Highway Safety Improvement Program

Data Driven Decisions

Alaska
Highway Safety Improvement Program
2015 Annual Report

Prepared by: AK

Disclaimer

Protection of Data from Discovery & Admission into Evidence

23 U.S.C. 148(h)(4) states "Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section [HSIP], shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data."

23 U.S.C. 409 states "Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data."

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Executive Summary

Under the Alaska Highway Safety Improvement Program (HSIP), the Alaska DOT&PF identifies high risk intersections and roads, scopes and prioritizes corrective projects, funds the most cost -effective projects, and evaluates actual project and program effectiveness. HSIP dollars are distributed to the most effective projects from a single statewide fund. The purpose of the Alaska HSIP is to "maximize lives saved and major injuries eliminated per dollar spent."

Regional Traffic and Safety personnel identify, scope, estimate, and rank candidate projects according to benefit -cost ratio (ranked projects) and potential for crash reduction (non-ranked projects). HQ Traffic & Safety reviews proposed new projects, works with the regions to clarify project description and scope, and submits recommended projects to the Federal Highway Administration for approval. Following FHWA approval of new HSIP projects, HQ Traffic and Safety selects the most effective projects and proposes a statewide HSIP funding plan for the coming federal fiscal year for approval by the Chief Engineer and the Director of Program Development.

The HSIP funding plan typically includes a blend of on -going projects and new projects. Regions design and construct funded projects and generate before -after studies when three years of post-improvement crash data becomes available. HQ Traffic & Safety manages funding for the statewide HSIP, annually updates the HSIP Handbook, maintains program effectiveness data, and produces the annual HSIP report.

Important Note on Performance Measures calculated by Online Reporting Tool: Alaska does not yet have serious injury data for 2013 and 2014. Alaska's serious injury performance measures for 2013 and 2014 will be updated when the data for those years are finalized.

Introduction

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. As per 23 U.S.C. 148(h) and 23 CFR 924.15, States are required to report annually on the progress being made to advance HSIP implementation and evaluation efforts. The format of this report is consistent with the HSIP MAP-21 Reporting Guidance dated February 13, 2013 and consists of four sections: program structure, progress in implementing HSIP projects, progress in achieving safety performance targets, and assessment of the effectiveness of the improvements.

Program Structure

Program Administration

How are Highway Safety Improvement Program funds allocated in a State?

☒ Central

☐ District

☐ Other

Describe how local roads are addressed as part of Highway Safety Improvement Program.

Safety projects on all public roads in Alaska are eligible to compete for HSIP funding. The same process is used to prioritize projects on both state and non-state (including local) roads.

Identify which internal partners are involved with Highway Safety Improvement Program planning.

☒ Design

☒ Planning

☒Maintenance

☒Operations

☒Governors Highway Safety Office

☐Other:

Briefly describe coordination with internal partners.

Design: Regional Traffic and Safety personnel identify, scope, estimate, and rank candidate projects according to benefit-cost ratio (ranked projects) and potential for crash reduction (non-ranked projects).

HQ Traffic & Safety reviews proposed new projects, works with the regions to clarify project description and scope, and submits recommended projects to the Federal Highway Administration Division Office for funding approval.

Planning: Funding plan developed in coordination with the Office of Program Development.

Maintenance and Operations: M&O staff consulted to determine alternative project nominations where safety problems may exist despite the lack of historic crash data.

Governors Highway Safety Office: Split penalty transfer funding to address engineering solutions to highway safety.

Identify which external partners are involved with Highway Safety Improvement Program planning.

☐Metropolitan Planning Organizations

☐Governors Highway Safety Office

☐Local Government Association

☒Other: Other-Municipality of Anchorage

☒Other: Other-City of Fairbanks

☒Other: Other-FHWA

Identify any program administration practices used to implement the HSIP that have changed since the last reporting period.

☐ Multi-disciplinary HSIP steering committee

☒ Other: Other-None

Describe any other aspects of Highway Safety Improvement Program Administration on which you would like to elaborate.

No response.

Program Methodology

Select the programs that are administered under the HSIP.

☐ Median Barrier	☐ Intersection	☐ Safe Corridor
☐ Horizontal Curve	☐ Bicycle Safety	☐ Rural State Highways
☐ Skid Hazard	☐ Crash Data	☐ Red Light Running Prevention
☐ Roadway Departure	☐ Low-Cost Spot Improvements	☐ Sign Replacement And Improvement
☐ Local Safety	☐ Pedestrian Safety	☐ Right Angle Crash
☐ Left Turn Crash	☐ Shoulder Improvement	☐ Segments
☒ Other: Other-Entire HSIP		

Program: **Other-Entire HSIP**

Date of Program Methodology: **11/14/2014**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
☒ All crashes	☐ Traffic	☐ Median width
☐ Fatal crashes only	☒ Volume	☐ Horizontal curvature
☐ Fatal and serious injury crashes only	☐ Population	☐ Functional classification
☐ Other	☐ Lane miles	☐ Roadside features
	☐ Other	☐ Other

What project identification methodology was used for this program?

☒ Crash frequency

☐ Expected crash frequency with EB adjustment

☐ Equivalent property damage only (EPDO Crash frequency)

☐ EPDO crash frequency with EB adjustment

☐ Relative severity index

☒ Crash rate

☒ Critical rate

☐ Level of service of safety (LOSS)

☐ Excess expected crash frequency using SPFs

☐ Excess expected crash frequency with the EB adjustment

☐ Excess expected crash frequency using method of moments

☐ Probability of specific crash types

☐ Excess proportions of specific crash types

☐ Other

Are local roads (non-state owned and operated) included or addressed in this program?

☒ Yes

☐ No

If yes, are local road projects identified using the same methodology as state roads?

☒ Yes

☐ No

How are highway safety improvement projects advanced for implementation?

☒ Competitive application process

☐ selection committee

☐ Other

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

☐ Relative Weight in Scoring

☒ Rank of Priority Consideration

☒ Ranking based on B/C	90
☒ Available funding	10
☐ Incremental B/C	
☐ Ranking based on net benefit	
☐ Other	

What proportion of highway safety improvement program funds address systemic improvements?

22

Highway safety improvement program funds are used to address which of the following systemic improvements?

☐ Cable Median Barriers	☐ Rumble Strips
☒ Traffic Control Device Rehabilitation	☐ Pavement/Shoulder Widening
☒ Install/Improve Signing	☒ Install/Improve Pavement Marking and/or Delineation
☐ Upgrade Guard Rails	☐ Clear Zone Improvements
☐ Safety Edge	☐ Install/Improve Lighting
☒ Add/Upgrade/Modify/Remove Traffic Signal	☐ Other

Regional engineers rank segments or corridors (the systems) within their region based on crash performance, and evaluate whether implementing a particular countermeasure throughout the segment (system) would improve crash performance. This process is somewhat different than the process proposed in the "Systemic Safety Project selection Tool" (SSPST) published by FHWA. Alaska may move more toward the SSPST process as data systems improve our analytic capabilities.

Alaska is still building the capacity to analyze the data and measure the performance of systemic improvements. We recognize the benefits, but right now we're approving systemic projects on a case by case basis, not as a fully realized program.

What process is used to identify potential countermeasures?

☒ Engineering Study

☐ Road Safety Assessment

☐ Other:

Identify any program methodology practices used to implement the HSIP that have changed since the last reporting period.

☐ Highway Safety Manual

☐ Road Safety audits

☐ Systemic Approach

☒ Other: Other-None

Describe any other aspects of the Highway Safety Improvement Program methodology on which you would like to elaborate.

-Data Used: Intersection screening is based on all crashes, with an emphasis on fatalities and major injuries. Segment screening is based on fatalities and major injuries.

-Project Identification: Project identification results from intersection and segment crash screening, initial project scope, cost estimate, and estimated crash reduction.

-Countermeasures implemented this year: Railway-Highway grade separations, illumination, roadway signing and delineation, intersection improvements, pedestrian improvements

-Spot vs. System wide improvements: About 22% of current year project funding addressed system wide improvements. Regional engineers rank segments or corridors (the systems) within their region based on crash performance, and evaluate whether implementing a particular countermeasure throughout the segment (system) would improve crash performance.

-HSIP/SHSP Alignment: All HSIP projects align with SHSP emphasis areas.

-Project Prioritization Process: Project prioritization is based on cost of crashes eliminated. Using crash cost results in a greater emphasis on severe crashes. For "ranked" projects, prioritization is based on benefit-cost ratio (estimated cost of crashes eliminated / cost of construction and maintenance). For "non-ranked" projects, prioritization is based on a subjective estimate of potential for reducing severe crashes.

Progress in Implementing Projects

Funds Programmed

Reporting period for Highway Safety Improvement Program funding.

☐ Calendar Year

☐ State Fiscal Year

☒ Federal Fiscal Year

Enter the programmed and obligated funding for each applicable funding category.

Funding Category	Programmed*		Obligated	
HSIP (Section 148)	28209993	49 %	39797407	56 %
HRRRP (SAFETEA-LU)				
HRRR Special Rule	900000	2 %	900000	1 %
Penalty Transfer - Section 154	8650000	15 %	10255261	14 %
Penalty Transfer – Section 164	8650000	15 %	9905444	14 %
Incentive Grants - Section 163				
Incentive Grants (Section 406)				
Other Federal-aid Funds (i.e. STP, NHPP)	7400000	13 %	5291506	7 %
State and Local Funds	3600000	6 %	4816026	7 %

Totals	57409993	100%	70965644	100%

How much funding is programmed to local (non-state owned and maintained) safety projects?

$8,193,186.00

How much funding is obligated to local safety projects?

$10,193,028.00

How much funding is programmed to non-infrastructure safety projects?

$5,565,000.00

How much funding is obligated to non-infrastructure safety projects?

$1,725,303.00

How much funding was transferred in to the HSIP from other core program areas during the reporting period?

$0.00

How much funding was transferred out of the HSIP to other core program areas during the reporting period?

$0.00

Discuss impediments to obligating Highway Safety Improvement Program funds and plans to overcome this in the future.

HSIP projects are often smaller projects that must compete with other state priorities for the same resources (personnel, equipment, etc.) as the larger projects in the state. Strategies for overcoming these impediments include bundling projects in the construction phase with larger projects, and consider program revisions to allow leveraging HSIP funds by combining with other eligible federal funding.

Describe any other aspects of the general Highway Safety Improvement Program implementation progress on which you would like to elaborate.

No response.

General Listing of Projects

List each highway safety improvement project obligated during the reporting period.

Project	Improvement Category	Output	HSIP Cost	Total Cost	Funding Category	Functional Classification	AADT	Speed	Roadway Ownership	Relationship to SHSP	
										Emphasis Area	Strategy
College Road/ Antoinette Ave/ Margaret Ave Intersection Reconstruction	Intersection geometry Intersection geometrics - realignment to align offset cross streets	1 Numbers	3112536.7	3380003	HSIP (Section 148)	Urban Minor Arterial	14120	0	State Highway Agency	Intersections	Implement infrastructure projects to address intersection crashes
HSIP: COLLEGE ROAD RIGHT TURN LANES	Intersection geometry Auxiliary lanes - add right-turn lane	1 Numbers	1300591	1329034	Penalty Transfer – Section 164	Urban Minor Arterial	14076	35	State Highway Agency	Intersections	Implement infrastructure projects to address intersection crashes
Fairbanks: Danby-Wembly Roundabout	Intersection traffic control Modify control - two-way stop to roundabout	1 Numbers	405000	450000	HSIP (Section 148)	Urban Minor Arterial	16560	0	State Highway Agency	Intersections	Implement infrastructure projects to address intersection

											crashes
Northern Region Avalanche Gates	Roadway signs and traffic control Roadway signs and traffic control - other	5 Numbers	1102066	1102066	Other Federal-aid Funds (i.e. STP, NHPP)	Rural Principal Arterial and Rural Major Collector	0	0	State Highway Agency	Roadways	See "Supporting Text" for relavant strategy
Northern Region Pedestrian Improvements	Pedestrians and bicyclists Crosswalk	59 Numbers	130662	130662	Penalty Transfer - Section 154	All FCs - systemic install	0	0	Other Local Agency	Pedestrians	Identify and implement appropriate engineering strategies to address high-crash locations involving pedestrians
Alaska Highway Signing and Striping Upgrades	Roadway Install / remove / modify passing zone	195.85 Miles	100000	100000	Penalty Transfer - Section 154	Rural Principal Arterial - Other	0	0	State Highway Agency	Lane Departure	Implement proper signing and striping to address passing related crashes

Chena Hot Springs Road Safety Improvements	Roadway signs and traffic control Roadway signs and traffic control - other	56.111 Miles	549708.6	587615	HRRR Special Rule	Rural Minor Arterial, Rural Major Collector	0	0	State Highway Agency	Roadway Departure	Implement infrastructure projects to address run-off-road crashes
Parks Highway Rest Areas	Parking Truck parking facilities	29.759 Miles	1424765	1424765	Penalty Transfer - Section 164	Rural Principal Arterial - Other	0	0	State Highway Agency	Roadway Departure	Implement infrastructure projects to address run-off-road crashes
Parks Hwy MP 321 Speed Feedback Sign	Roadway signs and traffic control Roadway signs and traffic control - other	1 Numbers	158571	158571	Penalty Transfer – Section 164	Rural Principal Arterial - Other	1485	65	State Highway Agency	Roadway Departure	Implement infrastructure projects to address run-off-road crashes
HSIP: 36th Ave, Arctic to C St 5 Lane Conversiont (formerly Group 5A. Anchorage Area HSIP Projects)	Intersection geometry Intersection geometrics - miscellaneous/other/unspecified	0.75 Miles	352800.9	392001	HSIP (Section 148)	All FCs - channelization & other geometric improvements at multiple locations	0	0	City of Municipal Highway Agency	Intersections	Implement infrastructure projects to address intersection crashes

Jewel Lake Road @ Raspberry Road East-West Dual Left Turn Lanes Project	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbers	409528.8	455032	HSIP (Section 148)	Urban Principal Arterial - Other	26585	45	State Highway Agency	Intersections	Implement infrastructure projects to address intersection crashes
Bragaw Street @ 16th Avenue 5 Lane	Intersection geometry Auxiliary lanes - add two-way left-turn lane	0.5 Miles	2040944.6	2040944.6	Penalty Transfer – Section 164	Urban Principal Arterial - Other	18583	0	City of Municipal Highway Agency	Roadway Departure	Implement infrastructure projects to address run-off-road crashes
Northern Lights Boulevard @ UAA Drive	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbers	284649	284649	Penalty Transfer - Section 154	Urban Principal Arterial - Other	41858	40	City of Municipal Highway Agency	Intersections	Implement infrastructure projects to address intersection crashes
HSIP 10: Anchorage Flashing Yellow Arrow Project	Intersection traffic control Modify traffic signal - add flashing yellow arrow	11 Numbers	3861584	3861584	Other Federal-aid Funds (i.e. STP, NHPP)	Mixed FCs	0	0	City of Municipal Highway Agency	Intersections	Implement infrastructure to address intersection crashes

Central Region Railroad/Highway Grade Crossing Guardrail Replacement	Roadside Barrier end treatments (crash cushions, terminals)	4 Numbers	8907	8907	Other Federal-aid Funds (i.e. STP, NHPP)	Mixed FCs	0	0	State Highway Agency	Roadway Departure	Implement infrastructure projects to address run-off-road crashes
Palmer-Wasilla Highway HSIP: Center Left Turn Lane Widening	Intersection geometry Auxiliary lanes - add two-way left-turn lane	10 Miles	540000	600000	HSIP (Section 148)	Rural Principal Arterial - Other	0	0	State Highway Agency	Lane Departure	Implement infrastructure projects to address head-on crashes
Johns Road and Klatt Road Intersection	Intersection traffic control Modify control - two-way stop to roundabout	1 Numbers	225272	225272	Other Federal-aid Funds (i.e. STP, NHPP)	Urban Minor Collector	10153	40	City of Municipal Highway Agency	Intersections	Implement infrastructure projects to address intersection crashes
Muldoon Road Channelization Improvements: 11th Court to	Access management Raised island - install new	0.75 Miles	2982751.3	2982751.3	Penalty Transfer – Section 164	Urban Principal Arterial - Other	0	40	State Highway Agency	Intersections	Implement infrastructure projects to address intersection crashes

Boundary Ave.											
Glenn Highway Continuous Lighting Project, MP 27-31	Lighting Continuous roadway lighting	4 Miles	652458.6	724954	HSIP (Section 148)	Rural Principal Arterial - Other	27210	65	State Highway Agency	Lane Departure	See "Supporting Text" for relavant strategy
Parks Hwy Safety Cooridor Median and Cont. Lighting	Access management Grassed median - extend existing	6 Miles	5678897.058	6309885.62	HSIP (Section 148)	Rural Principal Arterial - Other	0	55	State Highway Agency	Lane Departure	Implement infrastructure projects to address head-on crashes
Jewel Lake Road: 88th to Strawberry TWLTL	Intersection geometry Auxiliary lanes - add two-way left-turn lane	0.75 Miles	200000	200000	Penalty Transfer - Section 154	Urban Minor Arterial	14734	40	State Highway Agency	Intersections	Implement infrastructure projects to address intersection crashes
George Parks Highway Systemic Passing Lanes	Roadway Roadway widening - add lane(s) along segment	80.2 Miles	3466386	3851540	HSIP (Section 148)	Rural Principal Arterial - Other	0	65	State Highway Agency	Lane Departure	Implement infrastructure projects to address passing crashes

Project											
Seward Highway Passing Lane MP 99-100	Roadway Roadway widening - add lane(s) along segment	1 Miles	1062972	1181080	HSIP (Section 148)	Rural Principal Arterial - Other	8610	55	State Highway Agency	Lane Departure	Implement infrastructure projects to address passing crashes
CR Traffic Safety Corridor Left Turn Lanes	Intersection geometry Auxiliary lanes - add left-turn lane	3 Numbers	250000	250000	Penalty Transfer - Section 154	Rural Principal Arterial - Other	0	55	State Highway Agency	Intersections	Implement infrastructure projects to address rear end crashes
Regional High Friction Surface Treatment Project	Roadway Pavement surface - high friction surface	37 Numbers	5611028.4	6234476	HSIP (Section 148)	Mixed FCs	0	0	State Highway Agency	Lane Departure	Implement infrastruture projects to help motorists maintian control
Kodiak Island: Pillar Mountain Rock Fall Hazard Remediation	Roadside Barrier - other	1 Numbers	2745127.8	3050142	HSIP (Section 148)	Urban Minor Arterial	5430	45	State Highway Agency	Hazard correction and prevention	Implement infrastructure to prevent hazardous conditions

Central Region Sign Assembly Compliance Improvement	Roadway signs and traffic control Roadway signs (including post) - new or updated	2100 Numbers	3483708	3824620	HSIP (Section 148)	Mixed FCs	0	0	State Highway Agency	Roadway Departure	Implement infrastructure to improve signing/delineation
54474 Flashing Yellow Arrows - Kenai and Mat-Su	Intersection traffic control Modify traffic signal - add flashing yellow arrow	18 Numbers	58230	64700	HSIP (Section 148)	Mixed FCs	0	0	State Highway Agency	Intersections	Implement infrastructure to address intersection crashes
Sterling Highway Shoulder Widening - Soldotna to Clam Gulch	Shoulder treatments Widen shoulder - paved or other	20.3 Miles	3000000	3000000	Penalty Transfer - Section 154	Rural Principal Arterial - Other	4677	55	State Highway Agency	Roadway Departure	Implement infrastructure to address SVROR and head-on crashes
HSIP: Parks Hwy Grade Separations 2014	Railroad grade crossings Grade separation	0.49 Miles	18092734.24	2359400	HSIP (Section 148)	Rural Principal Arterial - Other	2640	65	State Highway Agency	Roadways	Implement infrastructure to address rail road crossings
CR School Zone Upgrades Phase II	Roadway signs and traffic control Roadway signs (including post) - new	8 Numbers	349145.1	387939	HSIP (Section	Mixed FCs	0	0	State Highway	Pedestrians	Implement infrastructure to address signing/delin

	or updated				148)				Agency		eation for drivers and pedestrians
Bethel Ridgecrest Drive School Zone Upgrades	Roadway signs and traffic control Roadway signs (including post) - new or updated	1 Numbers	81000	90000	HSIP (Section 148)	Rural Major Collector	4982	20	City of Municipal Highway Agency	Pedestrians	Identify and implement appropriate engineering strategies to address high-crash locations involving pedestrians
Akakeek Street and Ridgecrest Drive (in Bethel) Intersection Improvements	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	45000	50000	HSIP (Section 148)	Rural Major Collector	5169	30	City of Municipal Highway Agency	Intersections	Implement infrastructure projects to address intersection crashes
SGY Dyea Road Improvements	Roadway Roadway widening - curve	6 Numbers	284782.671	316425.19	HRRR Special Rule	Rural Minor Collector	243	25	State Highway Agency	Lane Departure	Implement infrastructure projects to address head-on crashes

JNU Thane Road Curve at Sheep Creek Safety Improvement	Roadway Roadway - other	2 Numbers	36676.5	36676.5	Other Federal-aid Funds (i.e. STP, NHPP)	Urban Minor Collector	611	40	State Highway Agency	Roadway Departure	Implement infrastructure projects to address run-off-road crashes
JNU Montana Creek Road Intersection Illumination	Lighting Intersection lighting	1 Numbers	68762	68762	Penalty Transfer - Section 154	Urban Minor Collector	7987	45	State Highway Agency	Intersections	Implement infrastructure projects to address intersection crashes
POW Craig-Klawock Hwy Guardrail Improvement	Roadside Barrier - other	7 Miles	282028.535	311476.15	HSIP (Section 148)	Rural Major Collector	1729	0	State Highway Agency	Roadway Departure	Implement infrastructure projects to address run-off-road crashes
JNU - Thane Road Guardrail	Roadside Barrier-metal	0.1 Miles	150167.191	162407.99	HSIP (Section 148)	Urban Major Collector	600	45	State Highway Agency	Roadway Departure	Implement infrastructure projects to address run-off-road crashes
FFY14-16 STRATEGIC	Non-infrastructure Non-infrastructure -	1 Numb	74000	74000	Penalty	N/A	0	0	N/A	Roadwa	See "Supporting

HIGHWAY SAFETY PLAN IMPLEMENTATION	other	ers			Transfer - Section 154					ys	Text" for relavant strategy
FFY 14-16 Crash Reporting Analysis System	Non-infrastructure Data/traffic records	1 Numbers	80100	89000	HSIP (Section 148)	N/A	0	0	N/A	Roadways	See "Supporting Text" for relavant strategy
SR FFY16-17 HSIP/SMS	Non-infrastructure Non-infrastructure - other	1 Numbers	180000	200000	HSIP (Section 148)	N/A	0	0	N/A	Roadways	See "Supporting Text" for relavant strategy
FFY 16-17 HSIP Safety Management	Non-infrastructure Non-infrastructure - other	1 Numbers	617672.61	686302.9	HSIP (Section 148)	N/A	0	0	N/A	Roadways	See "Supporting Text" for relavant strategy
CR: SMS/HSIP Program 2015-2017	Non-infrastructure Non-infrastructure - other	1 Numbers	608400	676000	HSIP (Section 148)	N/A	0	0	N/A	Roadways	See "Supporting Text" for relavant strategy

Progress in Achieving Safety Performance Targets

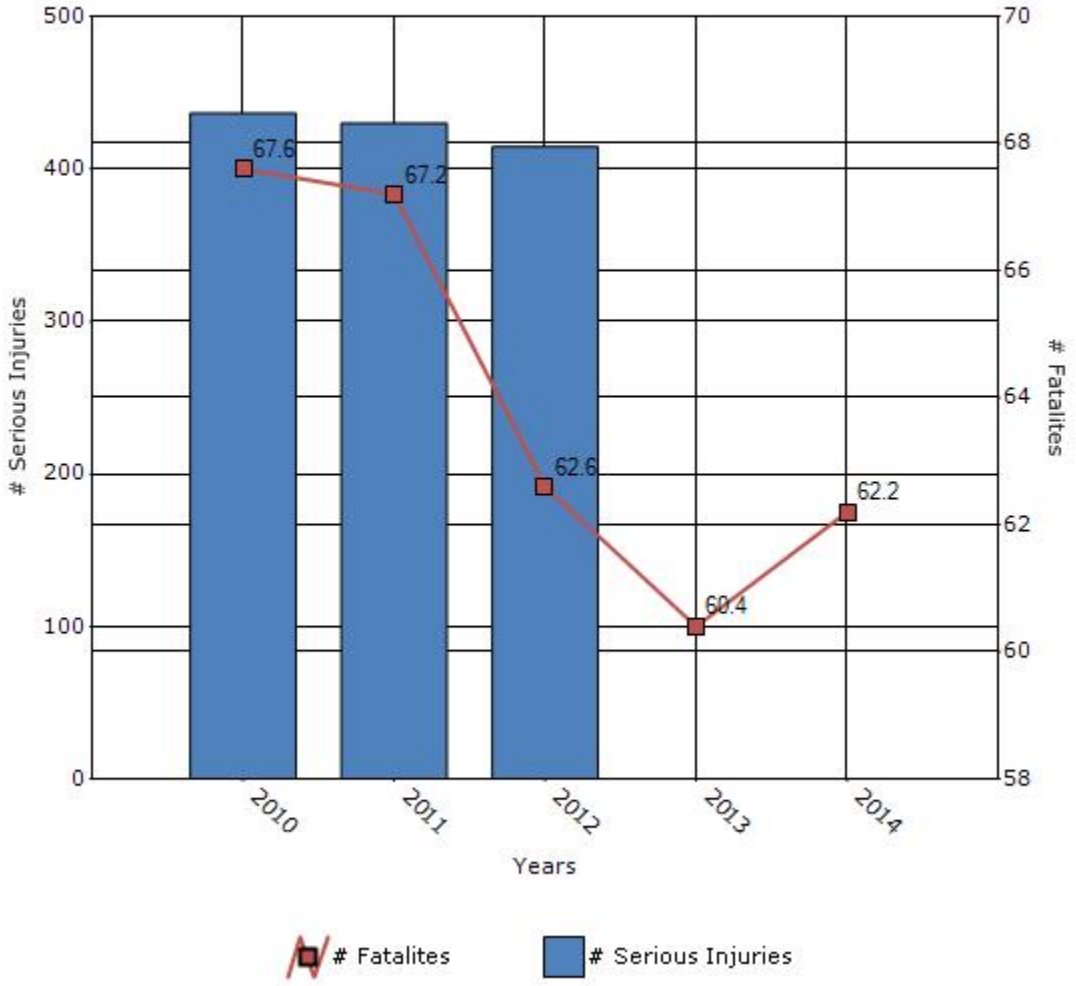
Overview of General Safety Trends

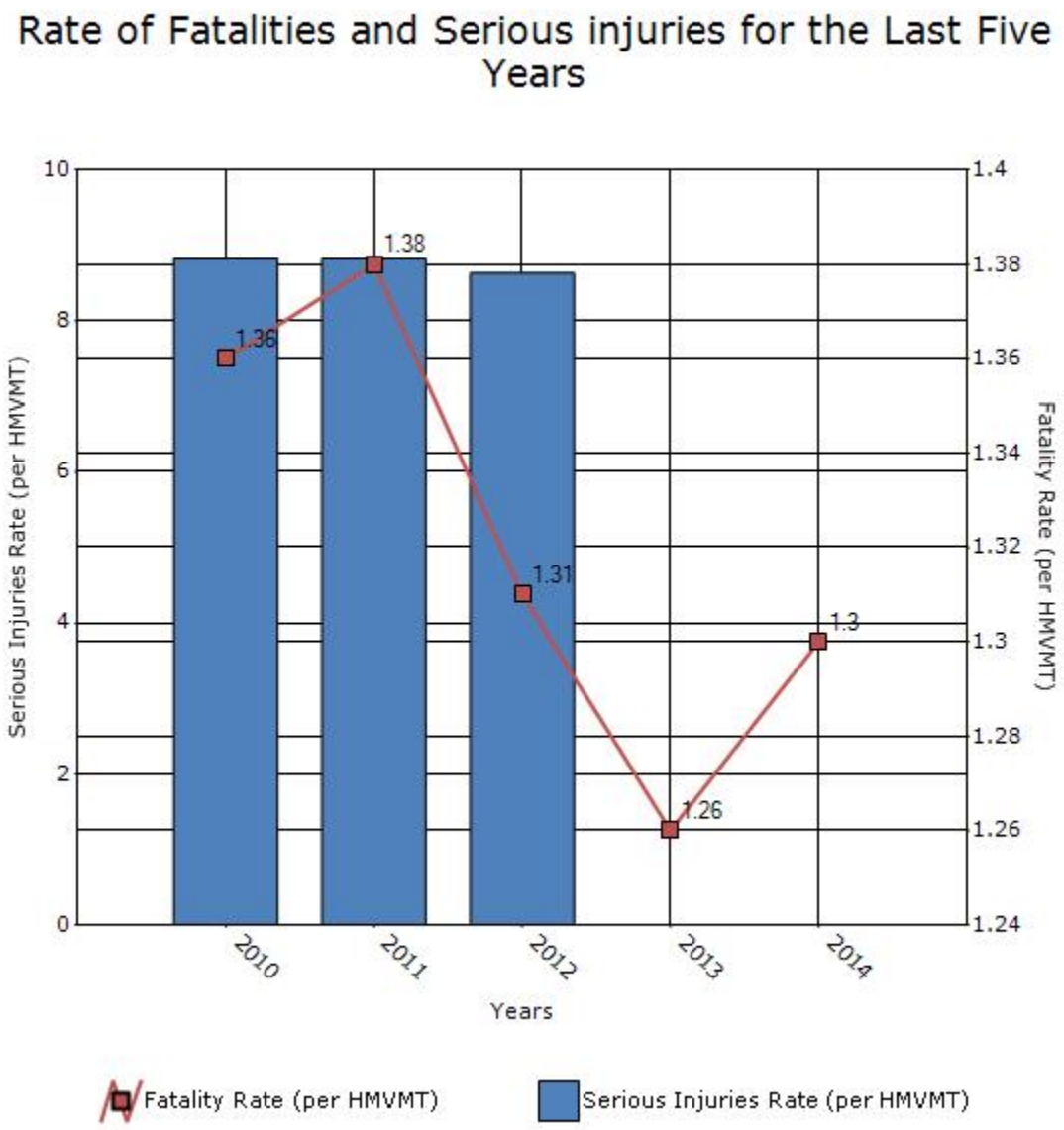
Present data showing the general highway safety trends in the state for the past five years.

Performance Measures*	2010	2011	2012	2013	2014
Number of serious injuries	436.4	429.8	414.4	0	0
Serious injury rate (per HMVMT)	8.82	8.82	8.63	0	0

*Performance measure data is presented using a five-year rolling average.

Number of Fatalities and Serious injuries for the Last Five Years





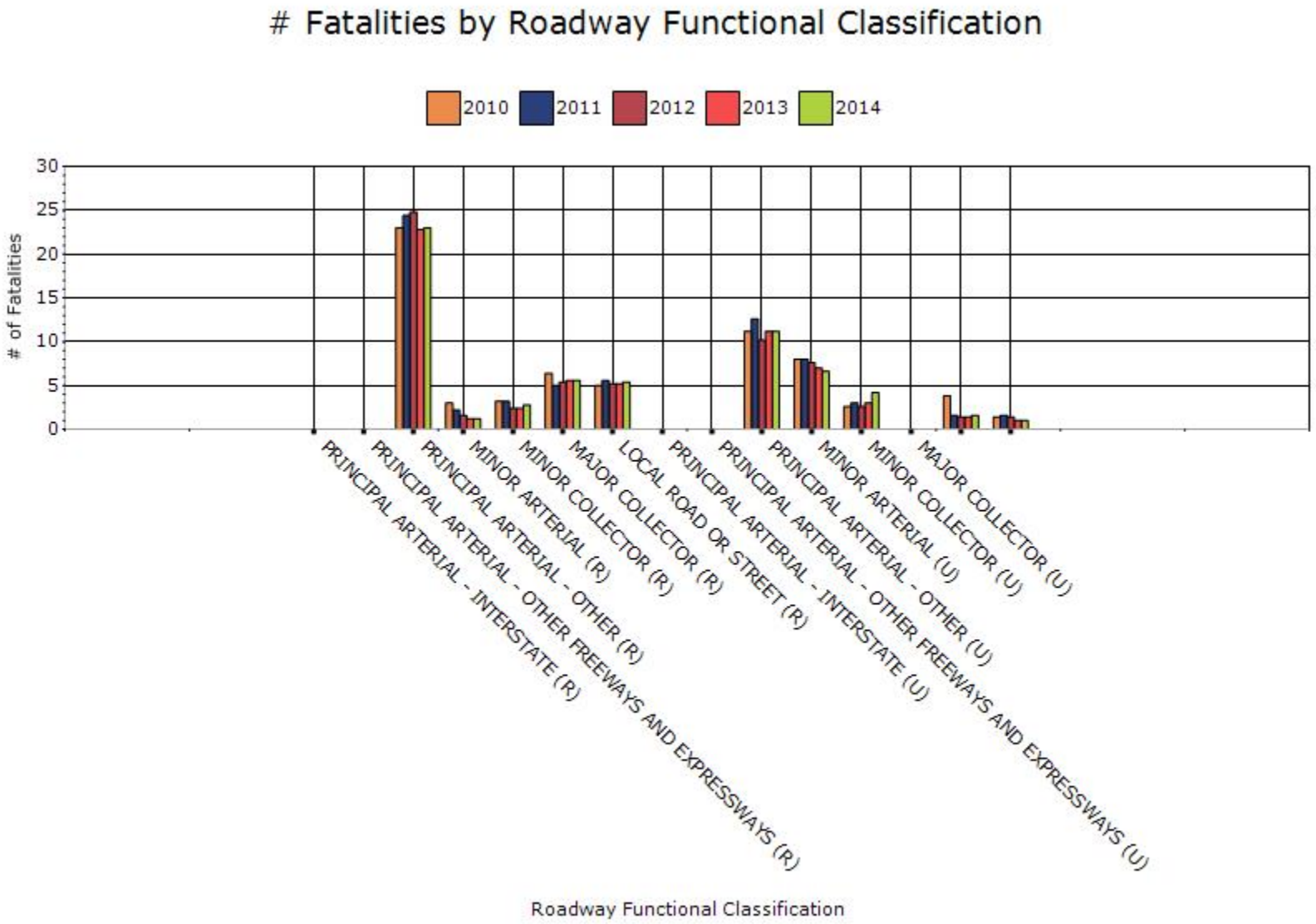
Alaska does not yet have serious injury data for 2013 and 2014. Alaska's serious injury performance measures for 2013 and 2014 will be updated when the data for those years are finalized.

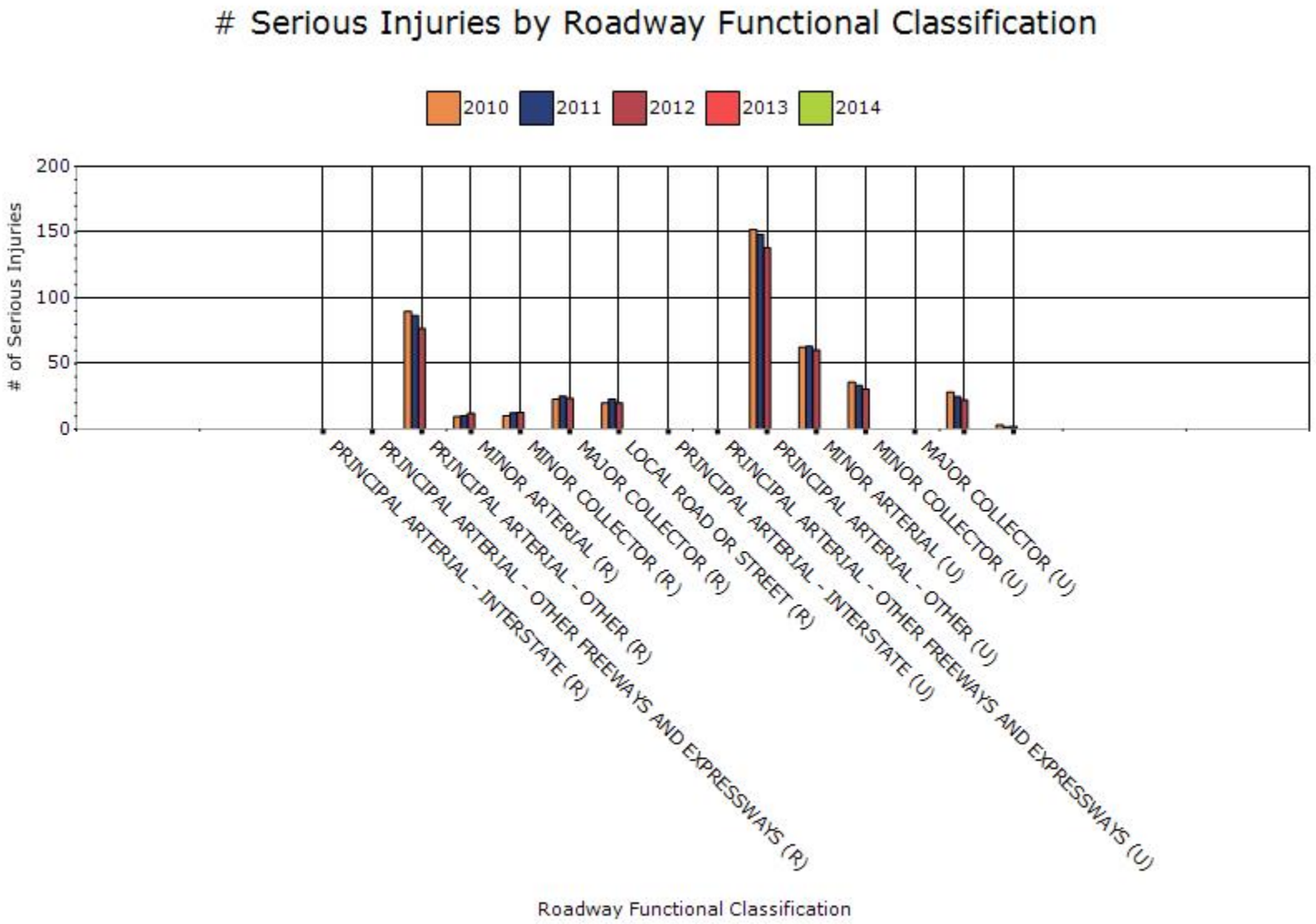
To the maximum extent possible, present performance measure* data by functional classification and ownership.

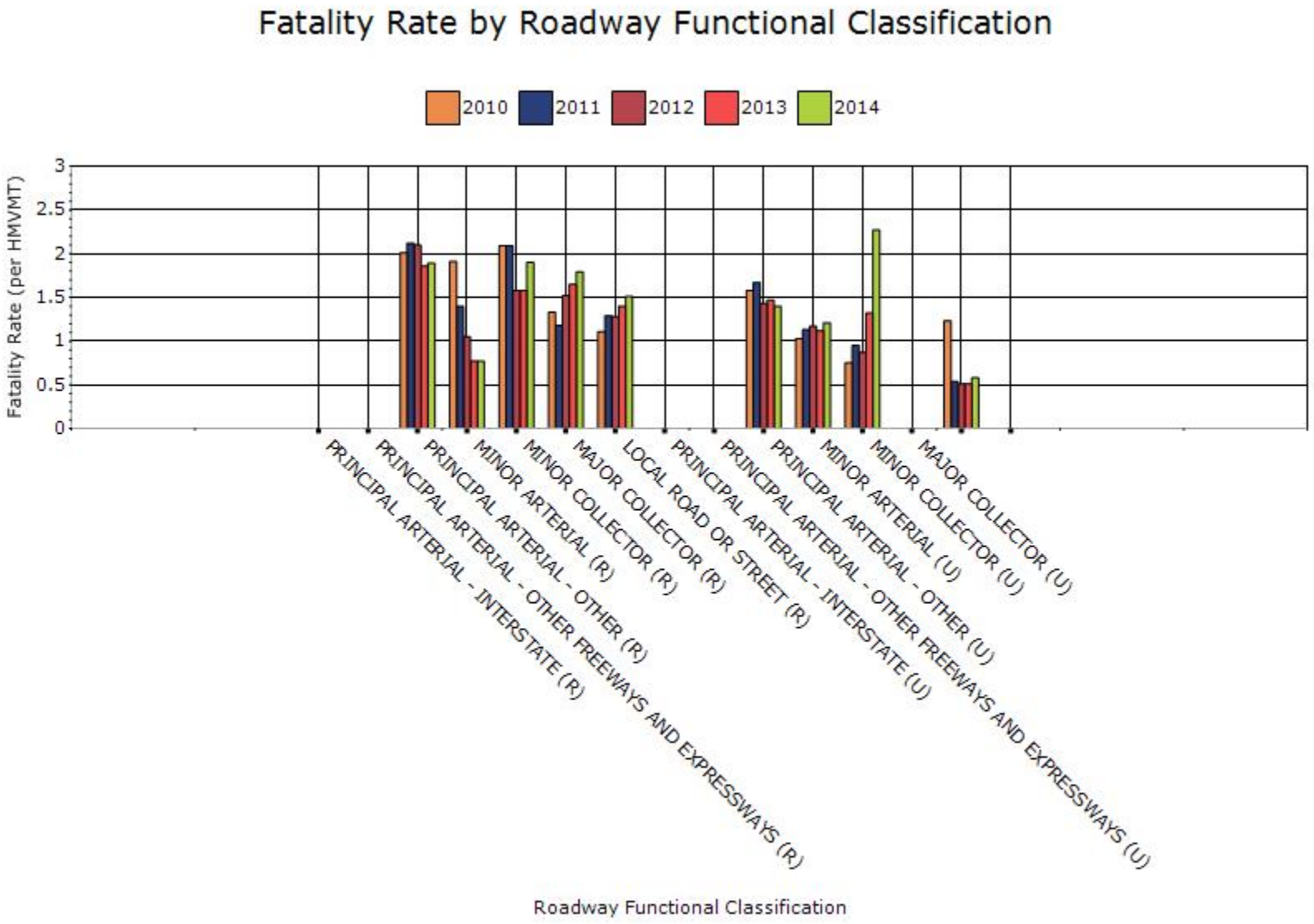
Year - 2014

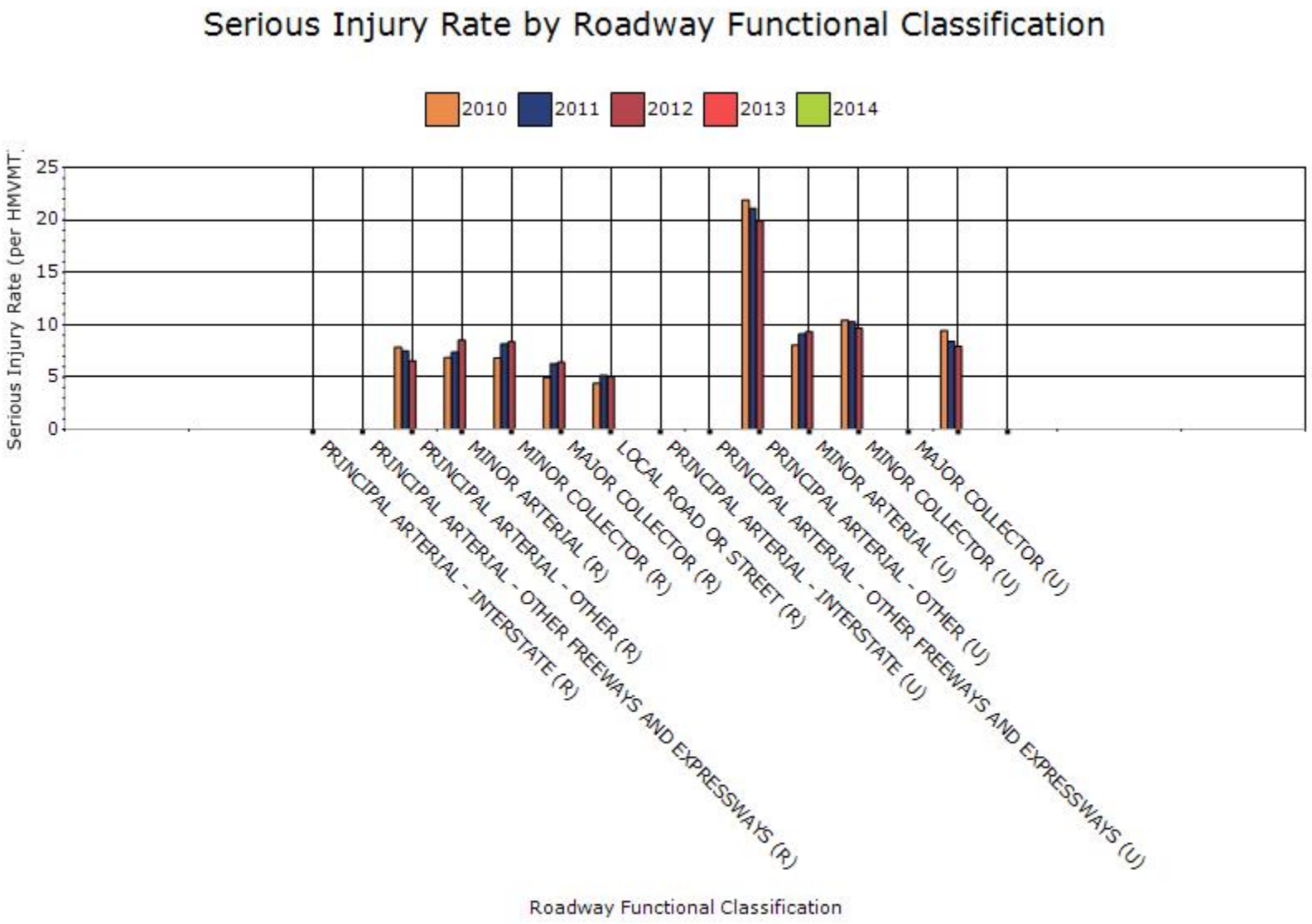
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER	23	0	1.89	0
RURAL MINOR ARTERIAL	1.2	0	0.77	0
RURAL MINOR COLLECTOR	2.8	0	1.9	0
RURAL MAJOR COLLECTOR	5.6	0	1.79	0
RURAL LOCAL ROAD OR STREET	5.4	0	1.51	0
URBAN PRINCIPAL	0	0	0	0

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
URBAN PRINCIPAL ARTERIAL - OTHER	11.2	0	1.4	0
URBAN MINOR ARTERIAL	6.6	0	1.21	0
URBAN MINOR COLLECTOR	4.2	0	2.27	0
URBAN MAJOR COLLECTOR	0	0	0	0
URBAN LOCAL ROAD OR STREET	1.6	0	0.58	0
OTHER	1	0	0	0


Fatalities by Roadway Functional Classification
2010
2011
2012
2013
2014
# of Fatalities
30
25
20
15
10
5
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification


Serious Injuries by Roadway Functional Classification
2010
2011
2012
2013
2014
# of Serious Injuries
200
150
100
50
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification

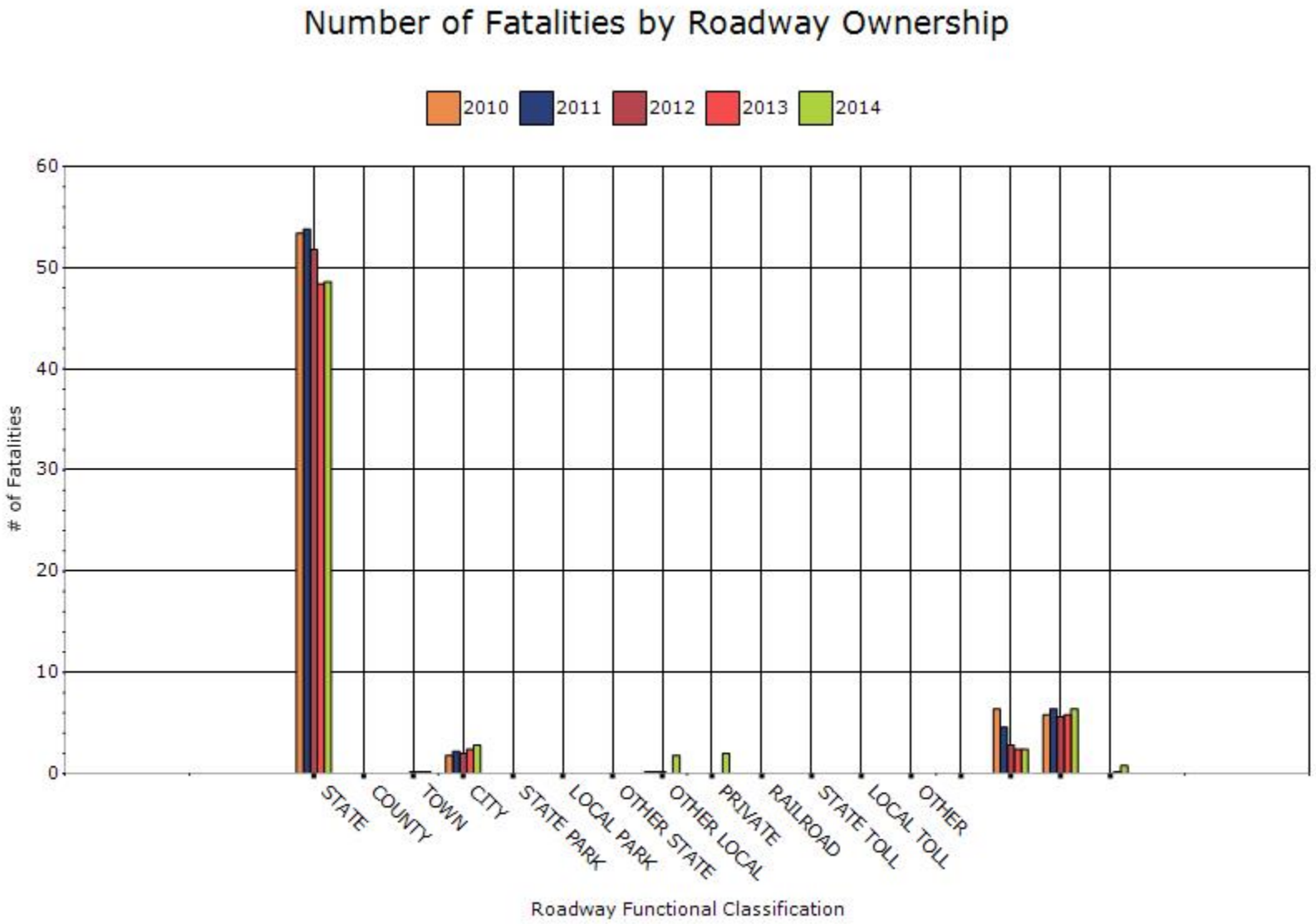

Fatality Rate by Roadway Functional Classification
2010
2011
2012
2013
2014
Fatality Rate (per HMVMT)
3
2.5
2
1.5
1
0.5
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification

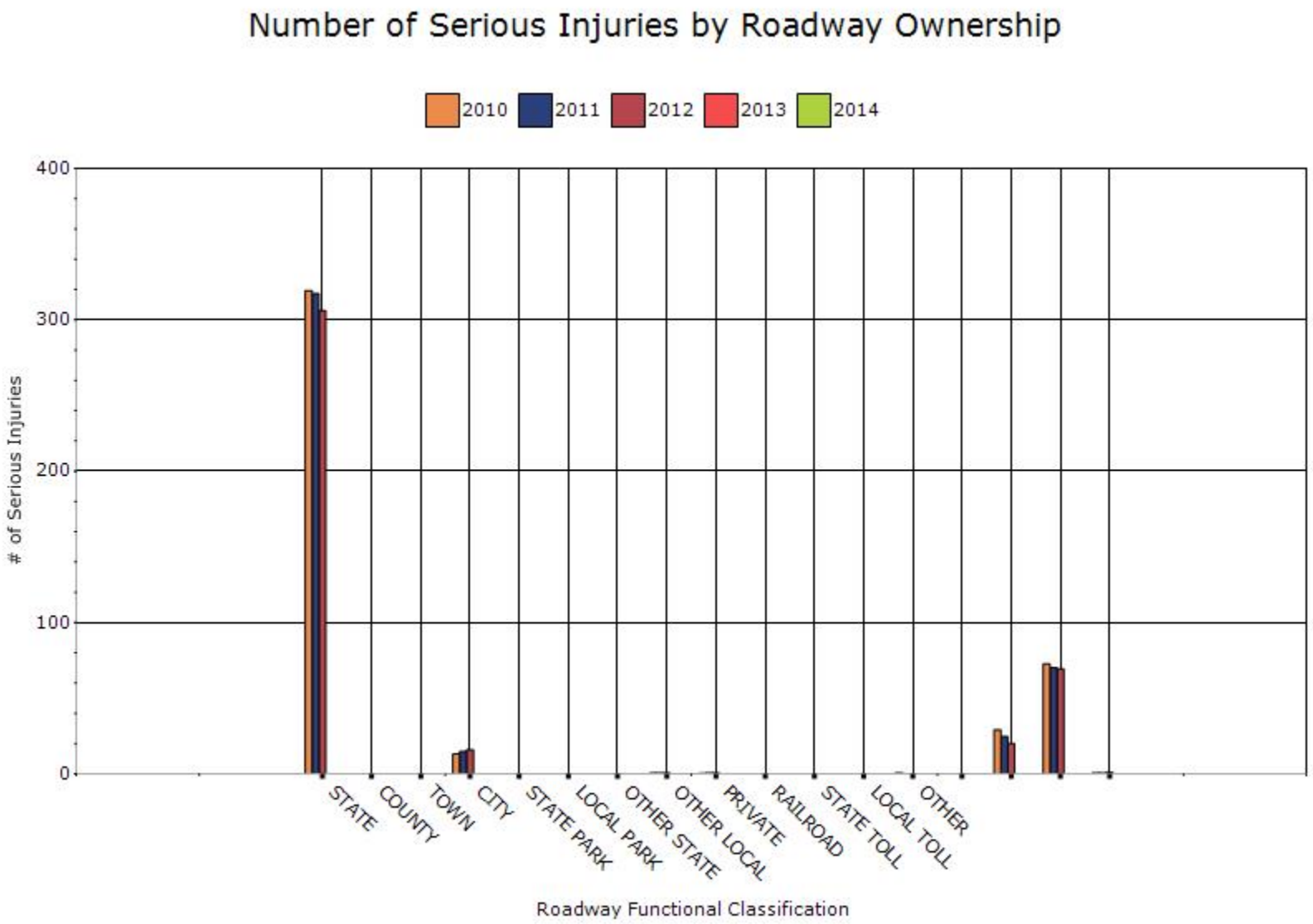

Serious Injury Rate by Roadway Functional Classification
2010
2011
2012
2013
2014
Serious Injury Rate (per HMVMT)
25
20
15
10
5
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification

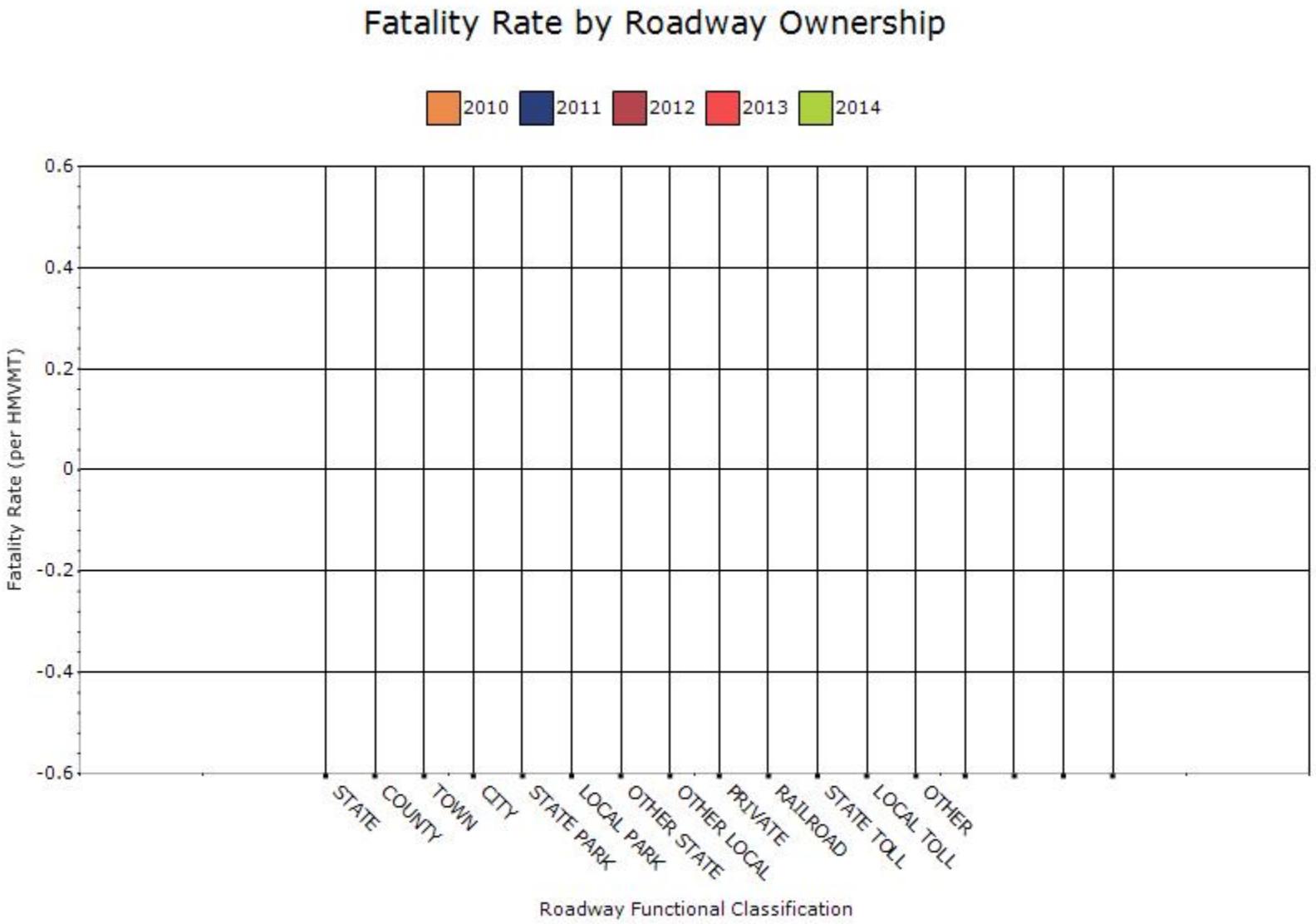
Year - 2014

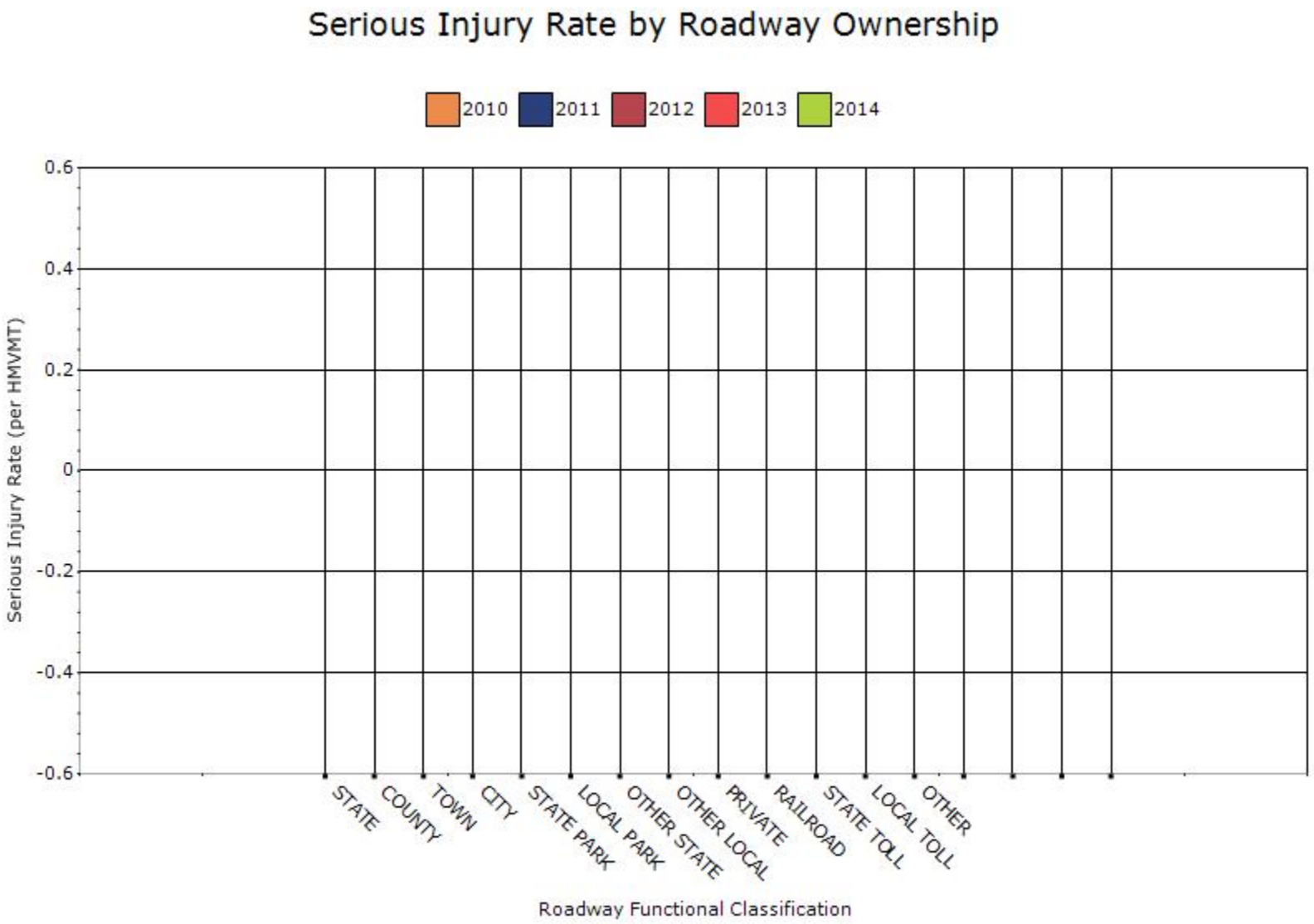
Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	48.6	0	0	0
COUNTY HIGHWAY AGENCY	0	0	0	0
TOWN OR TOWNSHIP HIGHWAY AGENCY	0.2	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	2.8	0	0	0
STATE PARK, FOREST, OR RESERVATION AGENCY	0	0	0	0
LOCAL PARK, FOREST OR RESERVATION AGENCY	0	0	0	0
OTHER STATE AGENCY	0	0	0	0
OTHER LOCAL AGENCY	1.8	0	0	0
PRIVATE (OTHER THAN RAILROAD)	2	0	0	0
RAILROAD	0	0	0	0
STATE TOLL AUTHORITY	0	0	0	0
LOCAL TOLL AUTHORITY	0	0	0	0
OTHER PUBLIC INSTRUMENTALITY (E.G. AIRPORT, SCHOOL, UNIVERSITY)	0	0	0	0
INDIAN TRIBE NATION	0	0	0	0

OTHER/UNKNOWN	2.4	0	0	0
BOROUGH	6.4	0	0	0
FEDERAL	0.8	0	0	0


Number of Fatalities by Roadway Ownership
2010
2011
2012
2013
2014
60
50
40
30
20
10
0
# of Fatalities
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification


Number of Serious Injuries by Roadway Ownership
2010
2011
2012
2013
2014
400
300
200
100
0
# of Serious Injuries
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification


Fatality Rate by Roadway Ownership
2010
2011
2012
2013
2014
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
Fatality Rate (per HMVMT)
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification


Serious Injury Rate by Roadway Ownership
2010
2011
2012
2013
2014
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
Serious Injury Rate (per HMVMT)
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification

Alaska does not yet have serious injury data for 2013 and 2014. Alaska's serious injury performance measures for 2013 and 2014 will be updated when the data for those years are finalized.

Alaska does not categorize VMT data by ownership, and therefore cannot compute fatality or injury rates by road ownership.

Describe any other aspects of the general highway safety trends on which you would like to elaborate.

No response.

Application of Special Rules

Present the rate of traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65.

Older Driver Performance Measures	2009	2010	2011	2012	2013
Fatality rate (per capita)	0.07	0.07	0.07	0.07	0.06
Serious injury rate (per capita)	0.27	0.3	0.34	0.37	0
Fatality and serious injury rate (per capita)	0.34	0.37	0.42	0.44	0

*Performance measure data is presented using a five-year rolling average.

Alaska does not yet have Older Driver Serious Injury data for 2013.

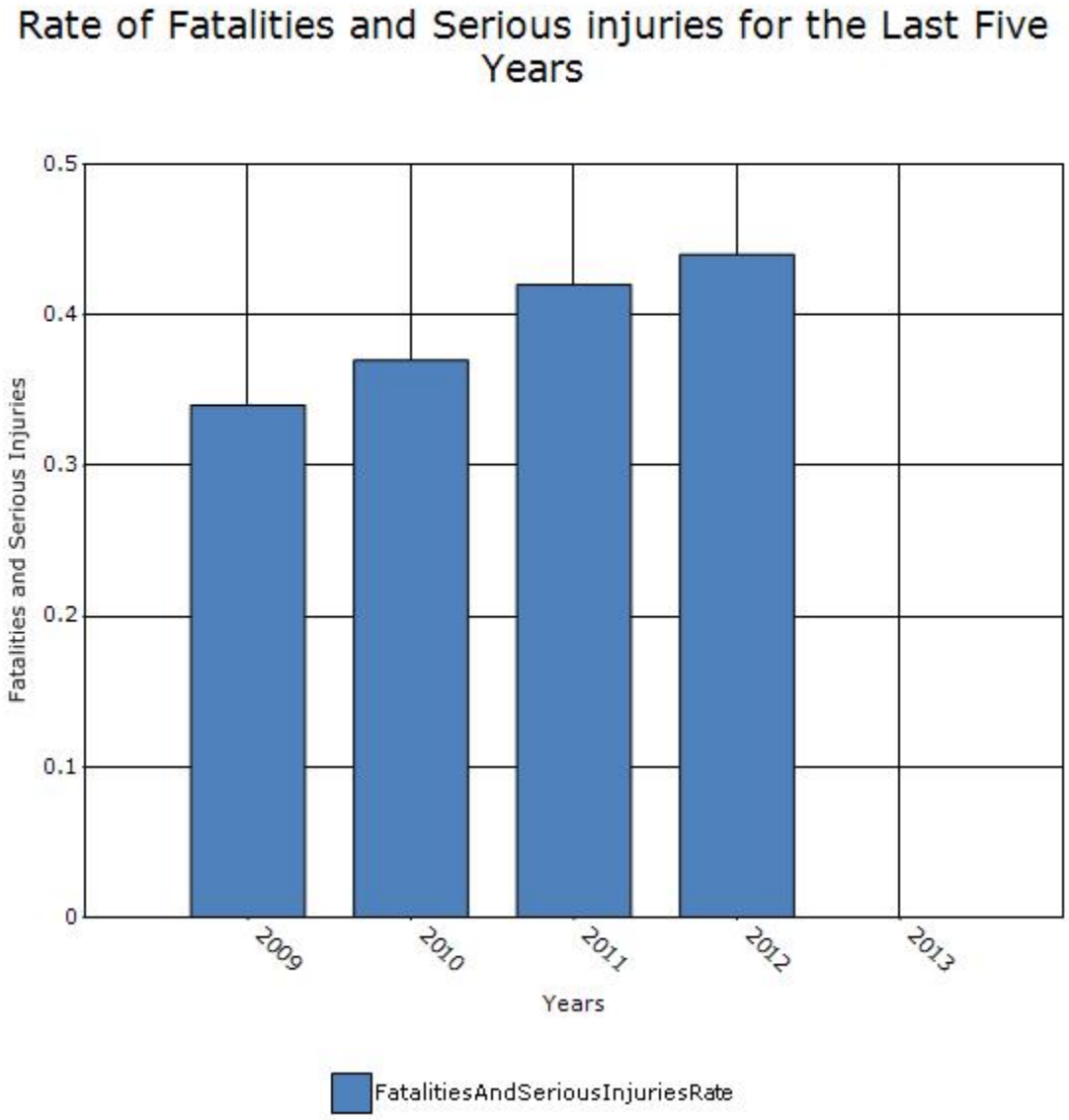
Compute five year rolling average rates for Older Drivers and Pedestrians.

Tabulate Annual totals for a. Fatal Driver, b. Fatal Ped, c. SI Driver, d. Serious Injury Ped and e. Total of Fatal/SI drivers and Peds.

Population Figures were provided by state in the MAP-21 Older Driver Guidance web page.

Compute annual rates for each grouping for years 2005 through 2013 using Population Figures for the applicable year (F+MI 2008/ PopFig 2008).

Used upload template. 5-yr rolling averages computed by the ORT.



Alaska does not have serious injury data for 2013. After consulting FHWA Alaska will provide the 2013 older driver data and resulting calculations in an amendment to the older driver rule question when the data become available.

Does the older driver special rule apply to your state?

No

Alaska does not have serious injury data for 2013. After consulting FHWA Alaska will provide the 2013 older driver data and resulting calculations in a amendment report when the data become available. Our response to question 28 may change at that time.

Assessment of the Effectiveness of the Improvements (Program

What indicators of success can you use to demonstrate effectiveness and success in the Highway Safety Improvement Program?

☐ None

☒ Benefit/cost

☐ Policy change

☐ Other:

What significant programmatic changes have occurred since the last reporting period?

☐ Shift Focus to Fatalities and Serious Injuries

☐ Include Local Roads in Highway Safety Improvement Program

☐ Organizational Changes

☒ None

☐ Other:

Briefly describe significant program changes that have occurred since the last reporting period.

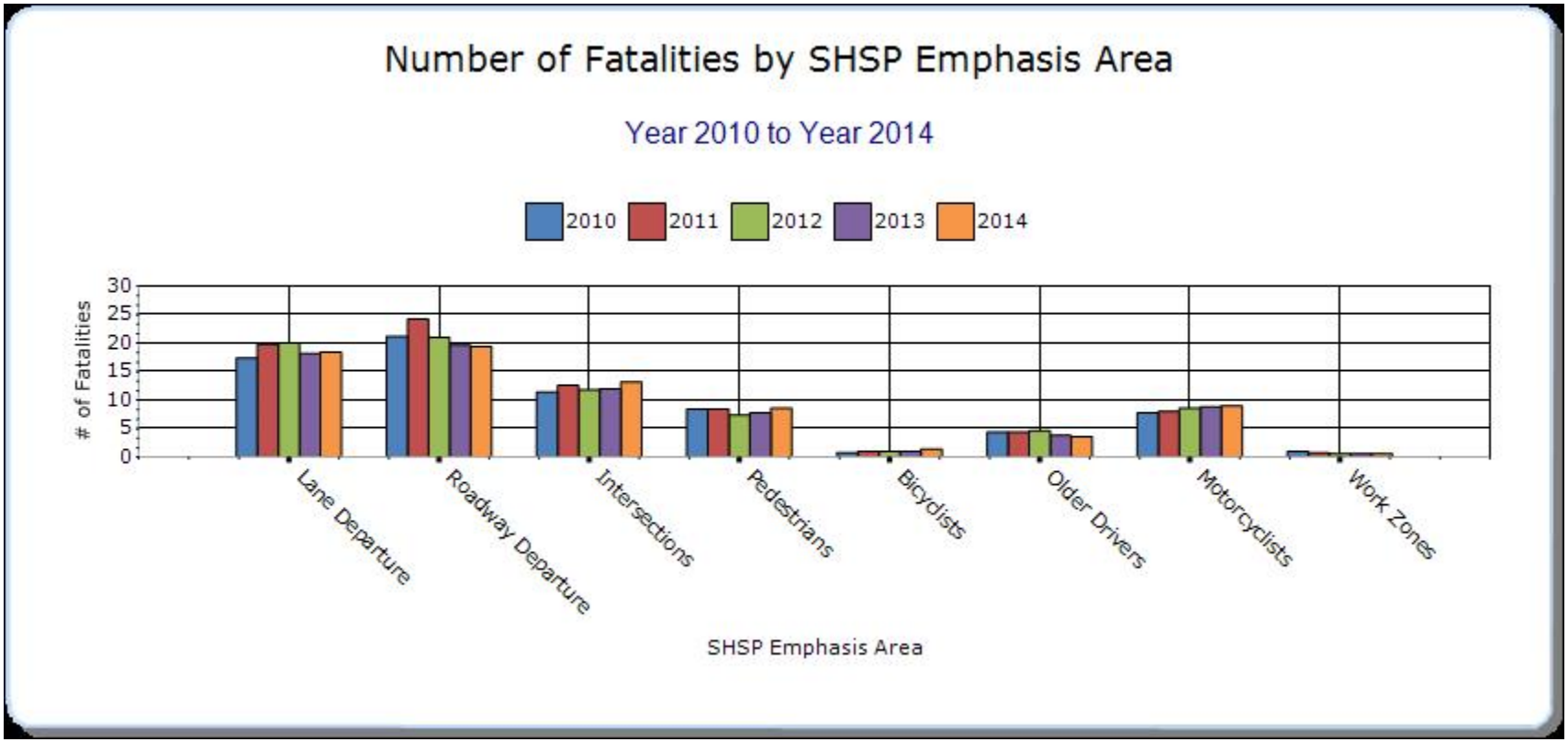
No response.

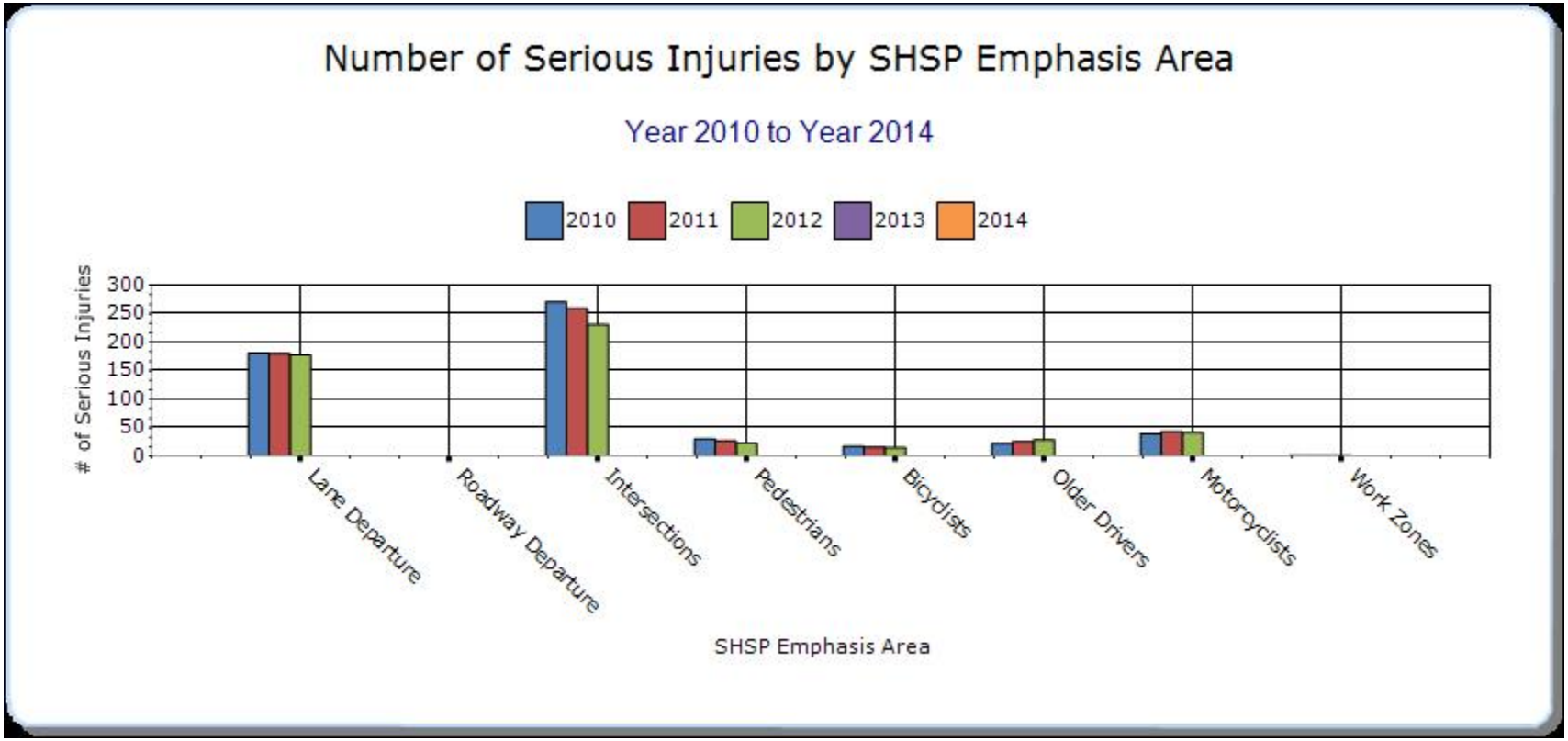
SHSP Emphasis Areas

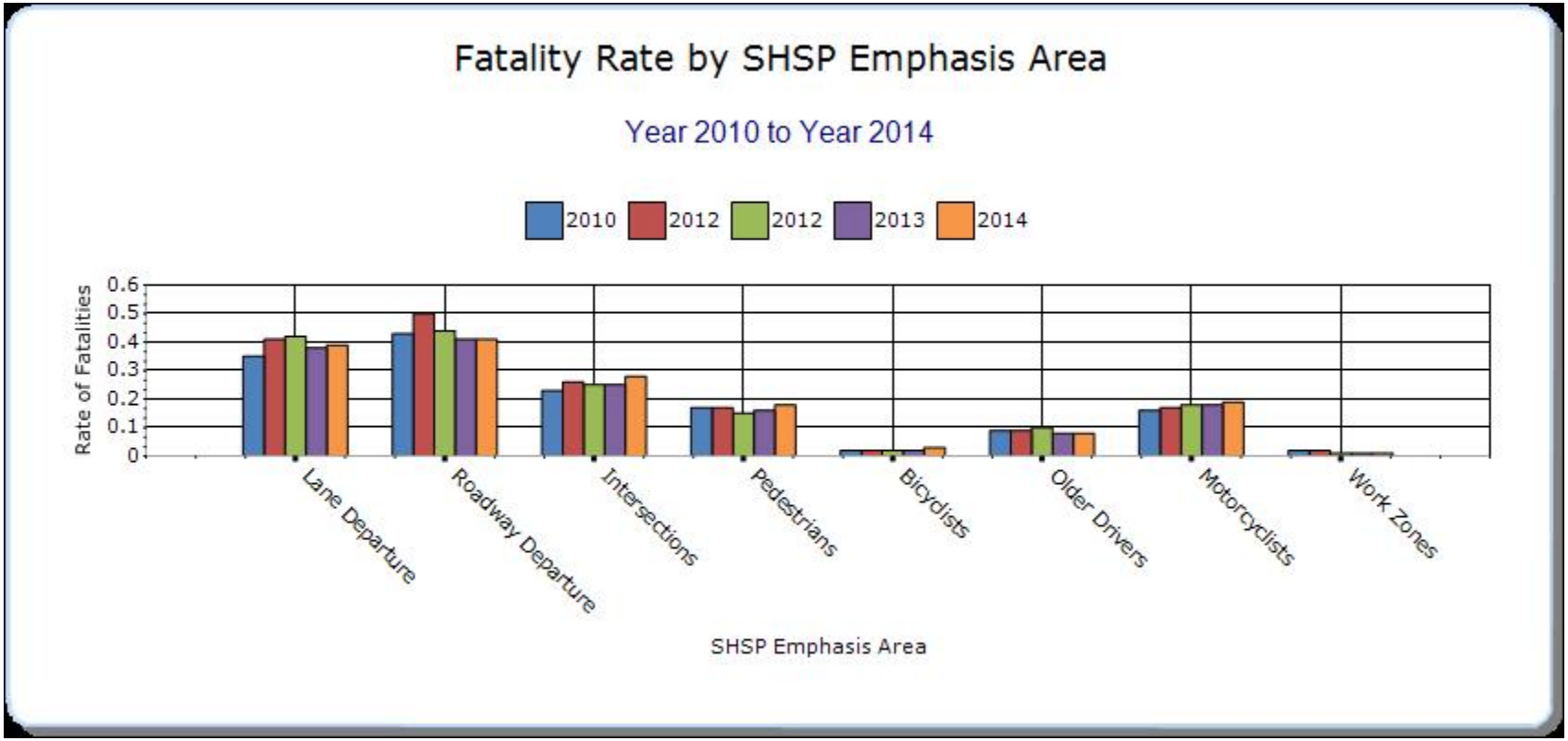
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

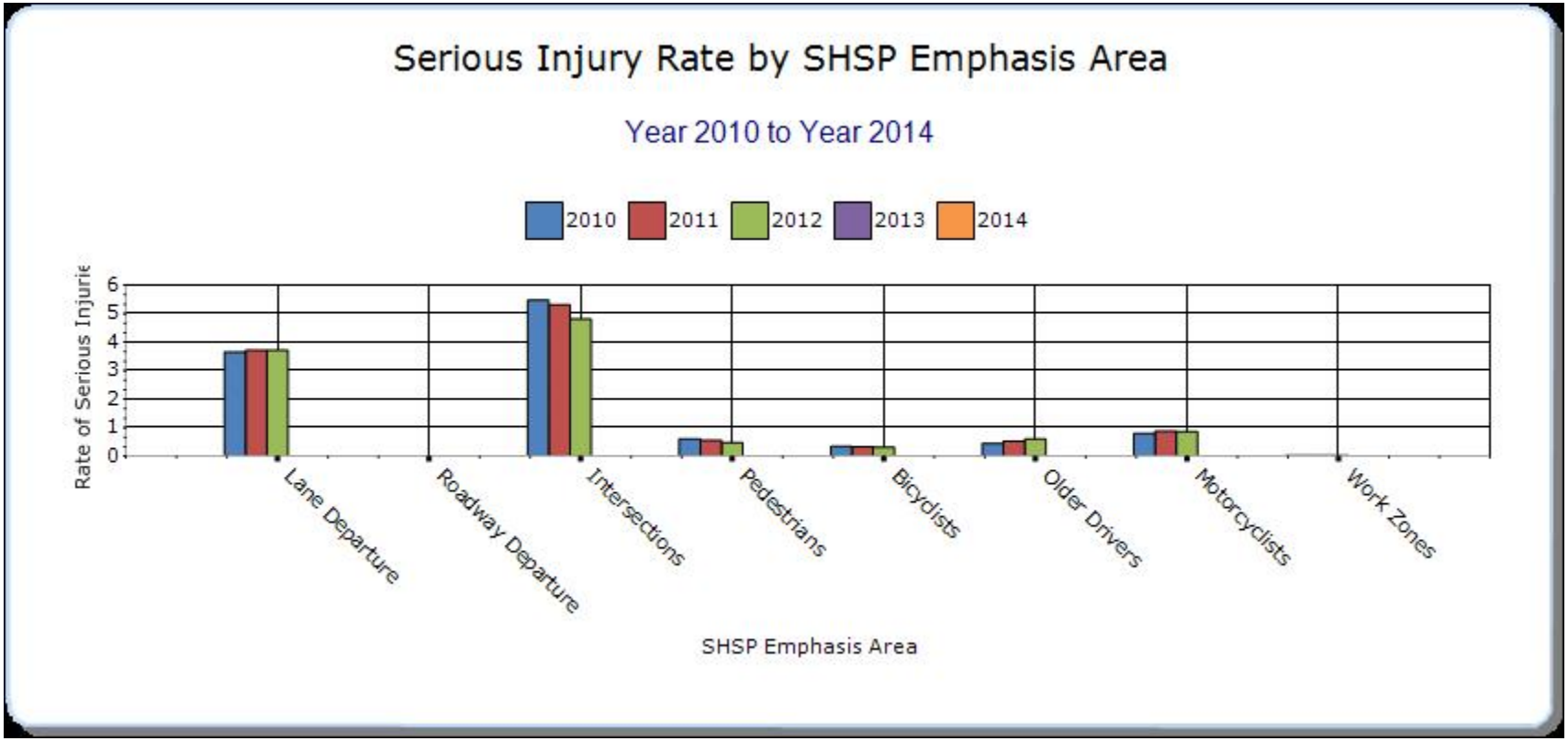
Year - 2014

HSIP-related SHSP Emphasis Areas	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Lane Departure		18.4	0	0.39	0	0	0	0
Roadway Departure		19.4	0	0.41	0	0	0	0
Intersections		13.2	0	0.28	0	0	0	0
Pedestrians		8.6	0	0.18	0	0	0	0
Bicyclists		1.4	0	0.03	0	0	0	0
Older Drivers		3.6	0	0.08	0	0	0	0
Motorcyclists		9	0	0.19	0	0	0	0
Work Zones		0.6	0	0.01	0	0	0	0


Number of Fatalities by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Fatalities
30
25
20
15
10
5
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
SHSP Emphasis Area


Number of Serious Injuries by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Serious Injuries
300
250
200
150
100
50
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
SHSP Emphasis Area


Fatality Rate by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2012
2012
2013
2014
Rate of Fatalities
0.6
0.5
0.4
0.3
0.2
0.1
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
SHSP Emphasis Area



Alaska does not yet have serious injury data for 2013 and 2014. Alaska's serious injury performance measures for 2013 and 2014 will be updated when the data for those years are finalized.

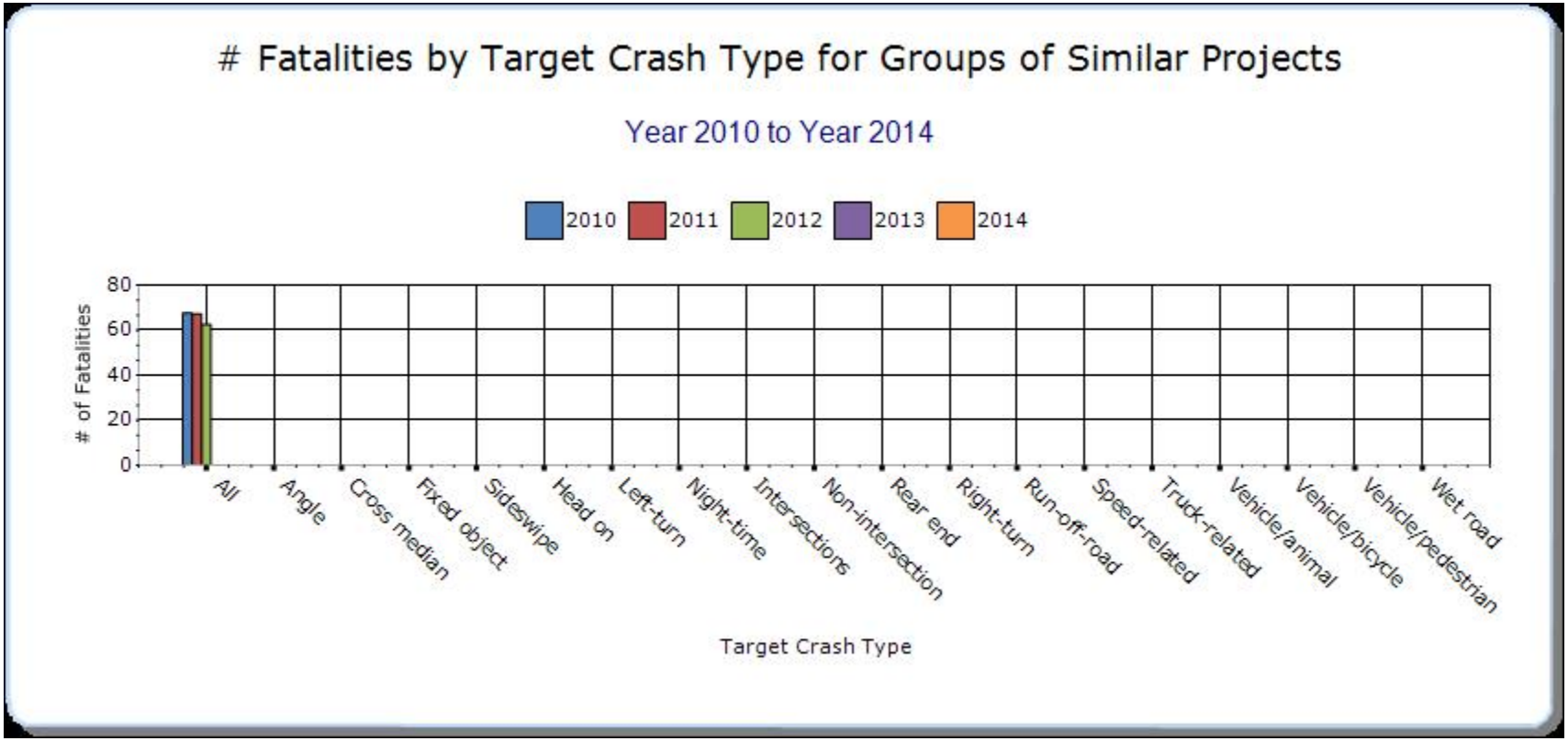
Some fatalities are double counted because of overlap between emphasis areas. For instance, a run-off-road fatal crash with a driver over 65 years of age would count against at least two EA categories (roadway departure and older drivers, possibly even lane departure).

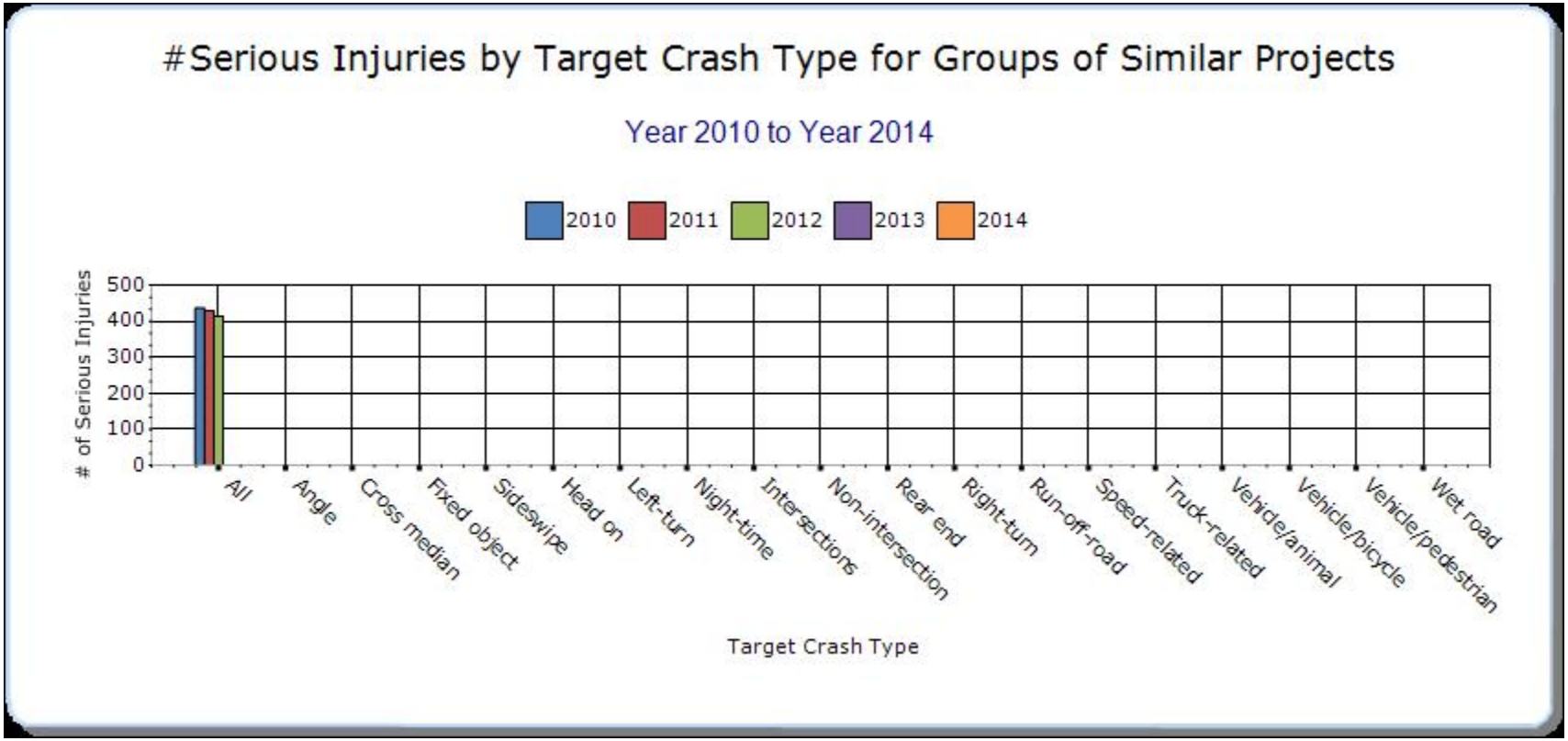
Groups of similar project types

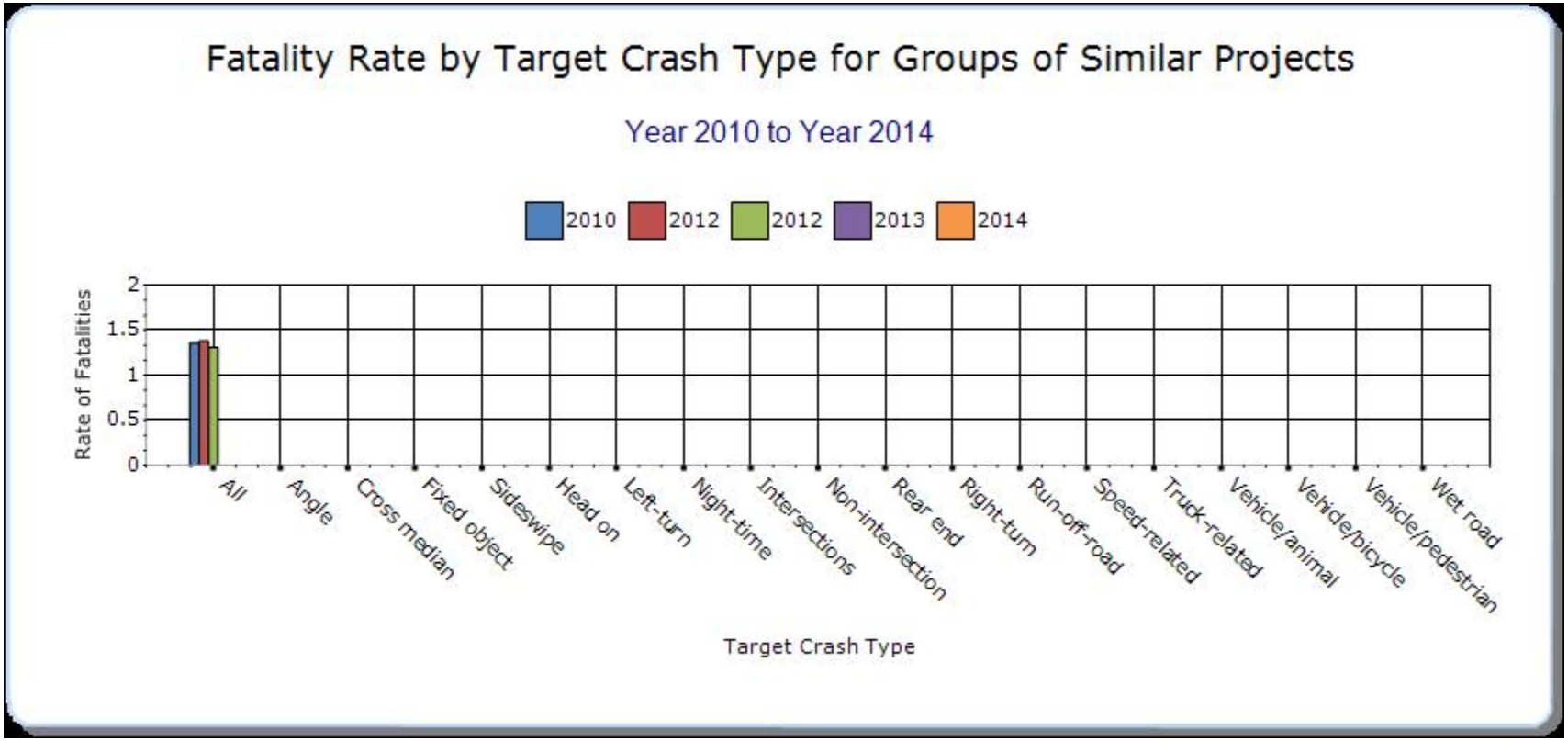
Present the overall effectiveness of groups of similar types of projects.

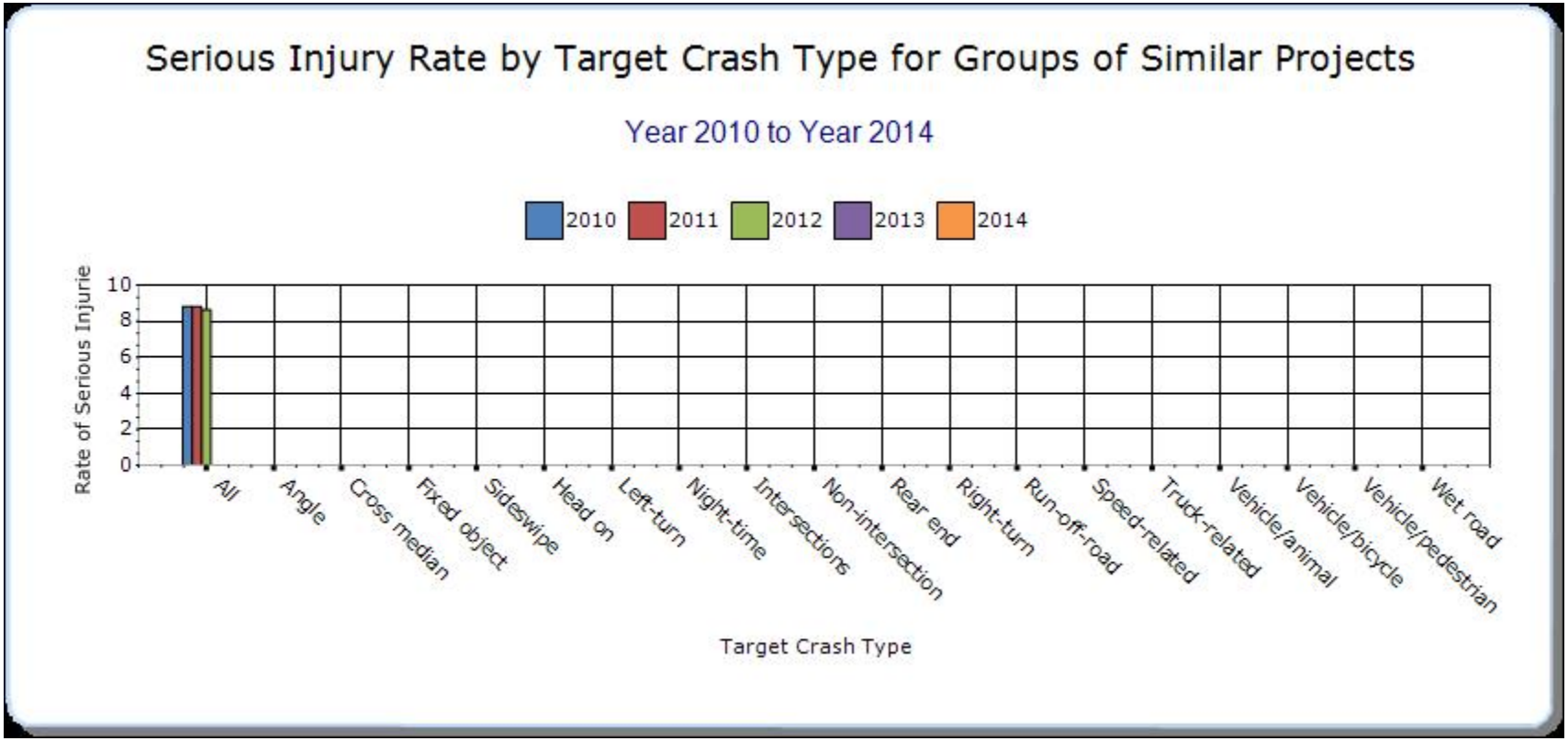
Year - 2014

HSIP Sub-program Types	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Other-Entire HSIP		62.2	0	1.3	0	0	0	0


Fatalities by Target Crash Type for Groups of Similar Projects
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Fatalities
80
60
40
20
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


#Serious Injuries by Target Crash Type for Groups of Similar Projects
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Serious Injuries
500
400
300
200
100
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


Fatality Rate by Target Crash Type for Groups of Similar Projects
Year 2010 to Year 2014
2010
2012
2012
2013
2014
Rate of Fatalities
2
1.5
1
0.5
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

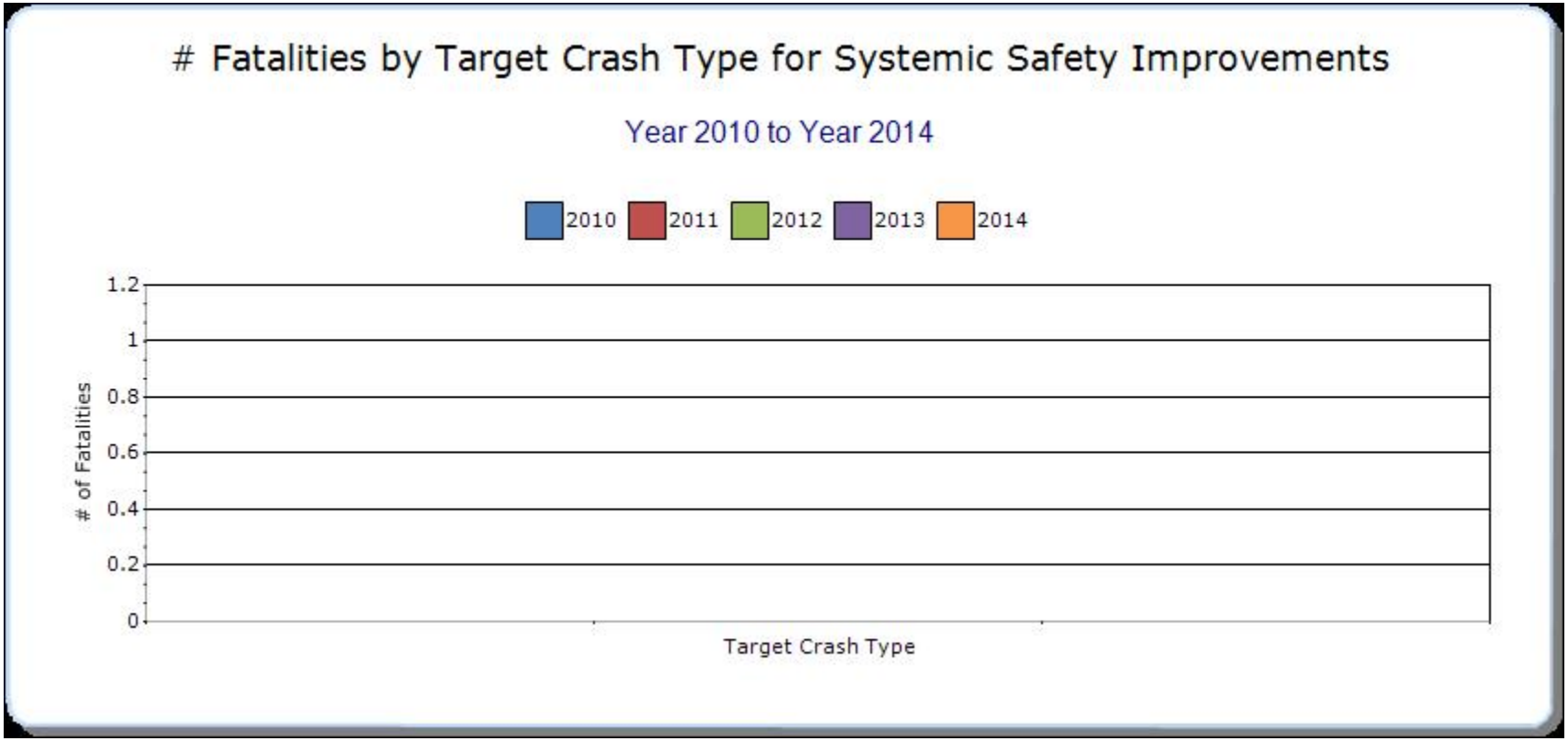


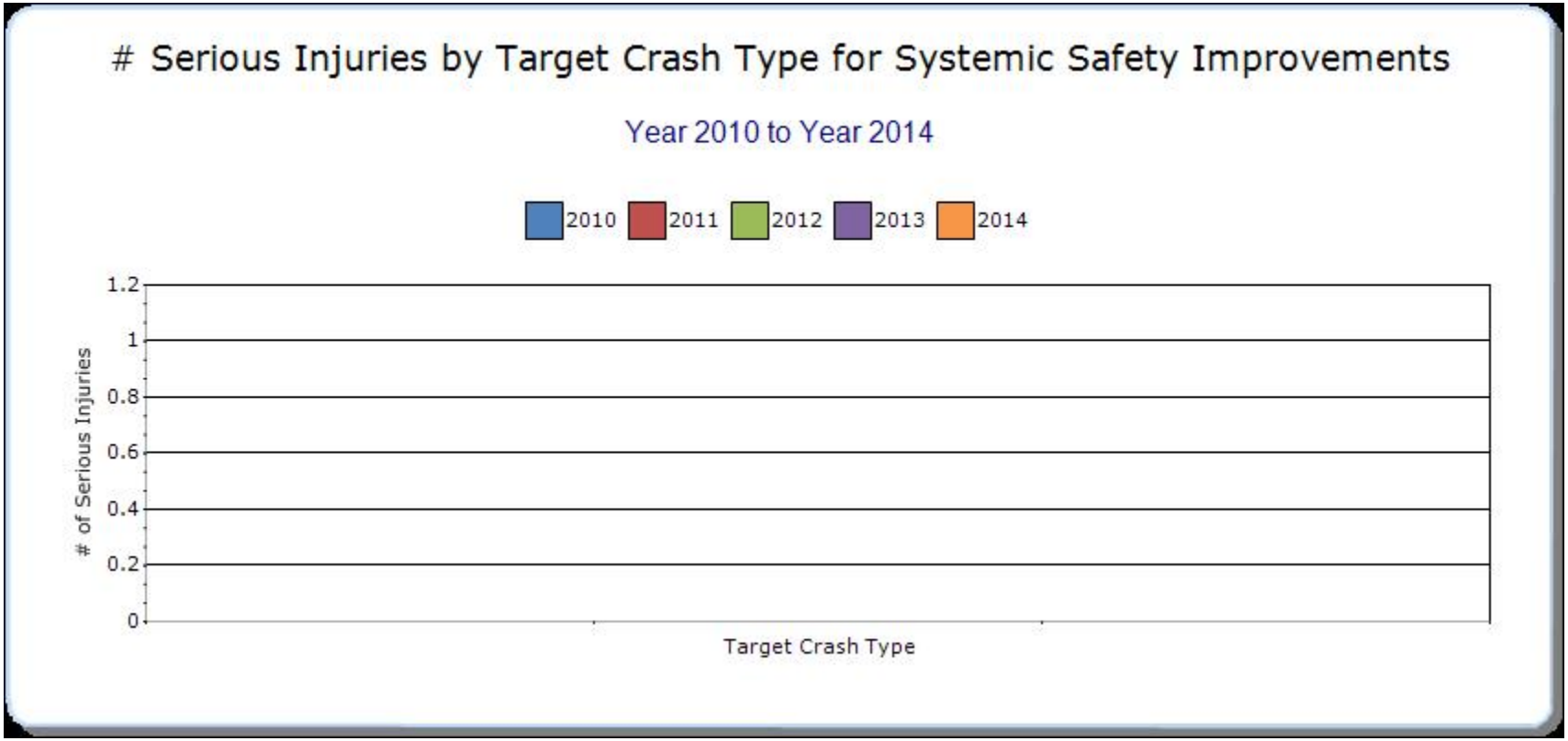
Alaska does not yet have serious injury data for 2013 and 2014. Alaska's serious injury performance measures for 2013 and 2014 will be updated when the data for those years are finalized.

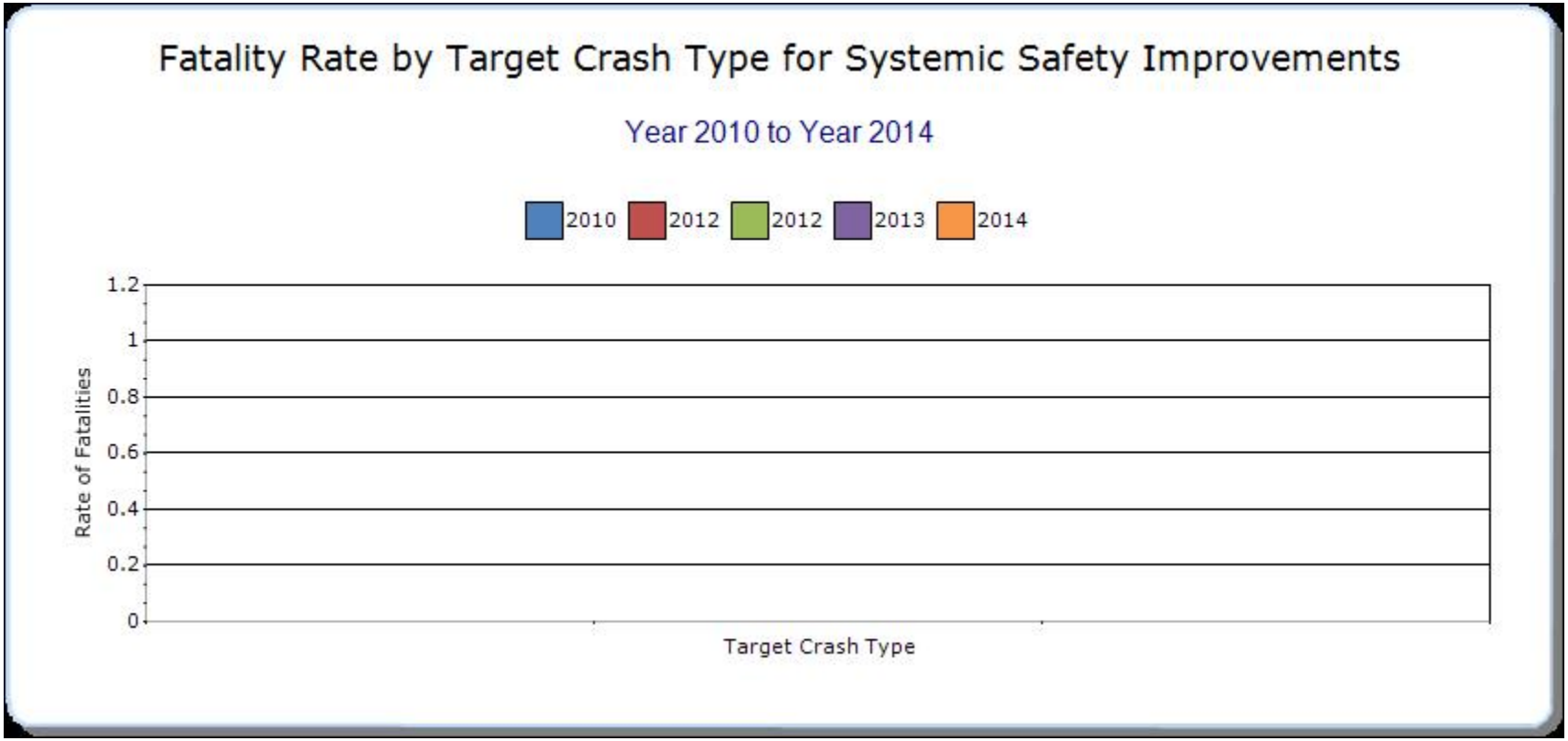
Systemic Treatments

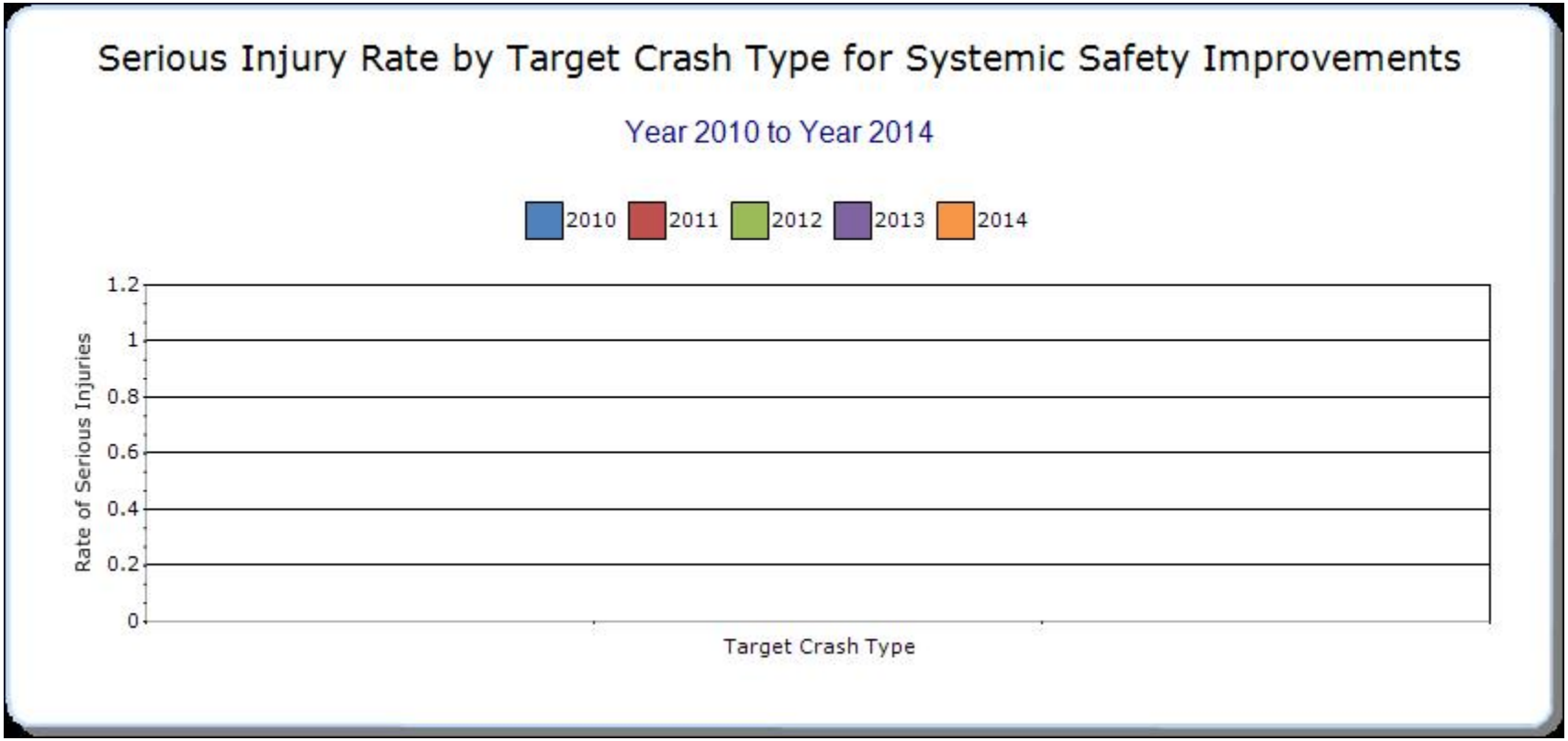
Present the overall effectiveness of systemic treatments.

Systemic improvement	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3


Fatalities by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2011
2012
2013
2014
1.2
1
0.8
0.6
0.4
0.2
0
# of Fatalities
Target Crash Type


Serious Injuries by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2011
2012
2013
2014
1.2
1
0.8
0.6
0.4
0.2
0
# of Serious Injuries
Target Crash Type


Fatality Rate by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2012
2012
2013
2014
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Fatalities
Target Crash Type



Alaska is still building the capacity to analyze the data and measure the performance of systemic improvements. We recognize the benefits, but right now we're approving systemic projects on a case by case basis, not as a fully realized program.

Describe any other aspects of the overall Highway Safety Improvement Program effectiveness on which you would like to elaborate.

No response.

Project Evaluation

Provide project evaluation data for completed projects (optional).

Location	Functional Class	Improvement Category	Improvement Type	Bef-Fatal	Bef-Serious Injury	Bef-All Injuries	Bef-PDO	Bef-Total	Aft-Fatal	Aft-Serious Injury	Aft-All Injuries	Aft-PDO	Aft-Total	Evaluation Results (Benefit/ Cost Ratio)
Minnesota Dr at 33rd Avenue	Urban Principal Arterial - Other	Access management	Median crossover - close crossover	0	1	19	19	0	0	0	1	0	0	8.0 : 1
Glenn Hwy: McCarrey St to Muldoon Rd	Urban Principal Arterial - Other Freeways and Expressways	Roadside	Removal of roadside objects (trees, poles, etc.)	1	0	7	33	0	0	0	2	2	0	1.29 : 1
Mitchell Expressway and Johansen Expresswa	Urban Principal Arterial - Other Freeways and	Intersection traffic control	Intersection flashers - add advance intersection warning sign-	0	3	49	90	0	0	0	4	21	0	6.63 : 1

y	Expressways		mounted											
University Ave at Erikson Ave	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	4	14	0	0	0	0	0	0	2.43 : 1
Fairbanks and North Pole Alaska	Varies	Pedestrians and bicyclists	Pedestrian signal - modify existing	2	9	63	14	0	1	4	10	4	0	8.93 : 1
Northern Region Highways	Varies	Roadway	Rumble strips - edge or shoulder	0	7	10	16	0	2	3	4	6	0	-10.64 : 1
Muldoon Road: 20th Ave to 36th Ave	Urban Principal Arterial - Other	Access management	Raised island - install new	0	6	47	107	0	0	1	13	21	0	0.17 : 1
Old Seward Hwy at Dimond Blvd	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	0	2	61	138	0	0	0	14	42	0	1.81 : 1
Lake Otis Parkway: Northern Lights to Tudor	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add right-turn lane	0	2	30	72	0	0	0	3	17	0	2.08 : 1

Midtown Corridor Study: Benson - 36th, C - Denali	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	1	2	42	109	0	0	2	2	21	0	0.91 : 1

Optional Attachments

Sections	Files Attached
Program Structure: Program Administration	FFY 2016 2014.11.14 HSIP Hdbk COMPLETE.pdf
Program Structure: Program Administration	08-31-15 RKH FHWA HSIP Report Letter .pdf

Glossary

5 year rolling average means the average of five individual, consecutive annual points of data (e.g. annual fatality rate).

Emphasis area means a highway safety priority in a State's SHSP, identified through a data-driven, collaborative process.

Highway safety improvement project means strategies, activities and projects on a public road that are consistent with a State strategic highway safety plan and corrects or improves a hazardous road location or feature or addresses a highway safety problem.

HMVMT means hundred million vehicle miles traveled.

Non-infrastructure projects are projects that do not result in construction. Examples of non-infrastructure projects include road safety audits, transportation safety planning activities, improvements in the collection and analysis of data, education and outreach, and enforcement activities.

Older driver special rule applies if traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in a State increases during the most recent 2-year period for which data are available, as defined in the Older Driver and Pedestrian Special Rule Interim Guidance dated February 13, 2013.

Performance measure means indicators that enable decision-makers and other stakeholders to monitor changes in system condition and performance against established visions, goals, and objectives.

Programmed funds mean those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) to be expended on highway safety improvement projects.

Roadway Functional Classification means the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide.

Strategic Highway Safety Plan (SHSP) means a comprehensive, multi-disciplinary plan, based on safety data developed by a State Department of Transportation in accordance with 23 U.S.C. 148.

Systemic safety improvement means an improvement that is widely implemented based on high risk roadway features that are correlated with specific severe crash types.

Transfer means, in accordance with provisions of 23 U.S.C. 126, a State may transfer from an apportionment under section 104(b) not to exceed 50 percent of the amount apportioned for the fiscal year to any other apportionment of the State under that section.