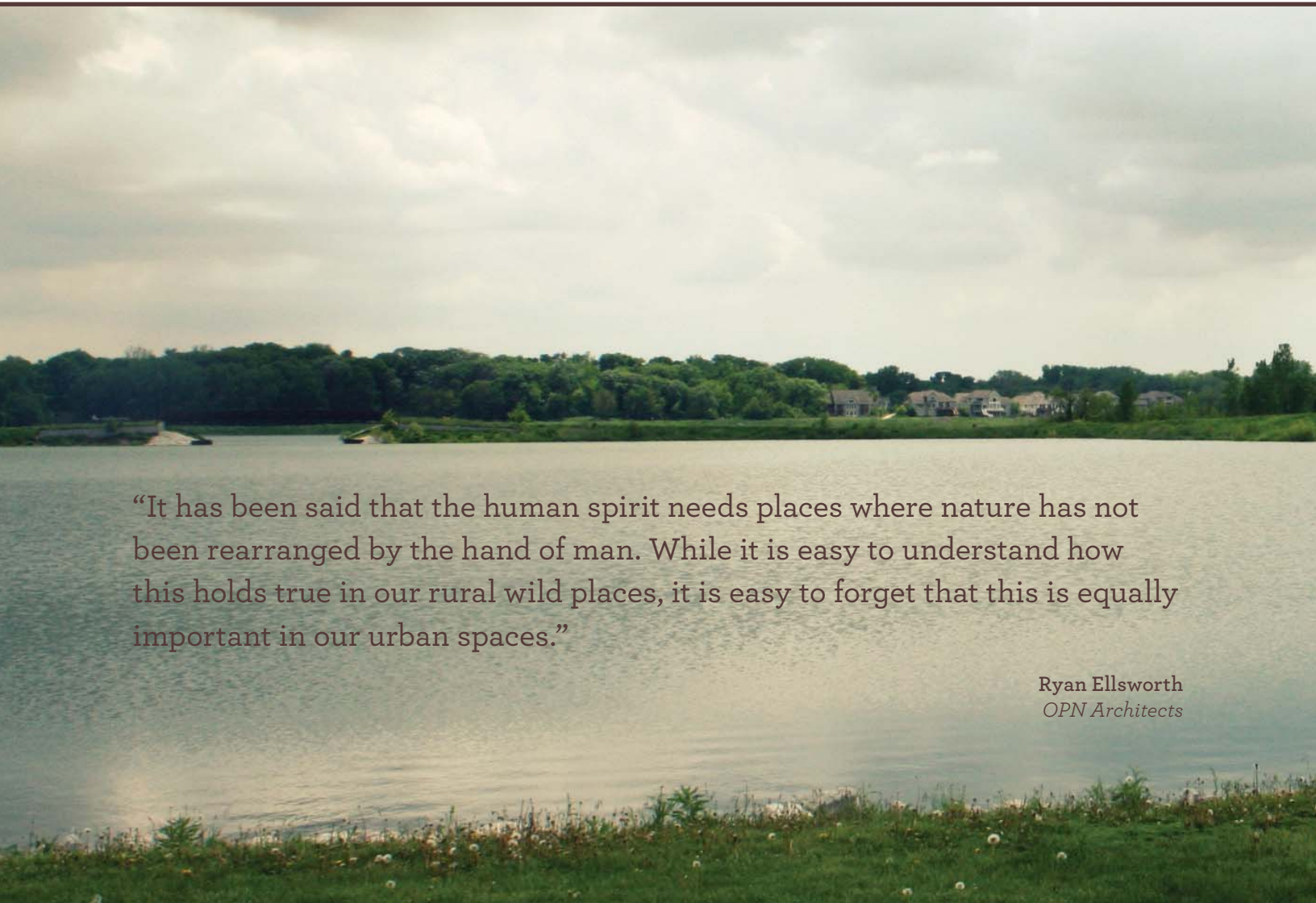
Current Conditions

One of the recurring themes during the MPO's various public outreach efforts was the desire of Greater Des Moines residents to get outside and enjoy the natural environment. People love riding on the trail system, hearing the birds, and disconnecting from the city. Despite this, the Greater Des Moines region has seen low levels of investment in open space over the last 40 years, with 88 percent of all current public interest land established before 1970, according to Polk County Conservation.

At the same time, Greater Des Moines is seeing a greater need to depend on the natural functions of watersheds to manage stormwater runoff and less on the gray infrastructure of storm sewers and detention ponds. Where conditions are created for infiltration strategies, using the natural functions of watersheds may save 10 to 50 percent on the cost of most stormwater infrastructure projects, according to the report *Banking on Green: A Look at How Green Infrastructure Can Save Municipalities and Provide Economic Benefits Community-Wide*.

With *Mobilizing Tomorrow*, the MPO is increasing its commitment to improving the region's environmental health as it invests in the transportation system. One of the first steps in this process is completing an inventory of environmentally sensitive areas — areas the MPO calls *environmental conflict* and *environmental challenge* areas. Many of these areas are coming under pressure as Greater Des Moines continues to grow outward. As a result, the region faces the possibility of losing key natural areas that not only provide habitat for plants and animals but also recreational opportunities for area residents. As this occurs and more roadways are proposed, the region must weigh the costs and benefits of development in regard to the natural environment.

Currently, Greater Des Moines has 77,106 acres of environmental challenge areas — those locations where proposed roadway improvements would potentially cost more to implement as a result of environmental features. Similarly, the region has 45,847 acres of environmental conflict areas — those locations where proposed improvements would pose a potential threat to the environment.



“It has been said that the human spirit needs places where nature has not been rearranged by the hand of man. While it is easy to understand how this holds true in our rural wild places, it is easy to forget that this is equally important in our urban spaces.”

Ryan Ellsworth
OPN Architects

Measures

The MPO has pinpointed four measures to assess how well Greater Des Moines, as a region, is protecting its environmental health. The first two relate to environmental impacts, while the remaining measures related to Vehicle Miles Traveled (VMTs).

When looking at environmental impacts, the MPO looks at two different areas. Environmental challenge areas are those locales where proposed improvements would potentially cost more to implement as a result of environmental features. Environmental conflict areas are those locales where proposed improvements would pose a potential threat to the environment.

VMTs measure the amount of total miles driven by all vehicles in a given area and are an indicator of how much people are driving. VMT-based metrics, such as per capita VMT and crashes per VMT, are common performance measures in transportation planning. *Mobilizing Tomorrow* supports a reduction in VMTs to reduce energy consumption, transportation-related emissions, congestion, and the occurrence of crashes.



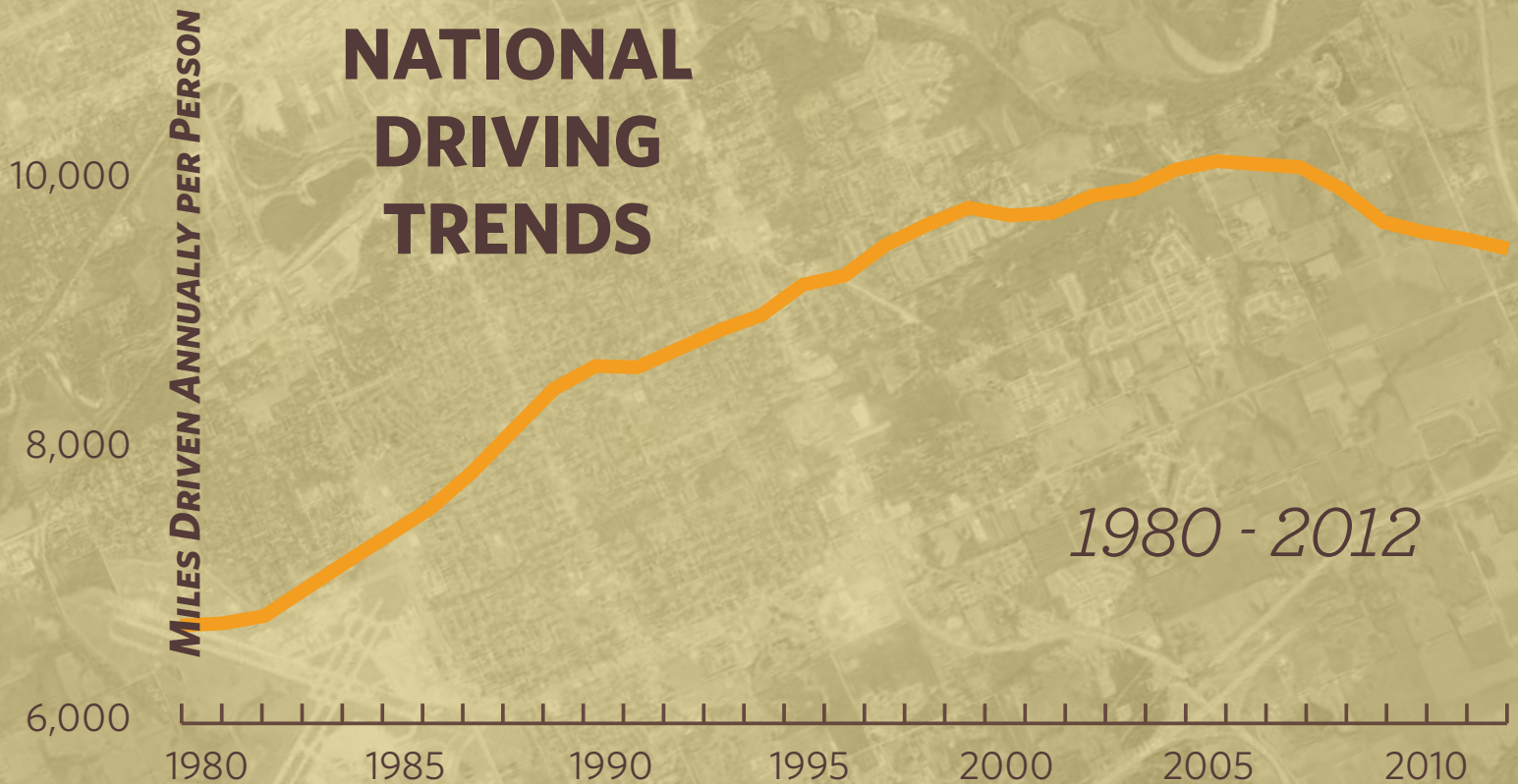
MANY the Miles

Nationally, **the number of miles driven peaked in 2004**. Since then, VMTs have been declining; the 2012 levels equaled those seen in 1997.

Demographic changes — namely aging Baby Boomers and fewer Millennials seeking drivers licenses — are contributing to less driving.

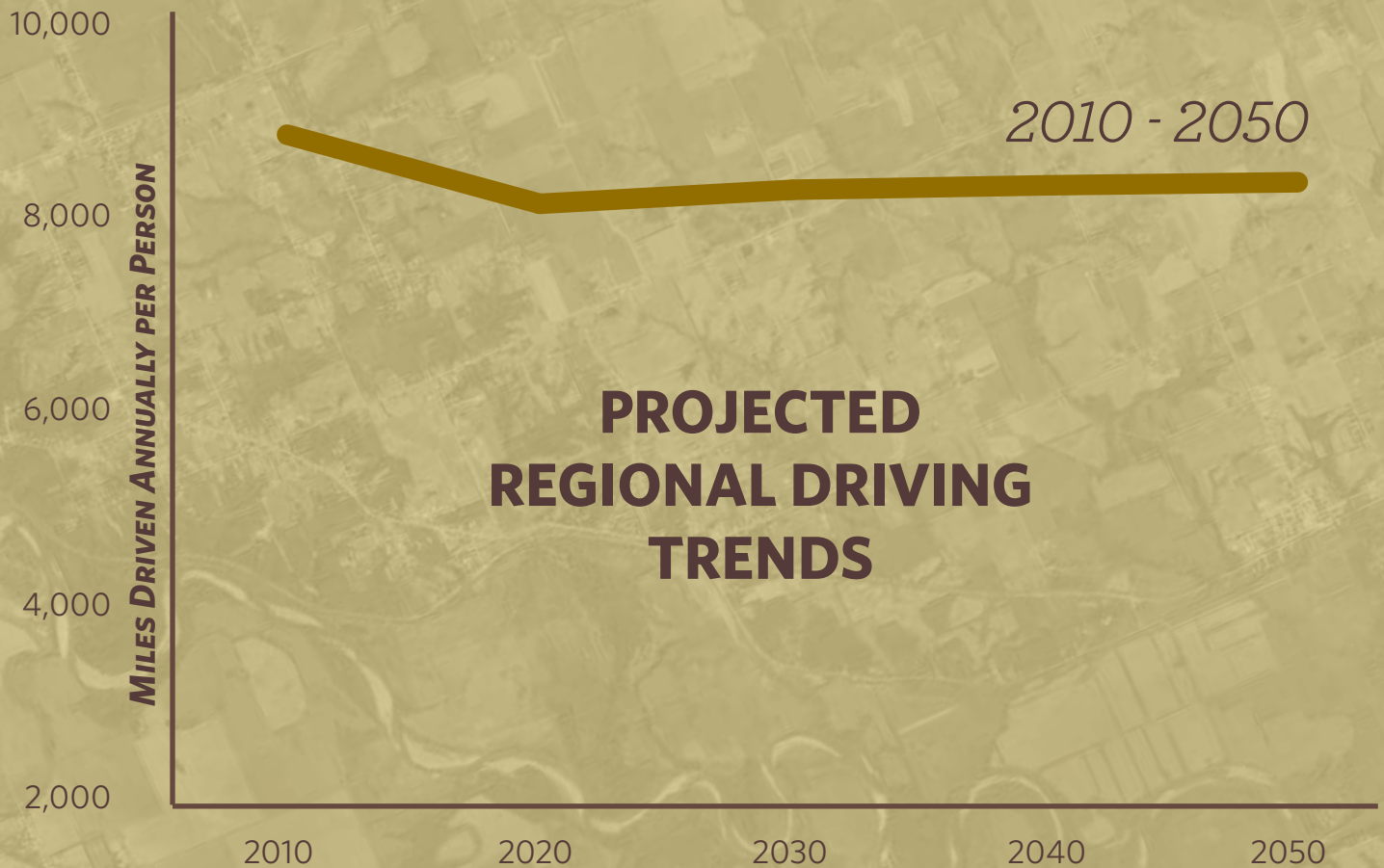
Local trends follow national trends when it comes to how much the region is driving. Collectively, MPO cities and counties have seen a decline in the number of miles driven per capita since 2000.

NATIONAL DRIVING TRENDS



1980 - 2012

Vehicle miles traveled (VMTs) are the amount of total miles driven by all vehicles in a given area and are an indicator of how much people are driving. VMT-based metrics, such as per capita VMT and crashes per VMT, are common performance measures in transportation planning. *Mobilizing Tomorrow* and other efforts support a reduction in VMTs to reduce energy consumption, transportation-related emissions, congestion, and the occurrence of crashes.



CAN WE CONTINUE TO REDUCE HOW MANY MILES WE'RE DRIVING?

Many strategies exist to reduce the number of miles people are driving:

- Creating more mixed use, walkable developments
- Increasing the availability of alternative modes of transportation, such as public transit and bicycling
- Increasing the cost of driving

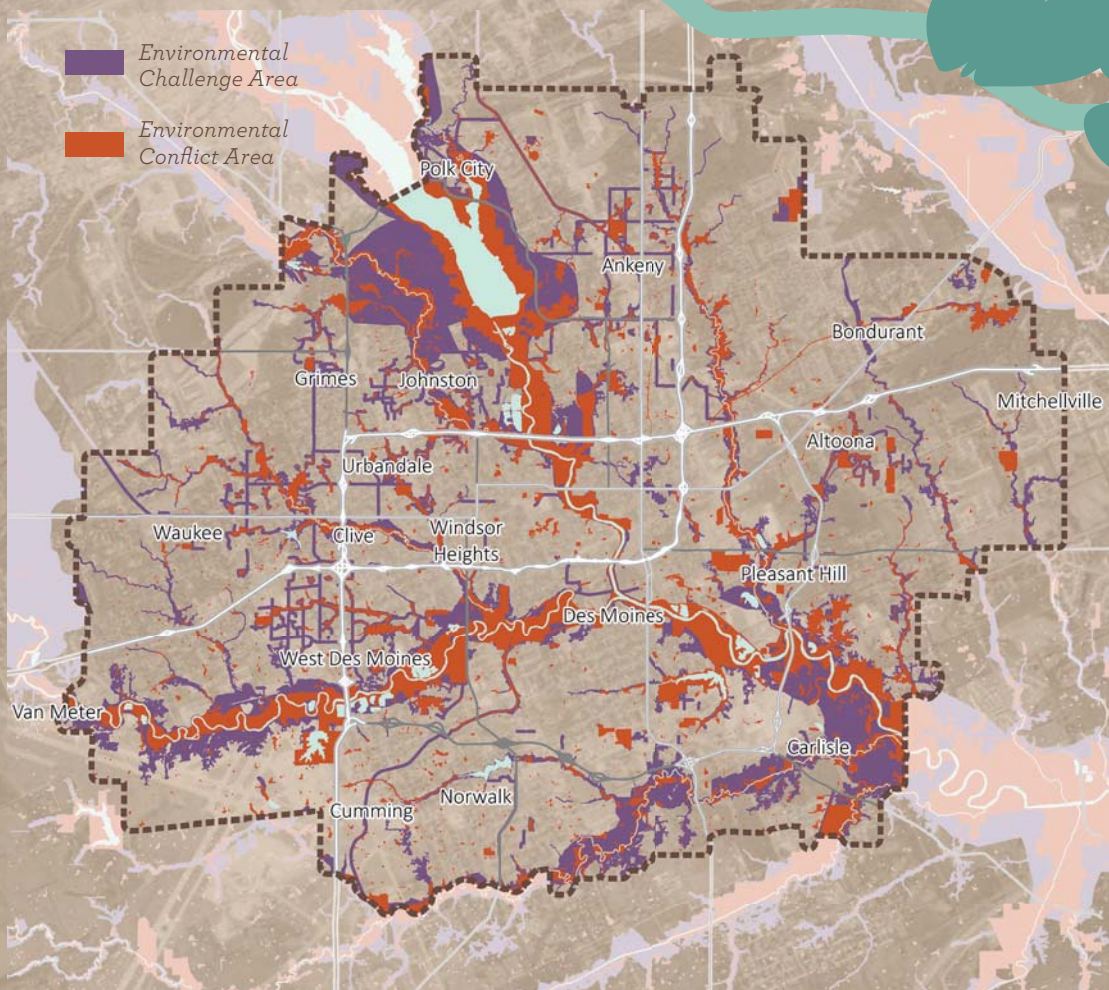
Data Sources:
US Census Bureau
Federal Highway Administration Travel Volume Trends
Iowa Department of Transportation (DOT)

PRESERVING the Environment

As development continues to occur around the region's periphery, we must consider environmental conflict and environmental challenge areas.

ENVIRONMENTAL CHALLENGE AREA n 1 a location where proposed improvements would potentially cost more to implement as a result of environmental features

Wetlands, Floodways,
Floodplains, and
Hydric Soils



Existing natural resources, their conditions, and their protection status are foundational in shaping the region's quality of life. Time and again, Greater Des Moines residents have demonstrated their desire to recreate outdoors and to simply enjoy nature. However, many environmentally sensitive areas are coming under pressure as our region continues to grow outward. As this occurs, we must be cognizant of these areas and weigh the costs and benefits of all proposed projects in regard to the natural environment.

An aerial photograph of the Greater Des Moines area serves as the background. Overlaid on the map are several environmental features: a dark brown silhouette of a city skyline at the top; a light blue wavy line representing water trails and streams; green silhouettes of various plants and grasses; a large green silhouette of a bird in flight on the left; and a large green silhouette of a tree on the right. A red rectangular box is positioned in the upper right quadrant, containing text.

ENVIRONMENTAL CONFLICT AREA n 1 a location where proposed improvements would pose a potential threat to the environment

Prairie Potholes

Parks, conservation areas, and trails

Habitat Blocks of Varying Sizes

Water Trails + Streams

Important Bird Areas

86,000

**ACRES OF ENVIRONMENTAL
CHALLENGE + CONFLICT AREAS**

Data Sources:
The Tomorrow Plan
Iowa Department of Natural Resources (DNR)

Targets

As a region, Greater Des Moines has demonstrated its commitment to preserving and protecting the natural environment. It is not enough to maintain the status quo; Greater Des Moines residents have expressed their desire for a more proactive approach.

MEASURE	CURRENT	2050 TARGET
Environmental Impacts		
Environmental Conflicts Areas [Acres]	45,847	Do Not Disturb
Environmental Challenge Areas [Acres]	77,106	Mitigate What Is Disturbed
Vehicles Miles Traveled		
Total [Average Weekday]	11,591,234	Decrease
Per Capita [Average Weekday]	24.14	Decrease

GOAL 4:

Further the Health, Safety, and Well-Being of All Residents in the Region

One of Greater Des Moines's key competitive advantages is its high quality of life. The region is consistently recognized for its affordability, access to the outdoors, and family-friendly atmosphere. However, this way of life is being challenged by impediments to multiple systems, including the area's car-centered transportation system and decreasing levels of physical activity. For residents to be able to truly enjoy the high quality of life for which Greater Des Moines is known, health and well-being, in all senses of those terms, need to be actively promoted throughout the region.

Current Conditions

Improving the health, safety, and well-being of all residents in Greater Des Moines furthers the vision of the region as one of lasting value, equity, and diversity. The way in which Greater Des Moines residents live influences their health, from the safety in one's automobile to access to key services.

Mobilizing Tomorrow encourages the development of diverse transportation options, increased access, and equality for all in the region. Three key pieces the region needs to understand in order to reach this goal are roadway safety, gaps in the regional trail system, and environmental justice.

Evaluating the safety levels of Greater Des Moines roadways enables the region to identify crash trends and to implement safety countermeasures. While fatality and major injury rates generally have decreased over the last several years, Greater Des Moines still can improve. After all, even one fatality is too many.

Residents' health and well-being can be enhanced by spending time outdoors and exercising. While Greater Des Moines touts its regional trail system and calls itself the 'Trails Capital of the World,' the region still has several significant gaps in its trail system. Though the existing network enables cyclists to travel many places, completing trails in these gaps could further enhance the already strong cycling community in Greater Des Moines.

The third facet of improving the health, safety, and well-being in the region is environmental justice. An environmental justice area is an area with a large population of traditionally under served individuals. The MPO works to ensure the fair treatment and meaningful involvement of all resident in the region, including those living in these areas. This means that no group should bear a disproportionate share of negative health or environmental consequences from any project. The MPO studies seven Degrees of Disadvantage to identify these areas. They include linguistically isolated, non-white populations, persons in poverty, carless households, single heads of households with children, persons over 65, and persons with disabilities. The MPO identifies those areas with high concentrations in six of these groups as environmental justice areas. While these areas only occupy four percent of the land area in Greater Des Moines, fifteen percent of local residents live in these areas.



Measures

The MPO has identified several data points that can help the region understand its progress in furthering the health, safety, and well-being of all residents in the region. These fall into three primary categories: Crash data, regional trail gaps, and environmental justice areas.

Crash data analysis offers insights into current trends and lets the region understand the safety of its roadways. This often allows the region to glean new understandings of trouble areas as well. When considering crash data, specific measures include:

- Number of fatalities;
- Fatalities per 100 million vehicle miles traveled;
- Number of serious injuries; and,
- Serious injuries per 100 million vehicle miles traveled.

When considering regional trail gaps, Greater Des Moines looks at both the number of gaps in the trail system as well as the length, in miles, of the gaps. This information allows the MPO to make strategic investments in the trail system to further its connectivity.

Finally, the MPO considers a number of measures when analyzing environmental justice areas. Doing so enables the MPO to consider the impact — both positive and negative — of potential projects in these areas. These include:

- Percent of population;
- Percent of area;
- Pavement conditions;
- Bridge conditions;
- The crash data outlined above; and,
- Non-congested roads.



“We believe in capitalizing on sustainability practices so that Iowa can continue to boast a strong economy and a high quality of life, now and for future generations.”

Fred Hubbell and Bob Riley
Capital Crossroads Natural Capital Committee Co-Chairs

METRO Mishaps

CRASH HOT SPOTS

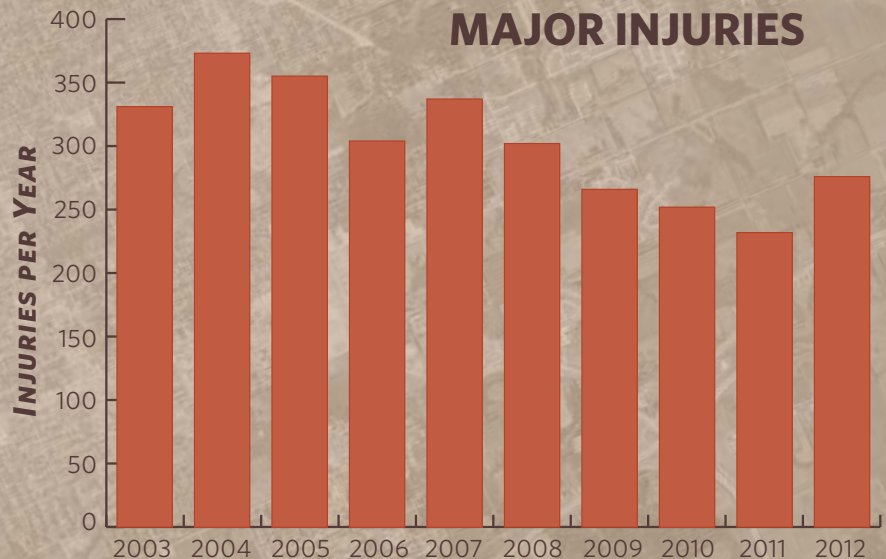
1.48
2003

CRASH DATA CAN HELP IDENTIFY ROADWAY TYPES THAT TEND TO BE MOST AT RISK FOR CRASHES.

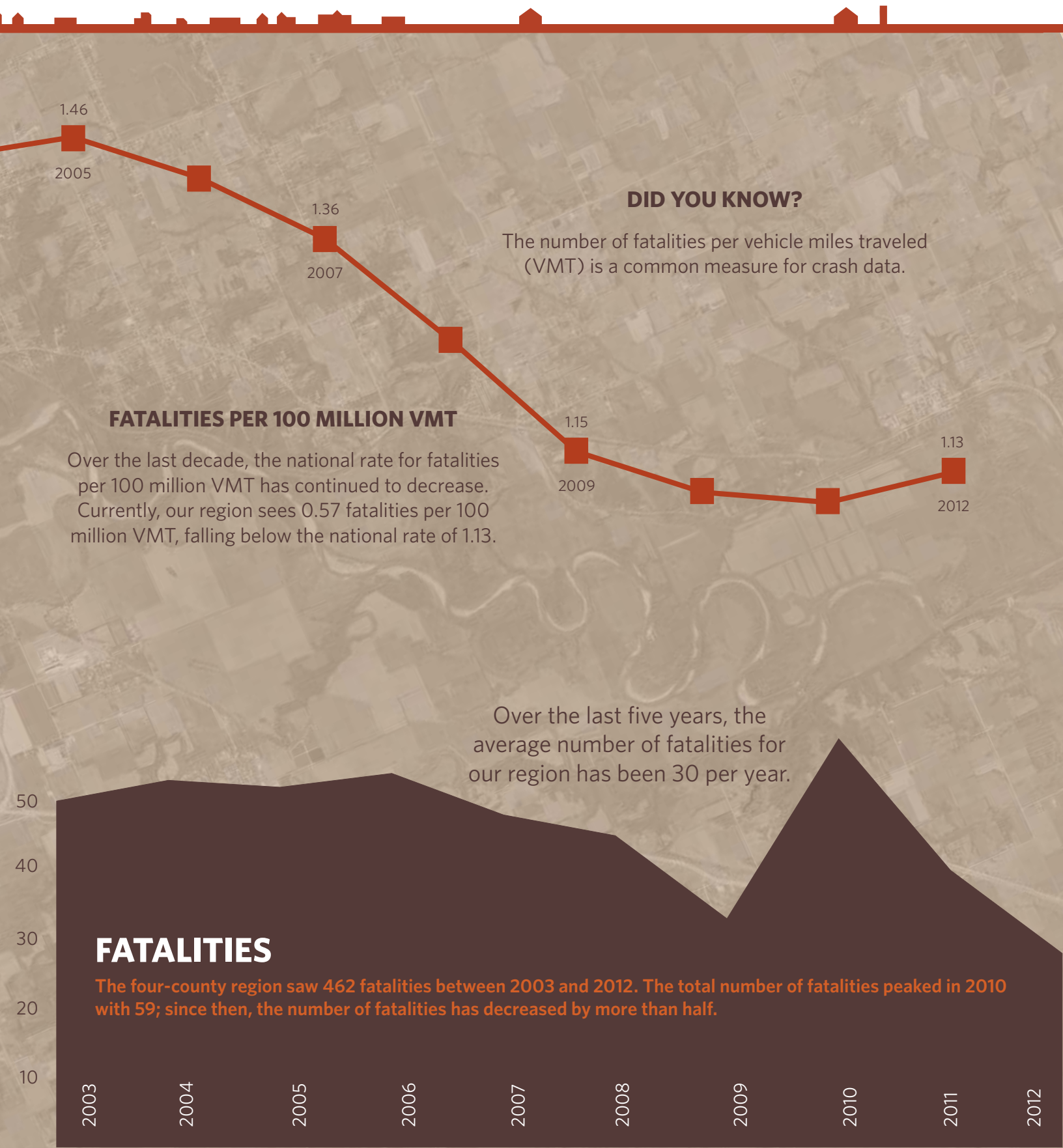
TRENDS

Over the last decade, the region has seen a decrease in both major injuries and fatalities as a result of automobile crashes in Dallas, Madison, Polk, and Warren counties. The total number of major injuries peaked in 2004 with 373; since then, the region has had an average of 291 major injuries annually as a result of automobile accidents.

MAJOR INJURIES



By analyzing crash data, the MPO is able to help identify the roadway types that tend to be most at risk for crashes. Using the Iowa Department of Transportation's Crash Mapping Analysis Tool (CMAT), the MPO pinpoints problem streets with higher crash densities and with more severe crashes.



FOLLOW the Trail

TRAIL COUNTERS CAN HELP US ANSWER THE QUESTION
WHERE ARE FUTURE TRAIL INVESTMENTS NEEDED?

40 PERCENT
OF RIDES
OCCUR ON
WEEKENDS

Central Iowans ride the most between 10:00 am and 4:00

Data Source:
Central Iowa Trail Count Program



In October 2011, the MPO began the Central Iowa Trail Counter Program with 40 infrared trail counters to provide a consistent method for collecting trail user data across the region. As of August 2014, 49 different locations had been counted. The data is used to analyze changes in trail usage as well as to help the MPO understand where future trail investments may be needed.

OUR TRAILS + TRAIL COUNTERS COVER THE REGION



THE TOP TRAILS OF 2012

These trails averaged the most riders on a daily basis in 2012.

- 01 High Trestle Bridge (East Side)
- 02 North Walnut Creek (Urbandale)
- 03 High Trestle Trail (Slater)
- 04 Walnut Creek Trail (Interstate 235)
- 05 Lakeview Park Trail (Urbandale)

JUNE 2012: 48,147 RIDERS

**TRAIL
USAGE IS
ON THE RISE**

JUNE 2013: 71,888 RIDERS

EQUAL Opportunity

7 FOCUS AREAS

Linguistically isolated • Non-white population •
Persons in poverty • Carless households • Single
heads of households with children • Persons
over 65 • Persons with a disability

40 | 16

PERCENT OF ROADS
IN DISADVANTAGED
AREAS ARE IN POOR OR
WORSE CONDITION

PERCENT OF ROADS IN
NON-DISADVANTAGED
AREAS ARE IN SUCH
CONDITION

Environmental Justice Area

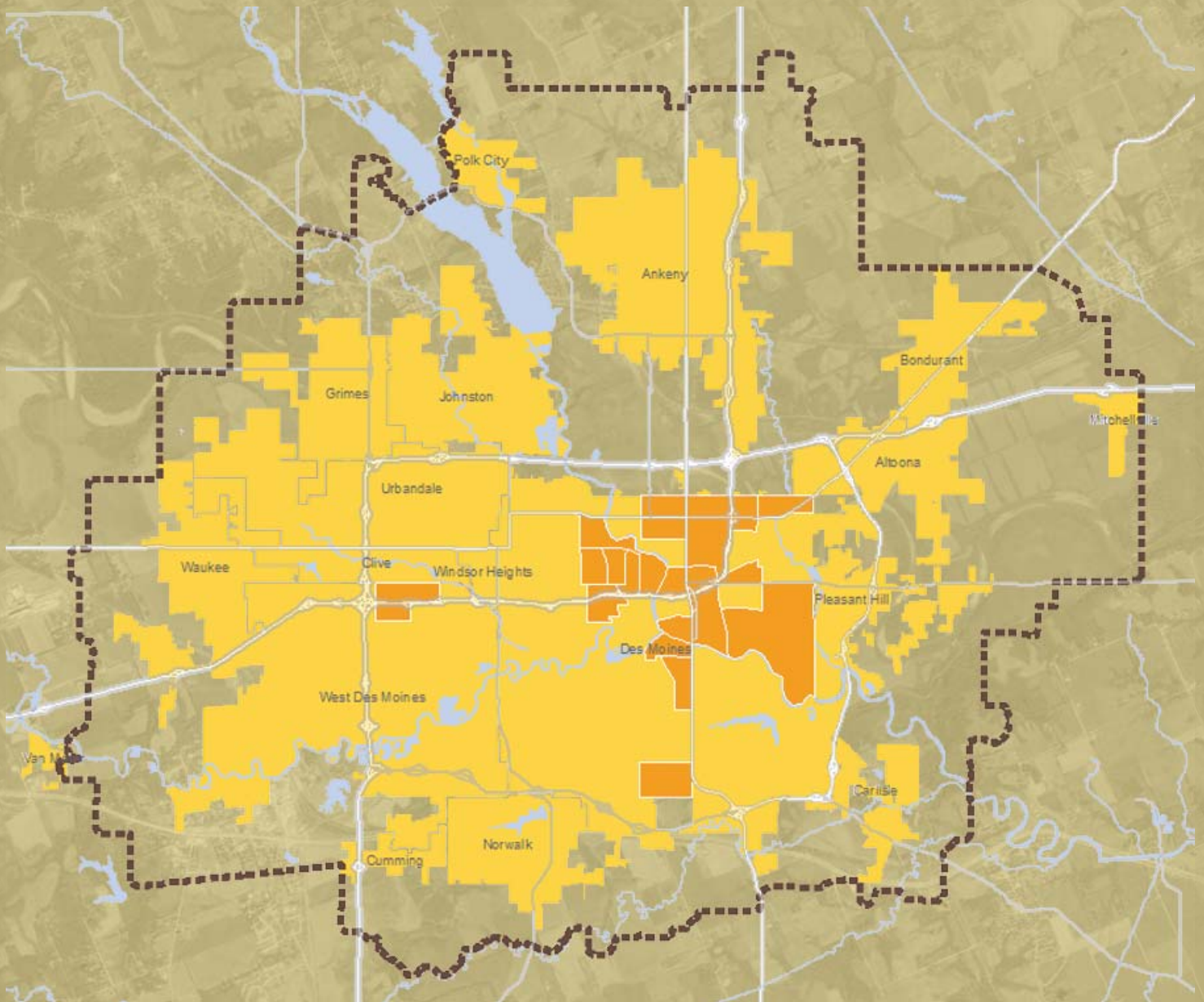
Non-Environmental
Justice Area

ENVIRONMENTAL JUSTICE AREA n 1 a
locale in Greater Des Moines that has high
concentrations of at least 6 of the focus areas
listed above

SERIOUS INJURIES
FROM AUTO CRASHES

The MPO works to ensure the fair treatment and meaningful involvement of all residents in the region. This means that no group, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of negative health or environmental consequences of any project. To ensure fair treatment, the MPO studies seven Degrees of Disadvantage to identify *environmental justice* areas, or those areas with large populations of traditionally under served individuals.

15% of area residents live in environmental justice areas



YET THESE AREAS COVER ONLY 4% of the land area

Targets

Regional leaders continually seek to make the region an even better place to live, work, learn, and play. Furthering the health, safety, and well-being of all residents in the region only will serve to make the region more appealing for current and potential residents as well as businesses. The MPO has identified several targets for the region to work towards.

MEASURE	CURRENT		2050 TARGET
Crash Data			
Number of Fatalities [5-Year Average]	30		Decrease
Fatalities per 100 Million VMT	0.71		Decrease
Number of Serious Injuries [5-Year Average]	215		Decrease
Serious Injuries per 100 Millions VMT	5.08		Decrease
Regional Trail Gaps			
Number of Gaps	13		0
Miles of Gaps	54		0
Environmental Justice Areas			
	EJ Areas	Non-EJ Areas	
Percent of Population	15	85	-
Percent of Area	4	96	-
Pavement Condition			
Average Pavement Condition Index	50	61	EJ = Non-EJ
Pavement Condition Index [% Poor or Worse]	40	16	EJ = Non-EJ
Bridge Condition			
Average Rating	87	81	-
Deficient Bridges [%]	1	23	-
Crash			
Number of Fatalities [5-Year Average]	5	25	-
Fatalities per 100 Million VMT	0.99	0.67	EJ = Non-EJ
Number of Serious Injuries [5-Year Average]	54	156	-
Serious Injuries per 100 Millions VMT	10.74	4.18	EJ = Non-EJ
Non-Congested Roads [% of Roadway Miles]	95	98	> 90

Certain measures included in the chart do not have 2050 targets. These measures help give a clearer understanding of the current system without setting a goal for the future.

PERFORMANCE MEASURES

Performance measures are quantitative descriptions that help us understand how the transportation system is performing. The MPO has developed a number of performance measures to track how well the region is meeting the goals laid out in *Mobilizing Tomorrow*, as shown in the preceding sections. This section offers an overview of these performance measures as well as a look at how certain performance measures compare in environmental justice and non-environmental justice areas across Greater Des Moines.

The MPO will track performance measures annually to gauge progress towards the target. As new information becomes available, the MPO may adjust targets and/or add new performance measures for the region to track.

Performance measures also were considered in the development of criteria for evaluating projects considered for inclusion in *Mobilizing Tomorrow*.

MEASURE	CURRENT	2050 TARGET
Goal 1: Enhance Multimodal Transportation Options		
Bicycle System On-Street		
Miles of On-Street Facilities	23	400
Mode Choice/Split (Peak Hour Trips to Downtown) [%]		
Single Occupancy Vehicles	77	55
Transit	7	20
Carpool	12	15
Walk/Bike/Work from Home/Other	4	10
Transit		
Total Ridership (Fiscal Year 2014)	4,400,000	8,800,000
Goal 2: Manage and Optimize Transportation Infrastructure and Services		
Bridge Sufficiency Rating		
Average Rating	82	-
Deficient Bridges [%]	25	Maintain
Transit		
Average Age of Fleet [Years]	7.7	6
Vehicles Beyond Useful Life [%]	18	0
Level of Service - Peak Hour		
Non-Congested Roads [% of Roadway Miles]	98.2	> 90
Pavement Condition Index		
Average Pavement Condition Index	60	-
Percent in Poor or Worse Condition	18	Maintain
Freight Impediments		
Number of Impediments	10	0
Goal 3: Improve the Region's Environmental Health		
Environmental Impacts		
Environmental Conflicts Areas [Acres]	45,847	Do Not Disturb
Environmental Challenge Areas [Acres]	77,106	Mitigate What Is Disturbed
Vehicles Miles Traveled		
Total [Average Weekday]	11,591,234	-
Per Capita [Average Weekday]	24.14	Decrease
Goal 4: Further the Health, Safety, and Well-Being of All Residents in the Region		
Crash Data		
Number of Fatalities [5-Year Average]	30	Decrease
Fatalities per 100 Million VMT	0.71	Decrease
Number of Serious Injuries [5-Year Average]	215	Decrease
Serious Injuries per 100 Millions VMT	5.08	Decrease
Regional Trail Gaps		
Number of Gaps	13	0
Miles of Gaps	54	0

PERFORMANCE MEASURES: ENVIRONMENTAL JUSTICE AREAS

MEASURE	CURRENT		2050 TARGET
	Environmental Justice Areas	Non-Environmental Justice Areas	
Percent of Population	15	85	-
Percent of Area	4	96	-
Pavement Condition			
Average Pavement Condition Index	50	61	EJ = Non-EJ
Pavement Condition Index [% Poor or Worse]	40	16	EJ = Non-EJ
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