# APPENDIX

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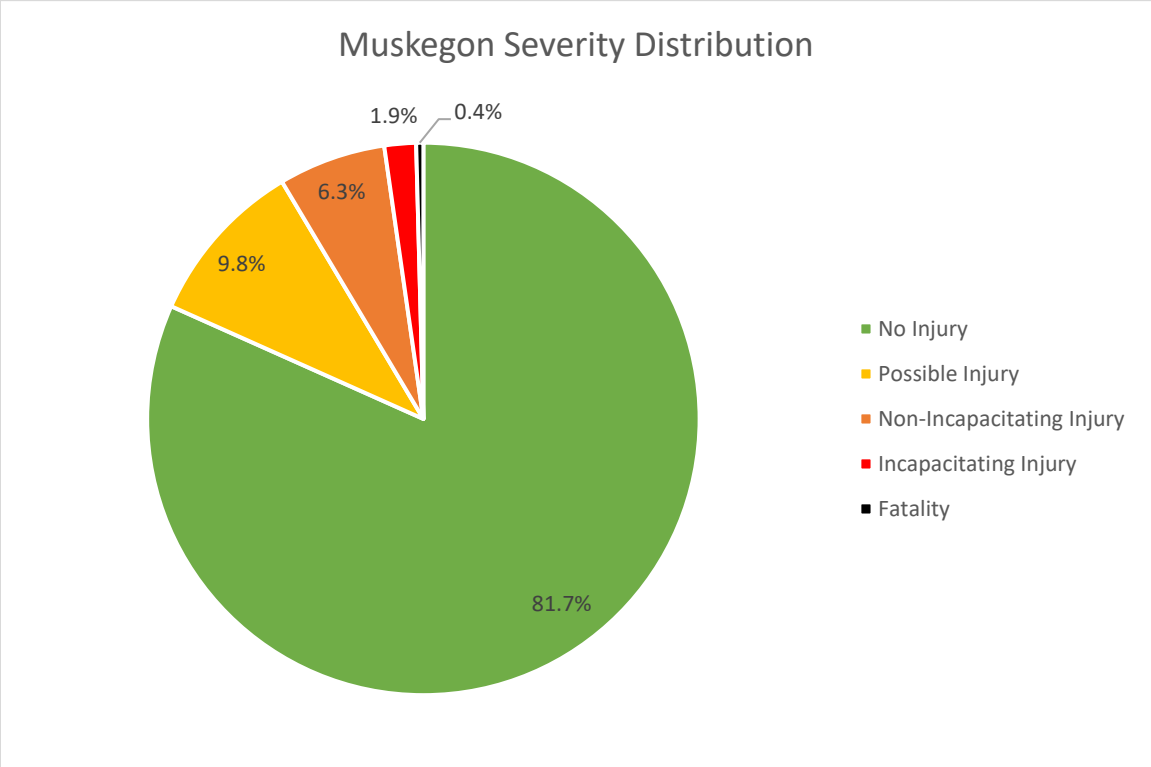
# A-1 CRASH ANALYSIS

The following sections provide a crash summary of the WestPlan MPO by individual county as well as the combined MPO areas. Additional experts from the US DOT Equitable Transportation Community Explorer are provided for reference.

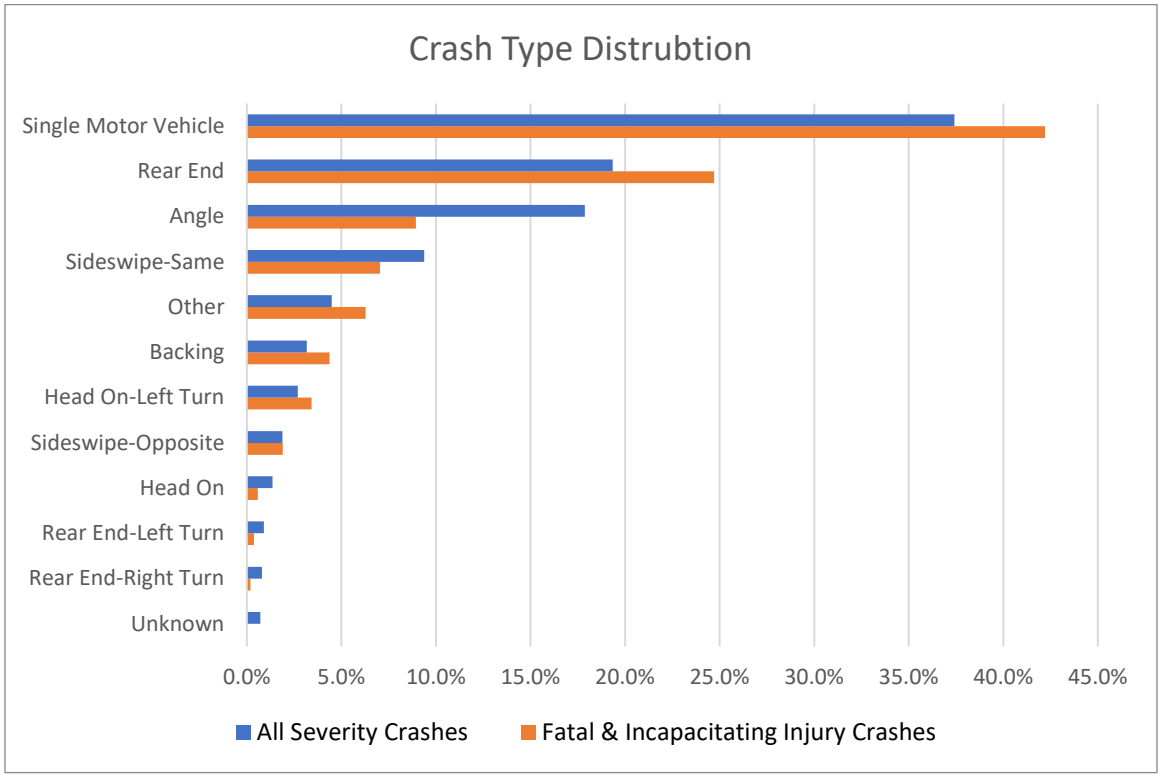
## *MUSKEGON COUNTY*

## CRASH SUMMARY (2018 – 2022)

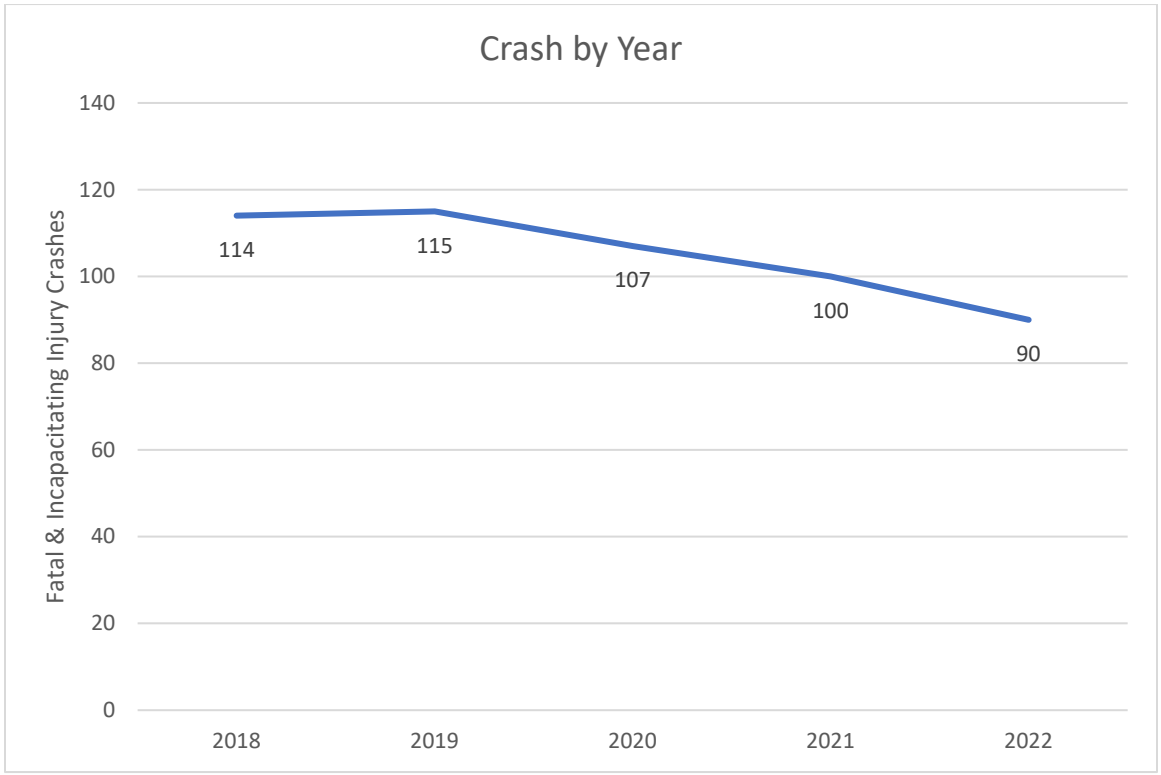
**SEVERITY**



**TYPE**

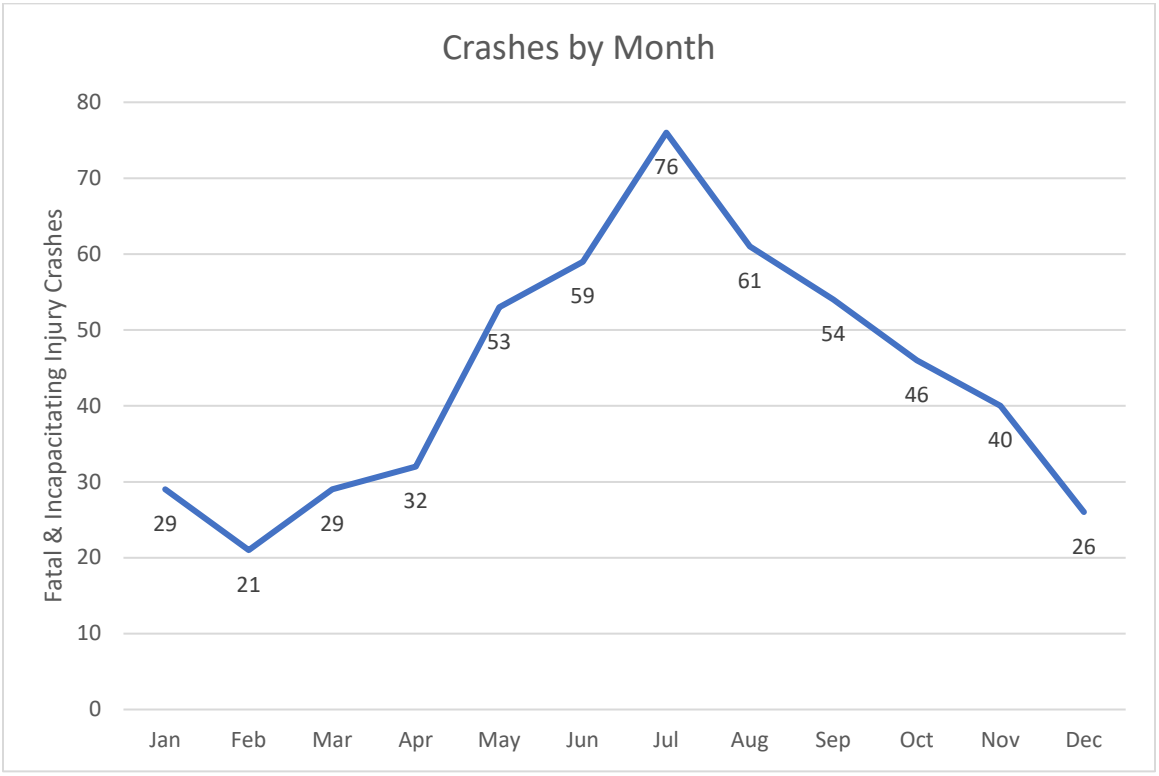

Crash Type Distrubtion
Single Motor Vehicle
Rear End
Angle
Sideswipe-Same
Other
Backing
Head On-Left Turn
Sideswipe-Opposite
Head On
Rear End-Left Turn
Rear End-Right Turn
Unknown
0.0%
5.0%
10.0%
15.0%
20.0%
25.0%
30.0%
35.0%
40.0%
45.0%
All Severity Crashes
Fatal & Incapacitating Injury Crashes

**YEAR**

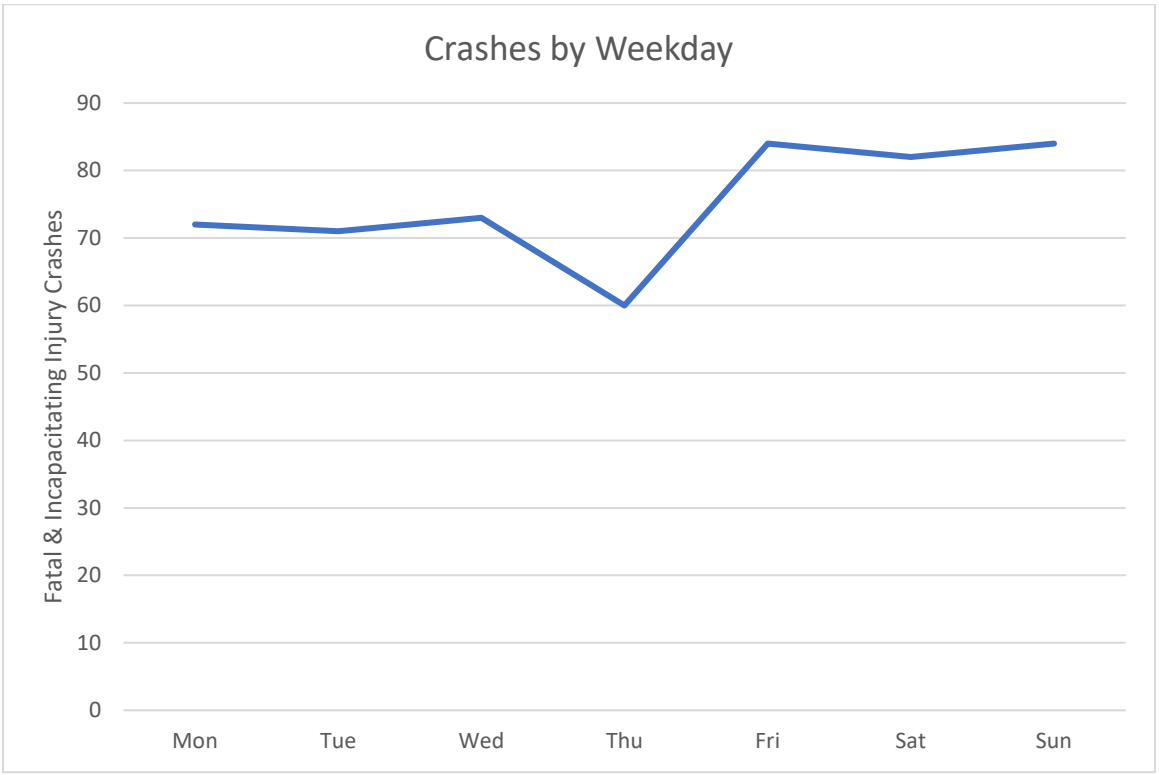

Crash by Year
Fatal & Incapacitating Injury Crashes
140
120
100
80
60
40
20
0
114
115
107
100
90
2018
2019
2020
2021
2022

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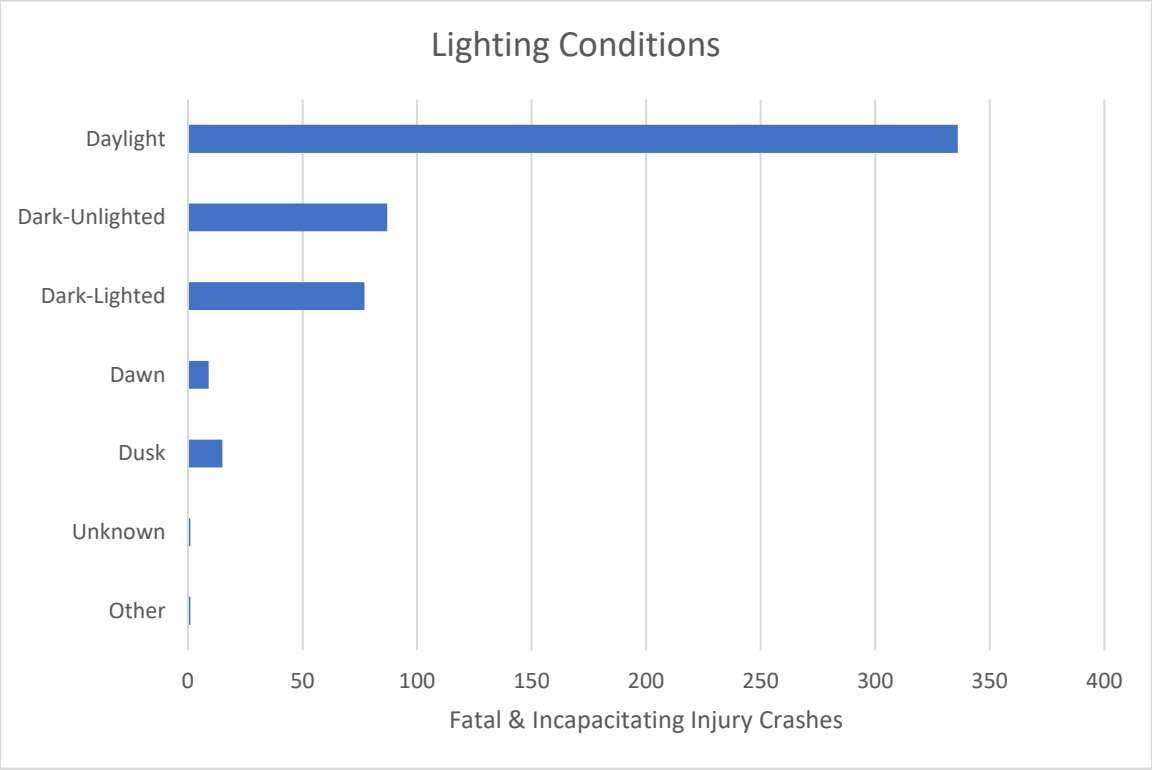
**MONTH**



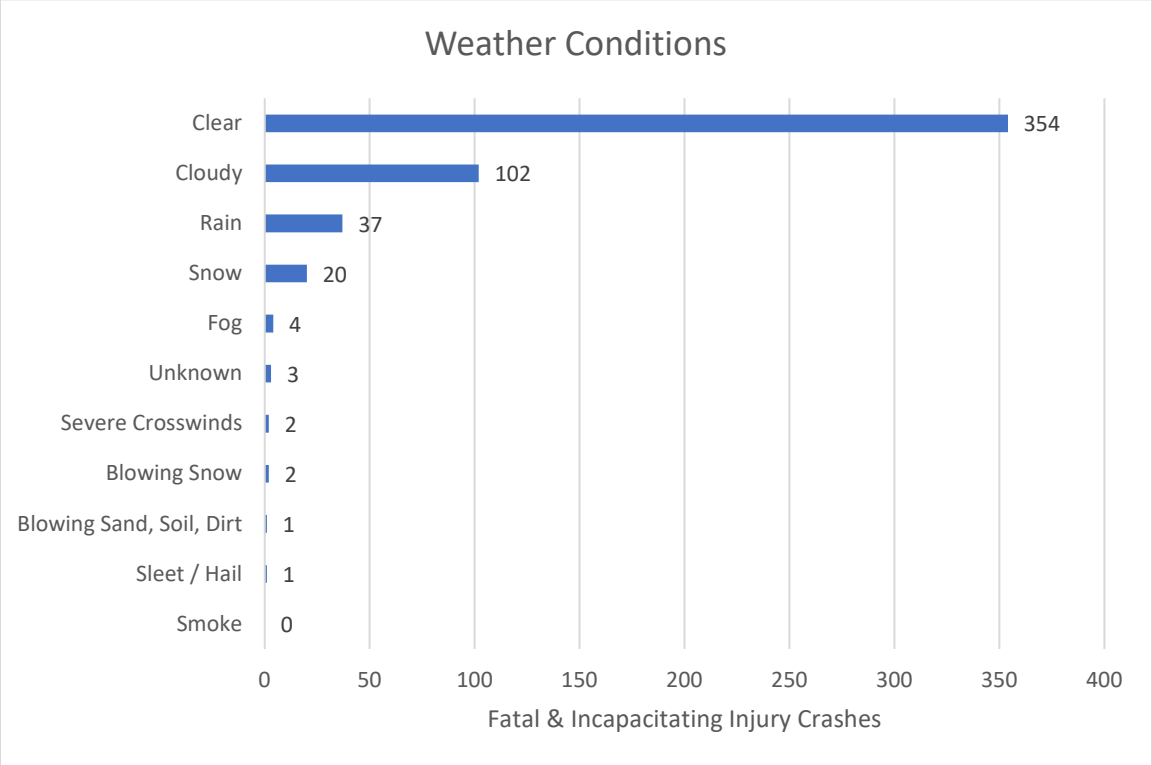

**WEEKDAY**



**LIGHTING CONDITIONS**

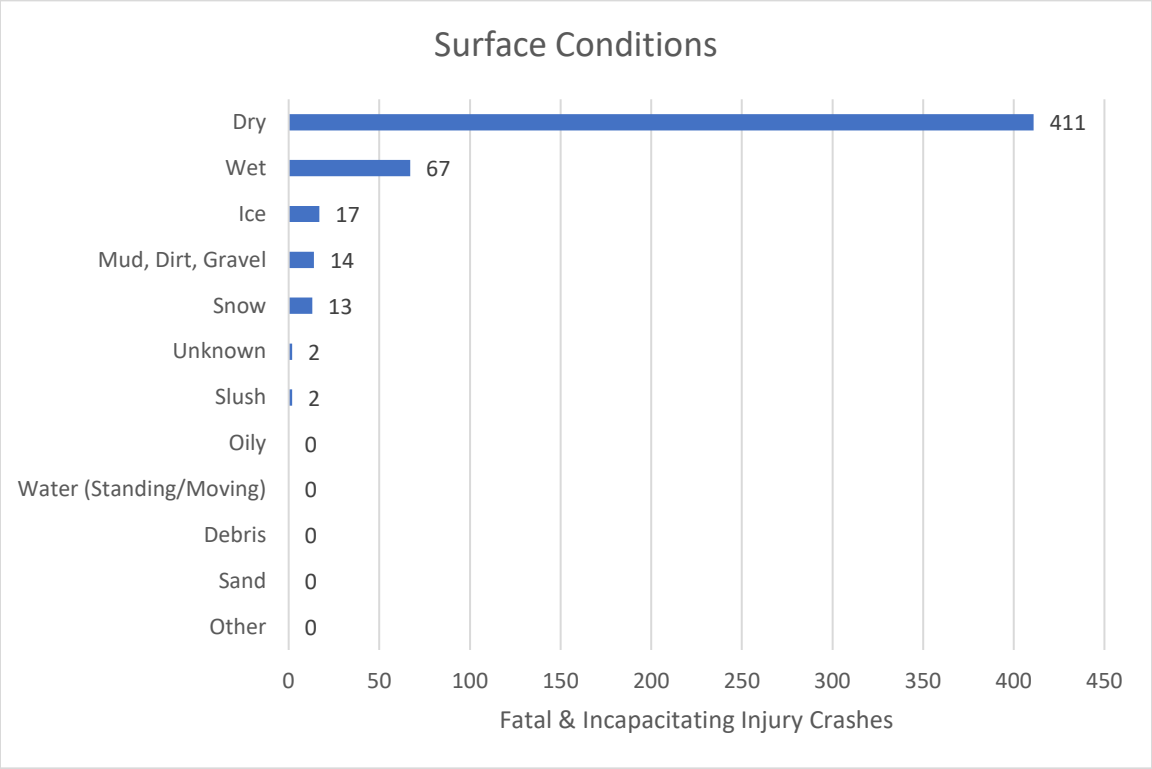



**WEATHER CONDITIONS**

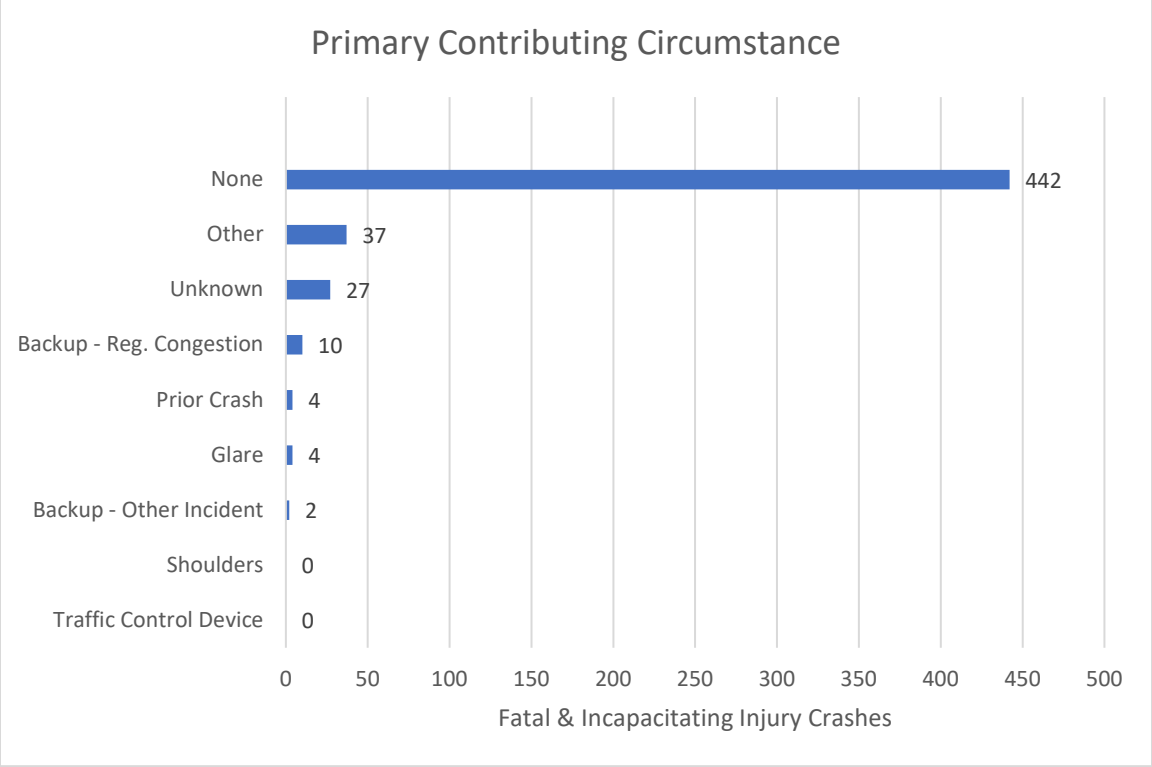


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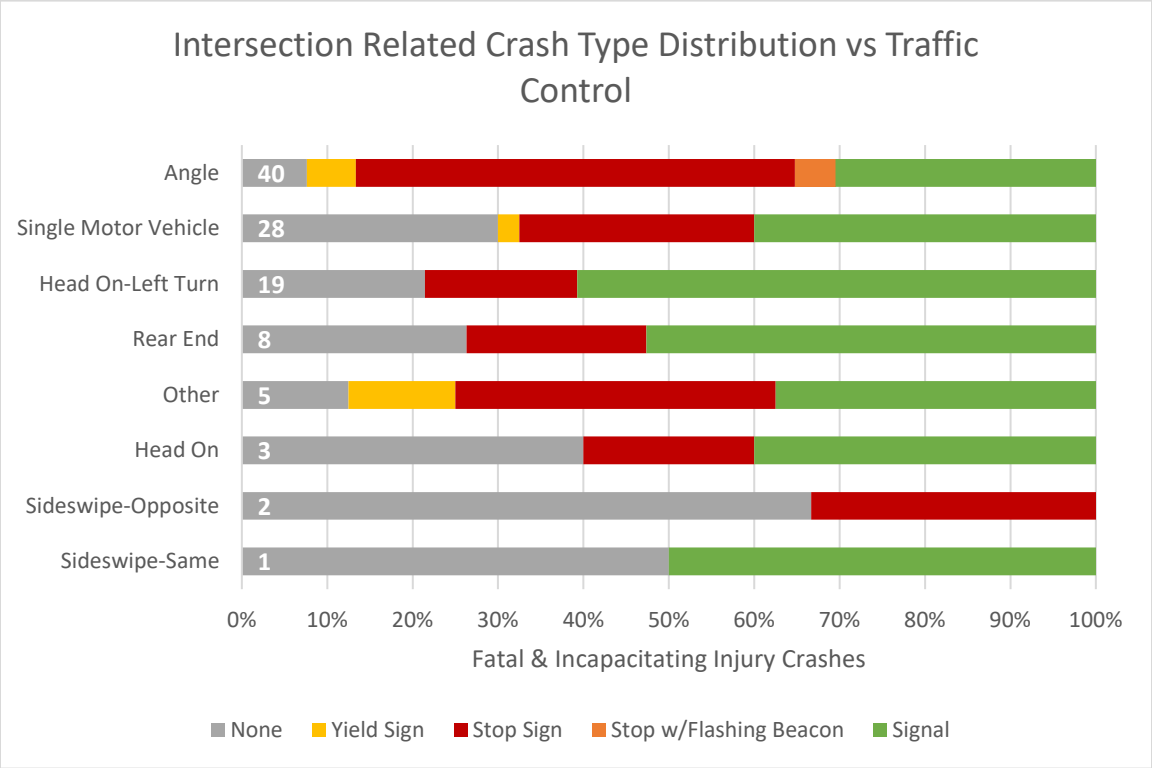
## SURFACE CONDITIONS




## CONTRIBUTING CIRCUMSTANCES

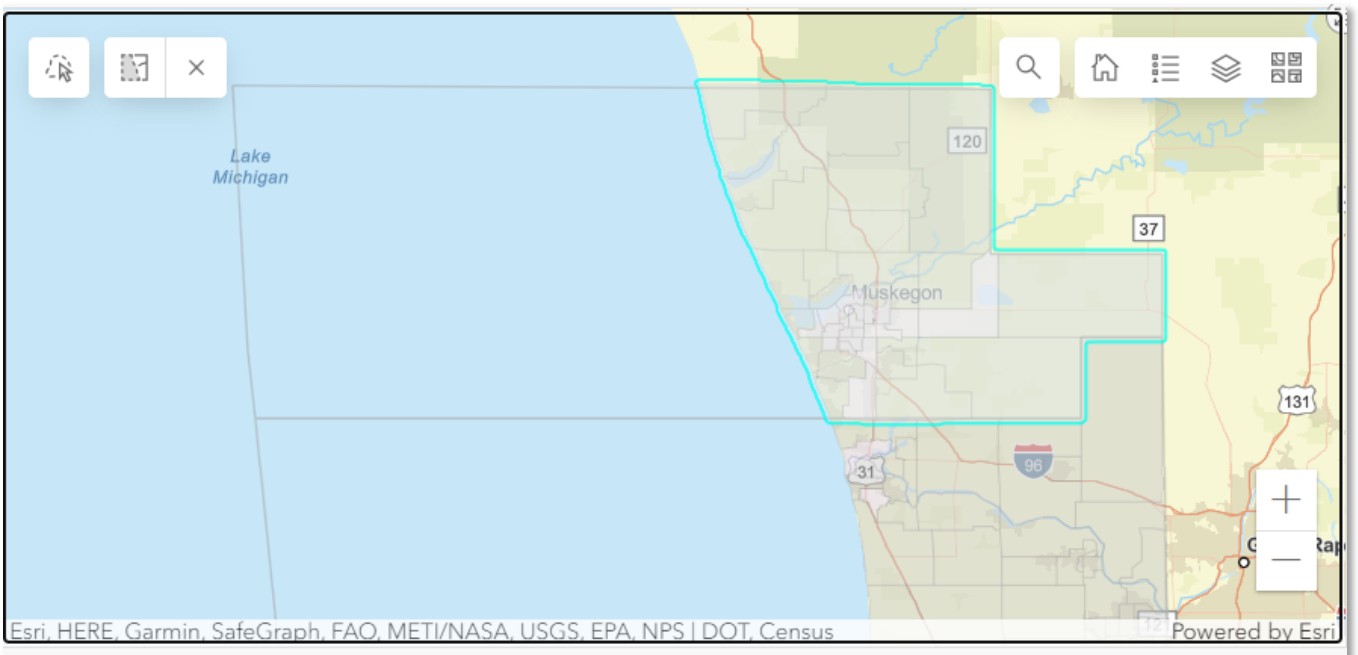


**INTERSECTION CRASH TYPES**

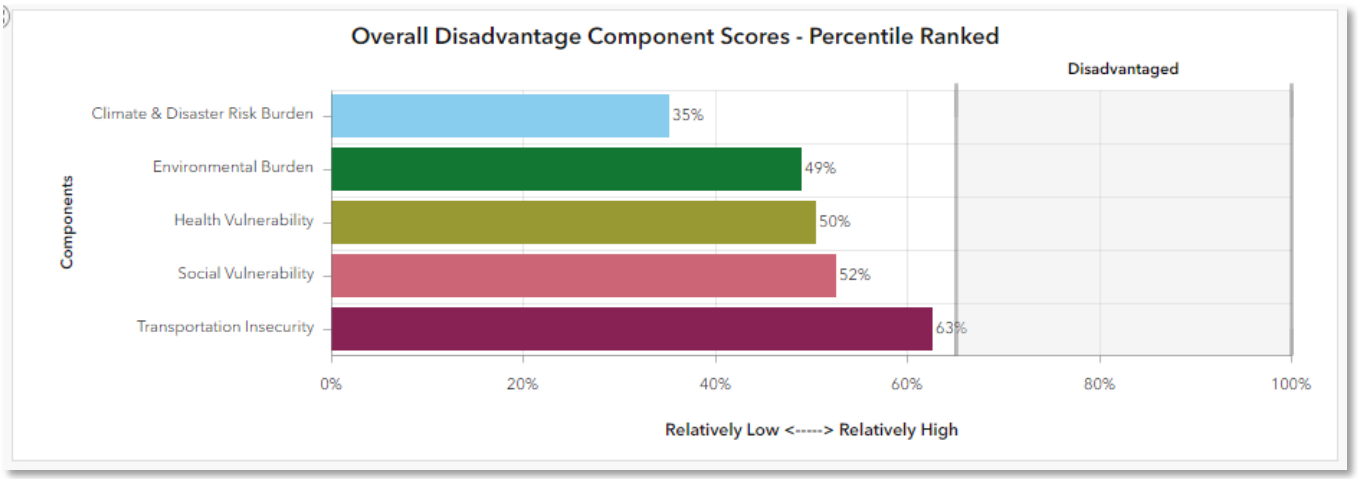


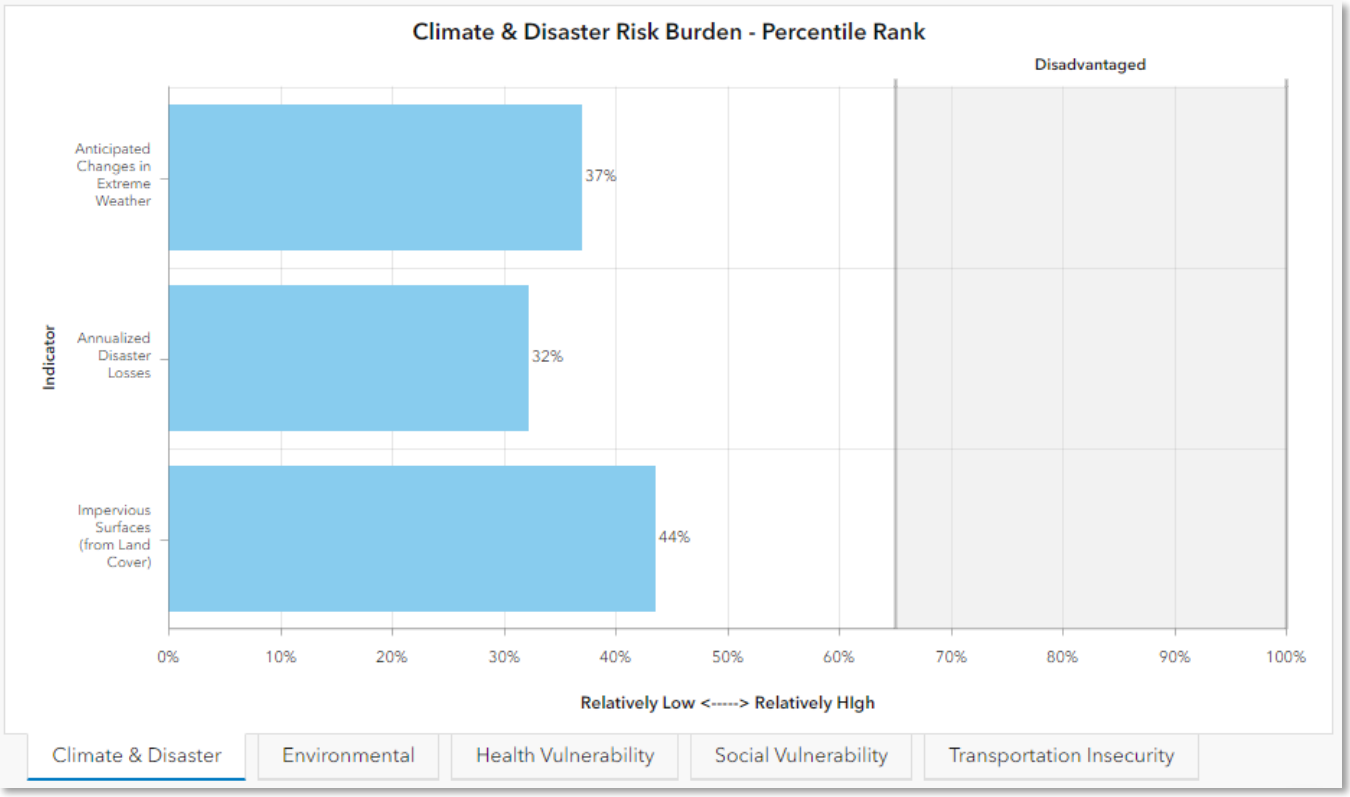
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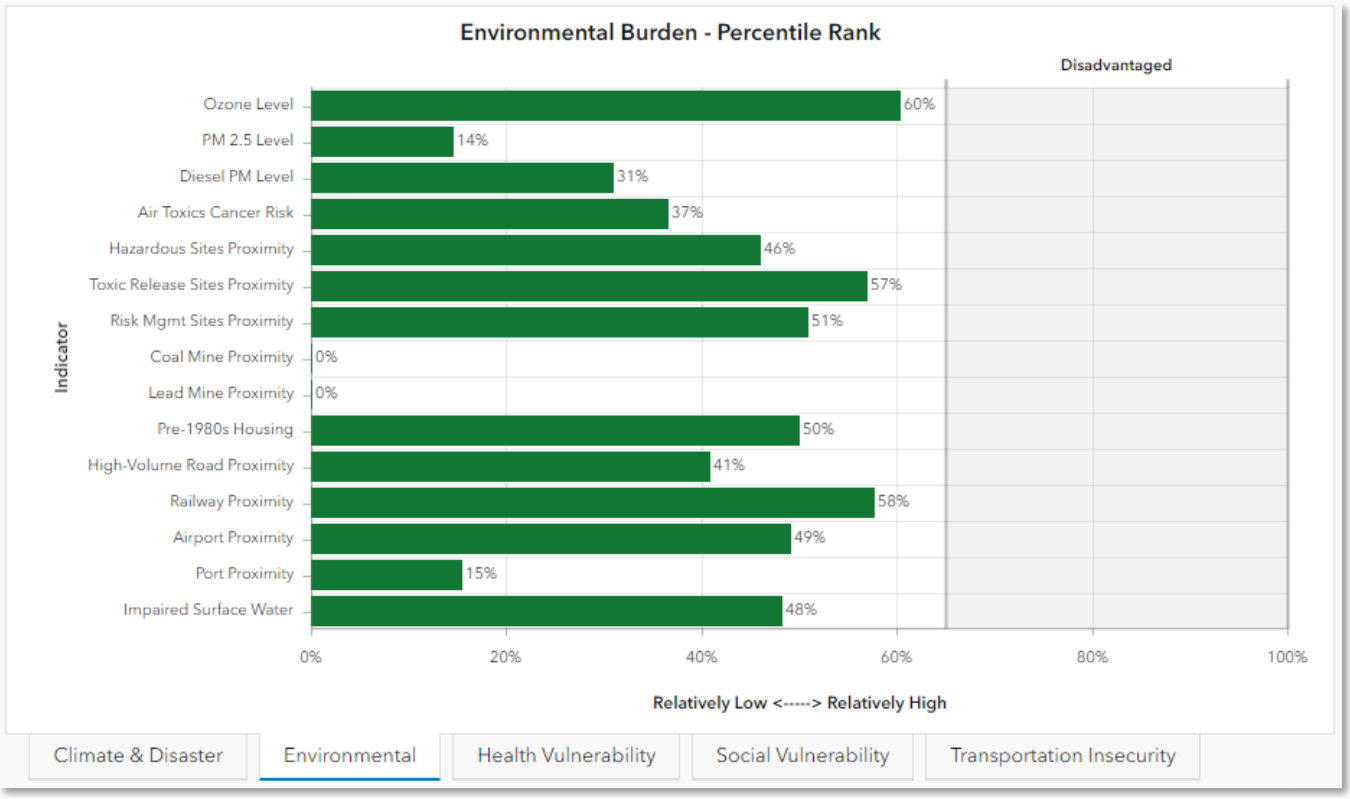
## MUSKEGON DISADVATANGED COMMUNITIES



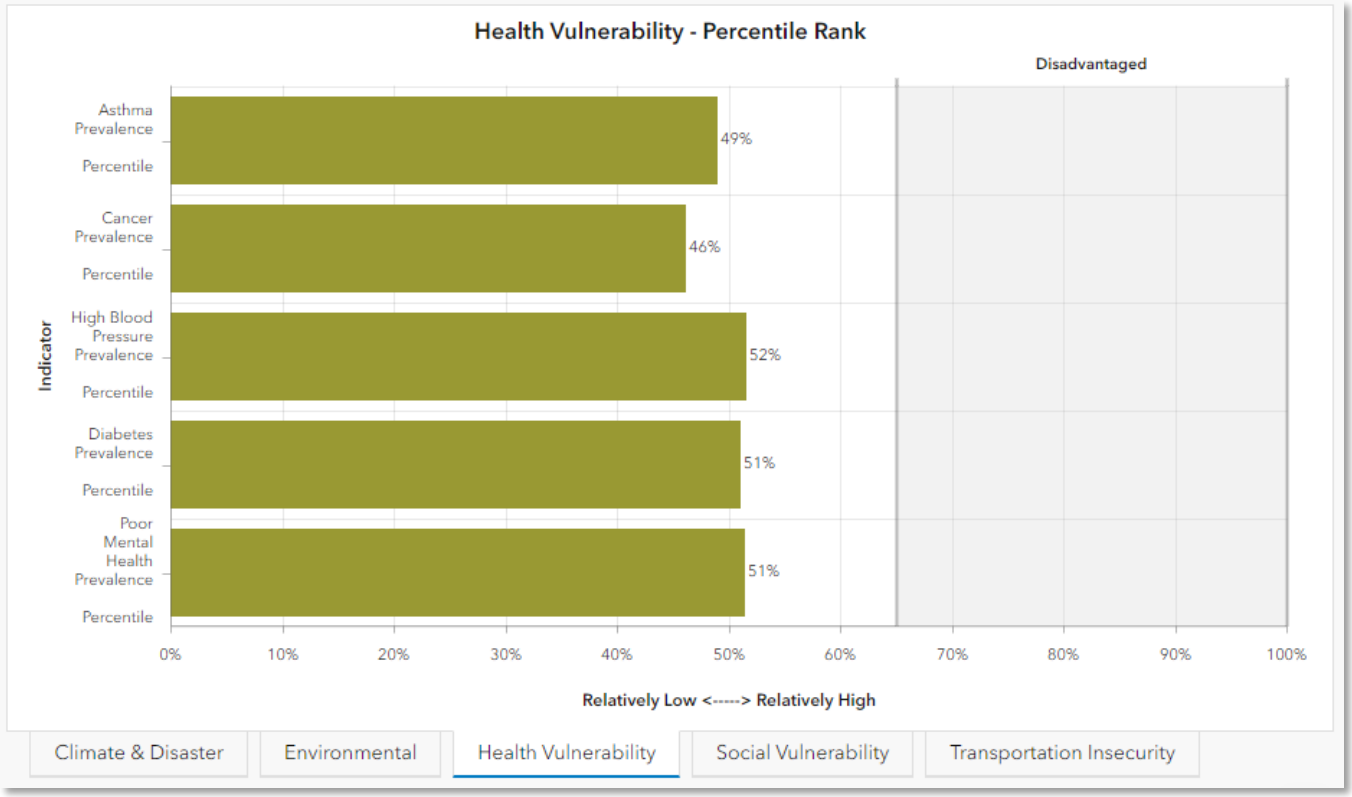

| Total Population Living in | Total Population Living in Disadvantaged Census Tracts in | % of Disadvantaged Census Tracts in the Selected Project |
|---|---|---|
| 173.7k | 67.6k | 42% |

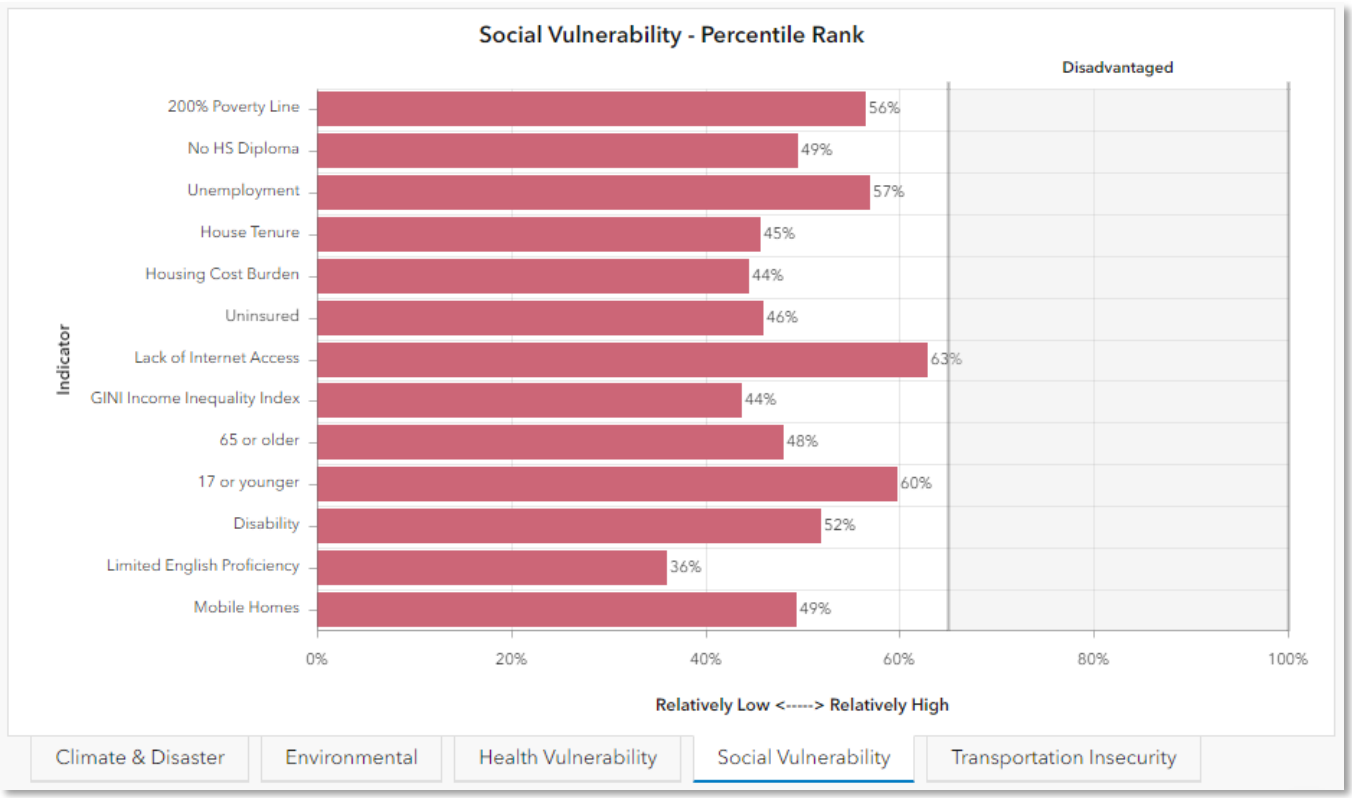



Climate & Disaster Risk Burden - Percentile Rank
Disadvantaged
Anticipated Changes in Extreme Weather
37%
Annualized Disaster Losses
32%
Impervious Surfaces (from Land Cover)
44%
Indicator
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Relatively Low <-----> Relatively HIgh
Climate & Disaster
Environmental
Health Vulnerability
Social Vulnerability
Transportation Insecurity


Environmental Burden - Percentile Rank
Disadvantaged
Ozone Level
60%
PM 2.5 Level
14%
Diesel PM Level
31%
Air Toxics Cancer Risk
37%
Hazardous Sites Proximity
46%
Toxic Release Sites Proximity
57%
Risk Mgmt Sites Proximity
51%
Coal Mine Proximity
0%
Lead Mine Proximity
0%
Pre-1980s Housing
50%
High-Volume Road Proximity
41%
Railway Proximity
58%
Airport Proximity
49%
Port Proximity
15%
Impaired Surface Water
48%
Indicator
0%
20%
40%
60%
80%
100%
Relatively Low <-----> Relatively High
Climate & Disaster
Environmental
Health Vulnerability
Social Vulnerability
Transportation Insecurity

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Health Vulnerability - Percentile Rank
Disadvantaged
Indicator
Asthma Prevalence Percentile
49%
Cancer Prevalence Percentile
46%
High Blood Pressure Prevalence Percentile
52%
Diabetes Prevalence Percentile
51%
Poor Mental Health Prevalence Percentile
51%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Relatively Low <-----> Relatively High
Climate & Disaster
Environmental
Health Vulnerability
Social Vulnerability
Transportation Insecurity


Social Vulnerability - Percentile Rank
Disadvantaged
Indicator
200% Poverty Line
56%
No HS Diploma
49%
Unemployment
57%
House Tenure
45%
Housing Cost Burden
44%
Uninsured
46%
Lack of Internet Access
63%
GINI Income Inequality Index
44%
65 or older
48%
17 or younger
60%
Disability
52%
Limited English Proficiency
36%
Mobile Homes
49%
0%
20%
40%
60%
80%
100%
Relatively Low <-----> Relatively High
Climate & Disaster
Environmental
Health Vulnerability
Social Vulnerability
Transportation Insecurity