

# Quality of Our Bridges

## Measuring Bridge Conditions

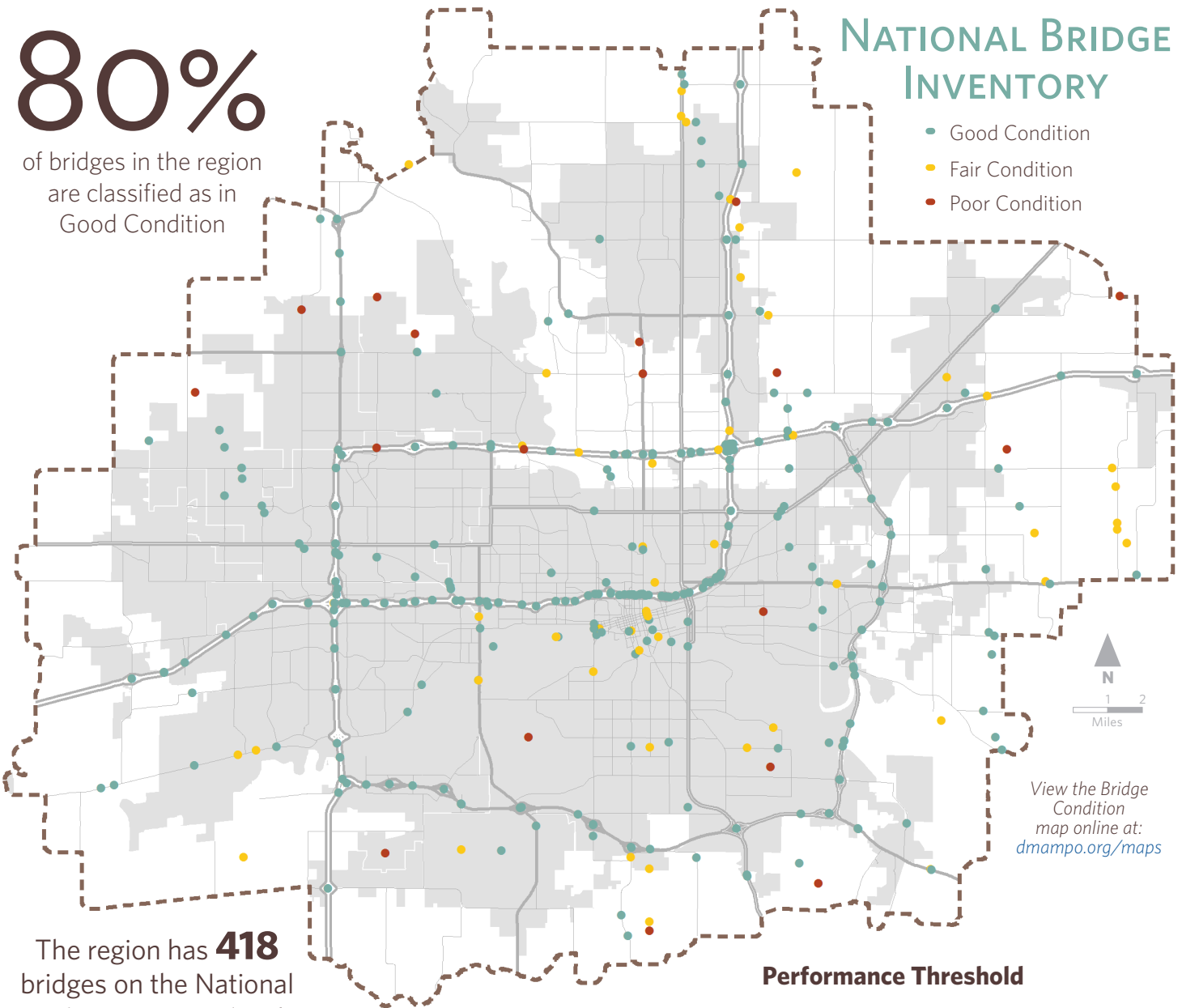
In January 2015, the Federal Highway Administration (FHWA) proposed changes to how bridge conditions are analyzed following the passage of MAP-21. Bridges are given a rating of *Good*, *Fair*, or *Poor* based on the lowest rating between the bridge deck, superstructure, and substructure as reported in the National Bridge Inventory (NBI). FHWA has proposed the use of two performance measures - percentage of deck area for bridges in *Good Condition* and percentage of deck area for bridges in *Poor Condition*.

# 80%

of bridges in the region are classified as in Good Condition

## NATIONAL BRIDGE INVENTORY

- Good Condition
- Fair Condition
- Poor Condition



View the Bridge Condition map online at: [dmampo.org/maps](http://dmampo.org/maps)

The region has **418** bridges on the National Bridge Inventory (NBI)

### Performance Threshold

Currently, the region does not exceed the FHWA recommended threshold for deck area in Poor Condition (10%).

# Performance Measures

*Mobilizing Tomorrow* identifies performance measures based on average sufficiency rating and the percent of deficient bridges within the region. The proposed performance measures identified by FHWA - percentage of deck area in *Good Condition* and percent of deck area in *Poor Condition* - are included in the table below.

GOAL	MEASURE	DATA	2050 TARGET	GOAL	ACTUAL	TREND
Bridge Sufficiency Rating	Average Rating	2014: 82	No Target Set	No Target Set	↑	1%
		2015: 83				
	Deficient Bridges (%)	2014: 26%	Maintain	→	↓	-6%
		2015: 20%				
Deck Area*	Good Condition (%)	2014: 59%	No Target Set	No Target Set	↑	26%
		2015: 85%				
	Poor Condition (%)	2014: 8%	No Target Set	No Target Set	↓	-7%
		2015: 1%				
Environmental Justice*	Good Condition (%)	2014: 68%	No Target Set	No Target Set	↑	18%
		2015: 86%				
	Poor Condition (%)	2014: 9%	No Target Set	No Target Set	↓	-7%
		2015: 2%				

\* Measures for these Goals are not included in *Mobilizing Tomorrow*, but are tracked in accordance with new guidance from FHWA.

## FAST Act Bridge Provisions

- National Highway Performance Program Funds may be obligated for the reconstruction, resurfacing, restoration, rehabilitation, or preservation of a bridge not on the National Highway System, if the bridge is on a Federal-aid highway.
- Allows the bundling of 2 or more similar bridge projects into a single project.
- Exempts certain bridges from preservation requirements.
- Streamlines the taking of nesting swallows in at-risk bridges.
- Commmissions a study on the performance of bridges funded by the innovative bridge research and construction program.



Photo Source:  
Iowa DOT, Office of Bridges and Structures

# Bridge Sufficiency

## Measuring Bridge Sufficiency

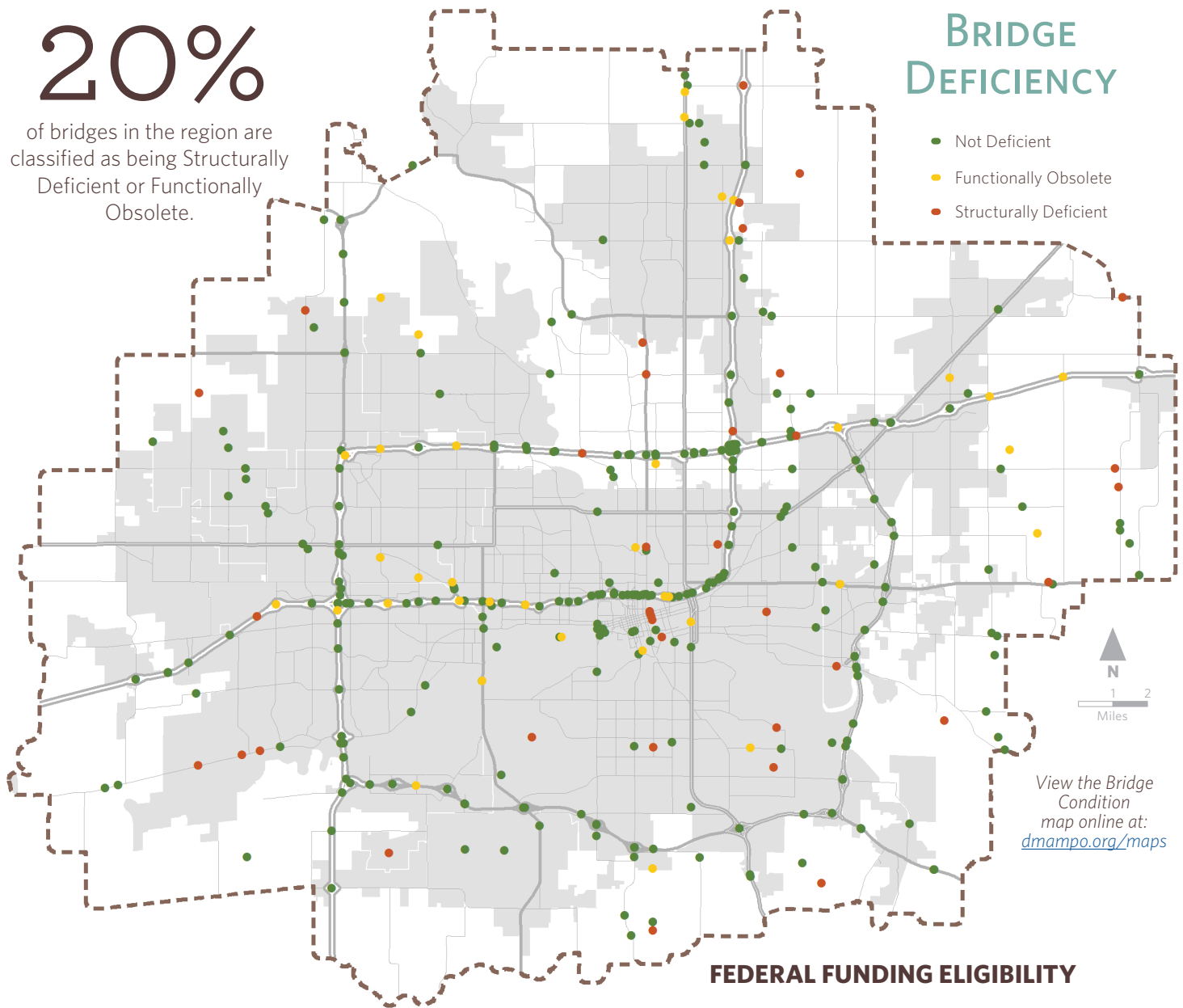
Bridges are given a sufficiency rating as well as a Structurally Deficient or Functionally Obsolete classification. *Sufficiency ratings* indicate a bridge's sufficiency to stay in service and help determine which bridges may need repair or replacement. *Structurally Deficient (SD)* refers to bridges needing significant maintenance, rehabilitation, or replacement, while *Functionally Obsolete (FO)* refers to bridges that no longer meet current design criteria, either because traffic volumes exceed what was anticipated or design standards have changed.

# 20%

of bridges in the region are classified as being Structurally Deficient or Functionally Obsolete.

## BRIDGE DEFICIENCY

- Not Deficient
- Functionally Obsolete
- Structurally Deficient



### FEDERAL FUNDING ELIGIBILITY

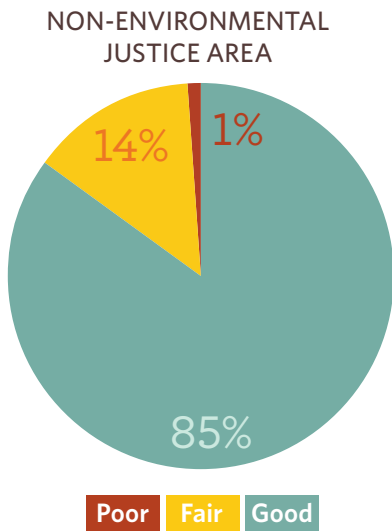
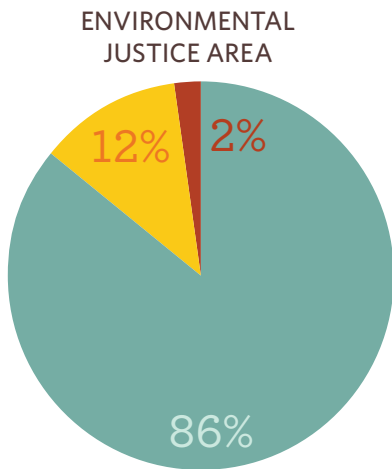
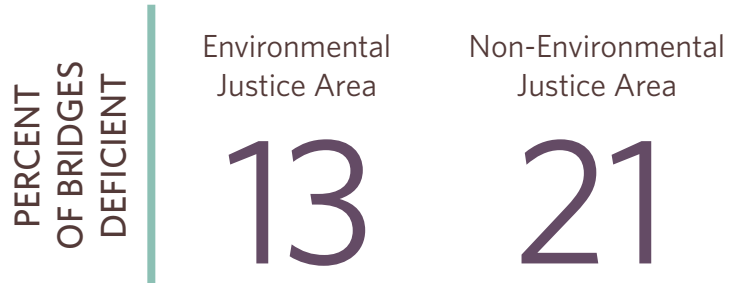
Only bridges categorized as structurally deficient or functionally obsolete with a sufficiency rating below 80 are eligible for certain federal funds. Currently, **15%** of bridges, in the region are eligible for this funding.

# Environmental Justice Areas

An Environmental Justice (EJ) review was completed to compare bridge conditions in EJ areas versus non-EJ areas.

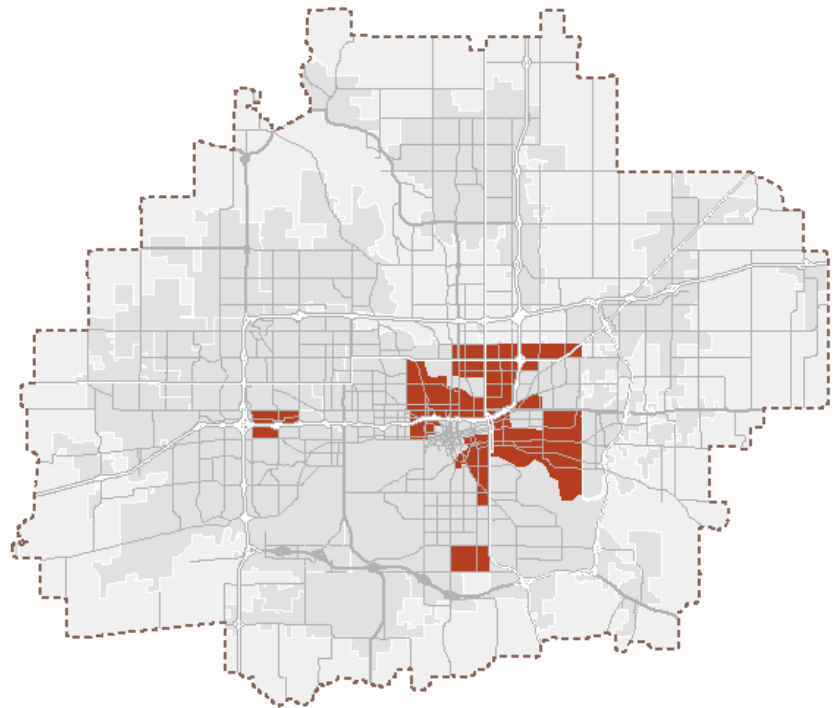
Of the 67 bridges located within EJ areas, **9** are classified as being Structurally Deficient or Functionally Obsolete.

*Iowa DOT bridges were included in the EJ review.*



*Values represent the percent of total deck area for each condition.*

## ENVIRONMENTAL JUSTICE AREAS



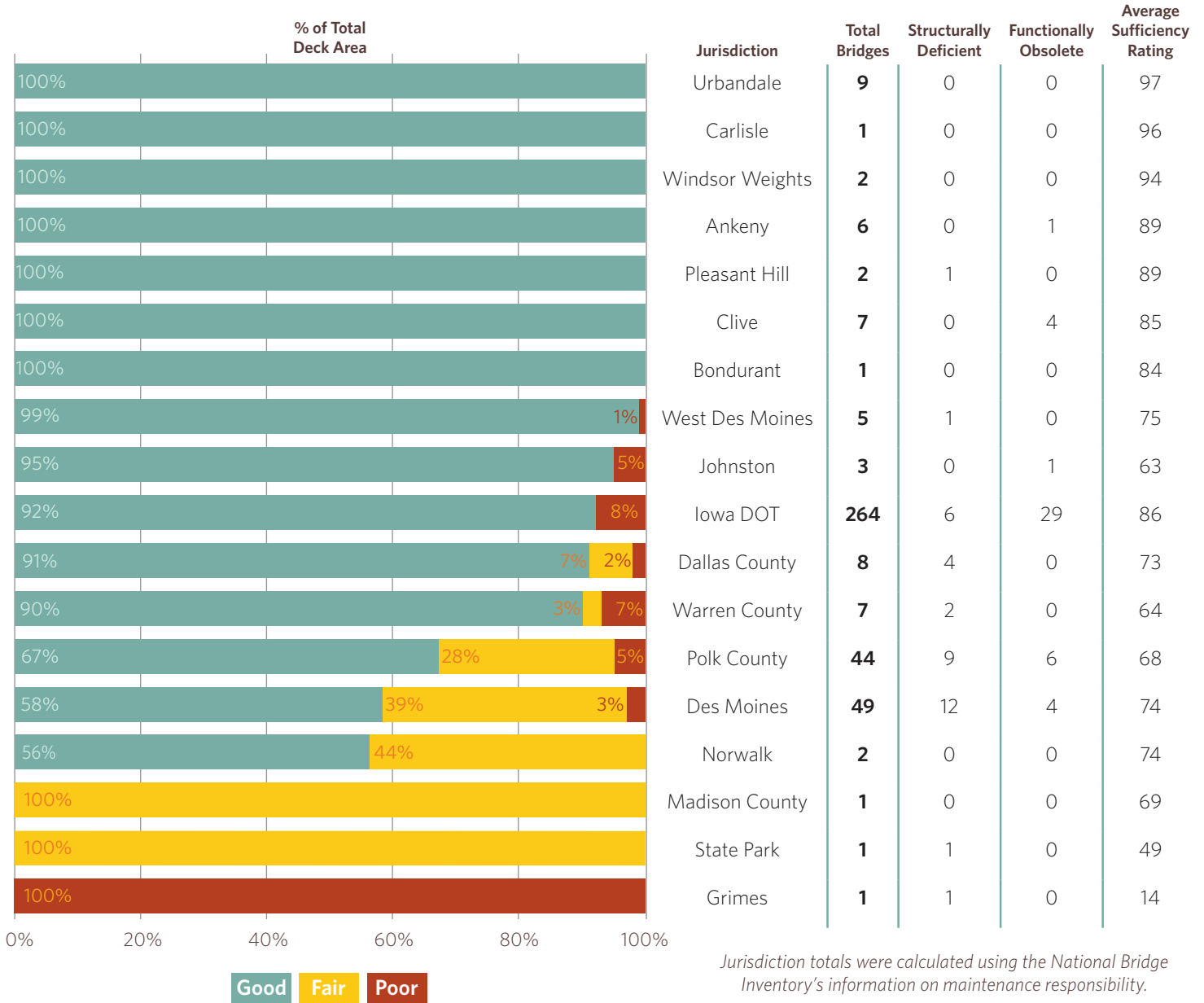
### ENVIRONMENTAL JUSTICE AREA

Concentrated area of traditionally underserved populations. Groups used to define EJ areas include:

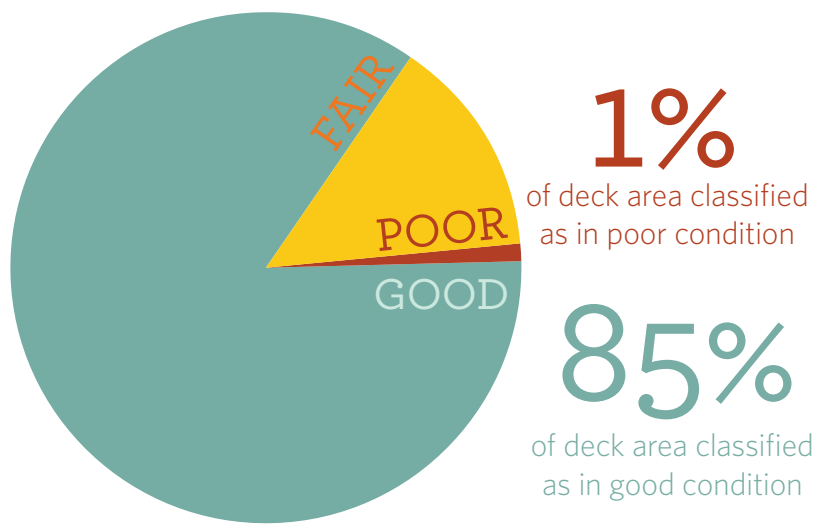
- Limited English Proficiency (LEP)
- Non-White Population
- Persons in Poverty
- Carless Households
- Single Heads of Households with Children
- Persons Over 65
- Persons with a Disability

*The MPO receives federal funding and may not discriminate against anyone on the basis of race, color, or national origin, according to Title VI of the Civil Rights Act of 1964.*

# LOCAL CONDITIONS



- Good** Component defects are limited to minor problems.
- Fair** Structural capacity of the component is not affected by minor deterioration, section loss, spalling, cracking, or other deficiency.
- Poor** Structural capacity of the component is affected or jeopardized by significant deterioration, section loss, spalling, cracking, or other deficiency.



Data Source: Iowa Department of Transportation National Bridge Inventory, 2015