

Arizona Tribal Transportation and Injury Prevention Summit
Focus Area 2A

ADOT

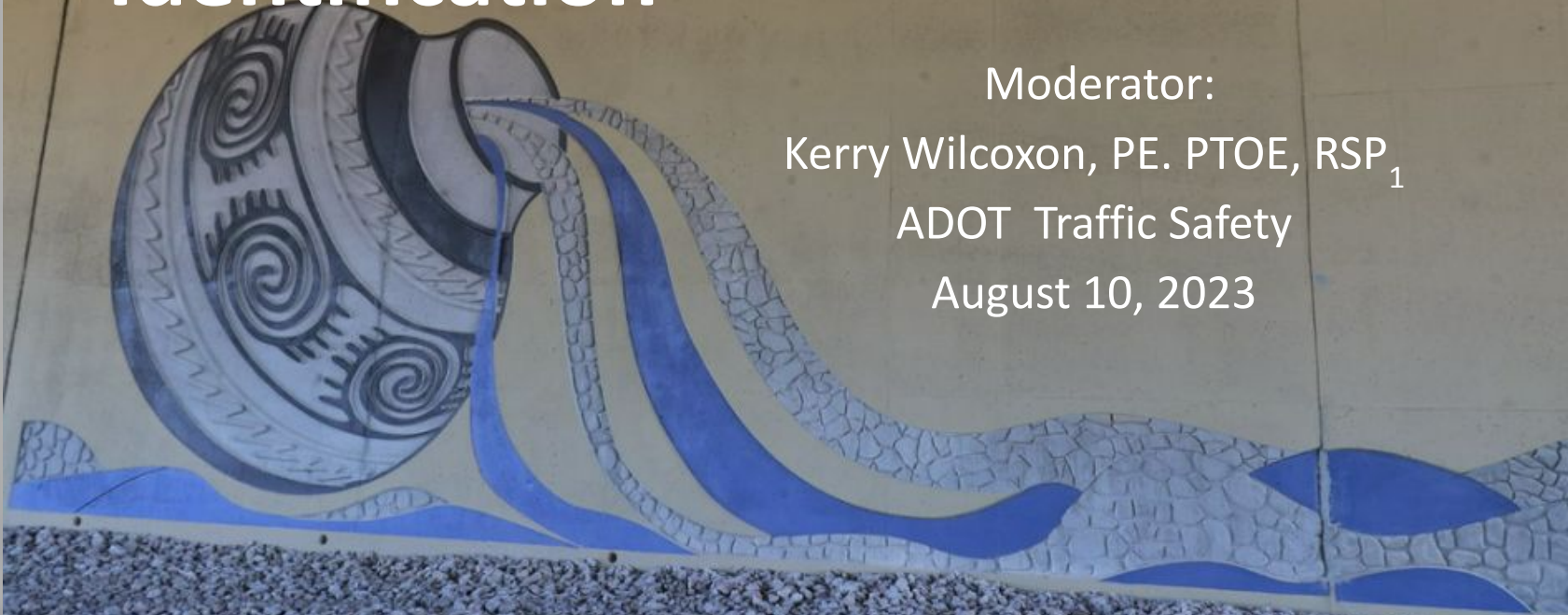
Safety Analysis and Strategy Identification

Moderator:

Kerry Wilcoxon, PE, PTOE, RSP₁

ADOT Traffic Safety

August 10, 2023



2022 Traffic Fatalities

1288 Deaths*

9% Higher than 2021

Highest number since 2006

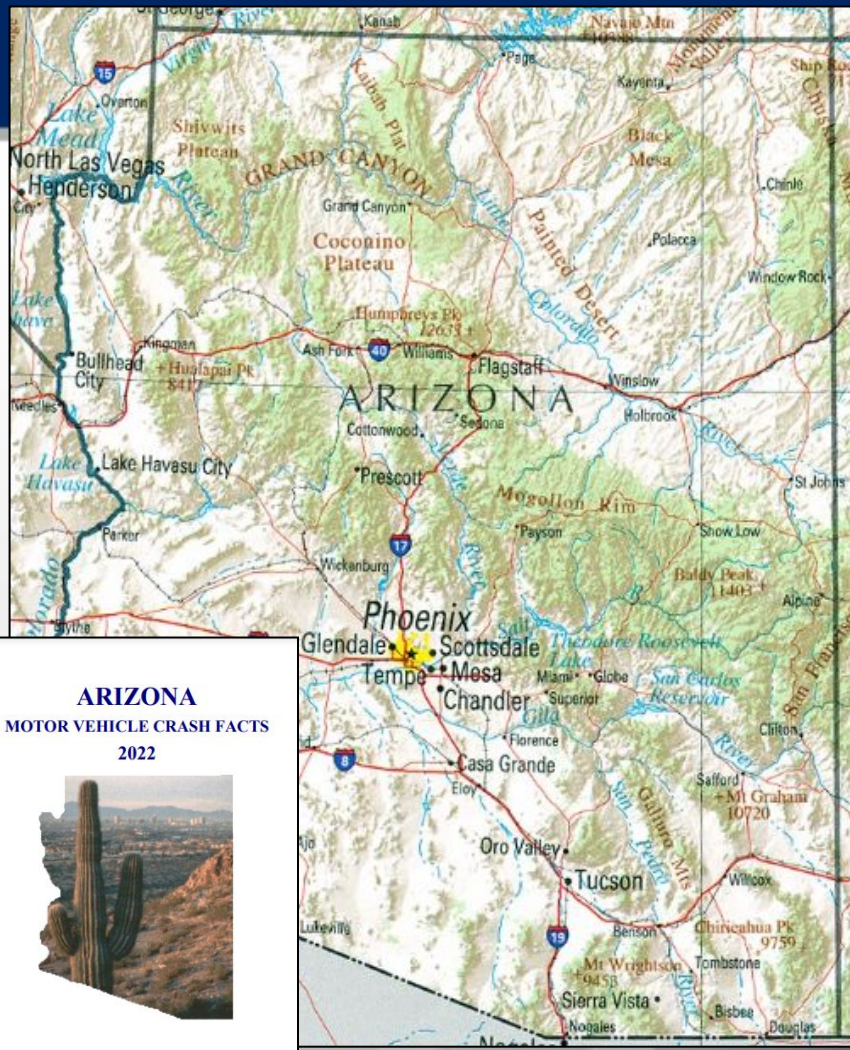
Most Severe Types - Angle, left turn and pedestrian crashes

Most Common Causes –

Speed-Too-Fast and

Failure-to-Yield

*2022 data as of 8/7/23



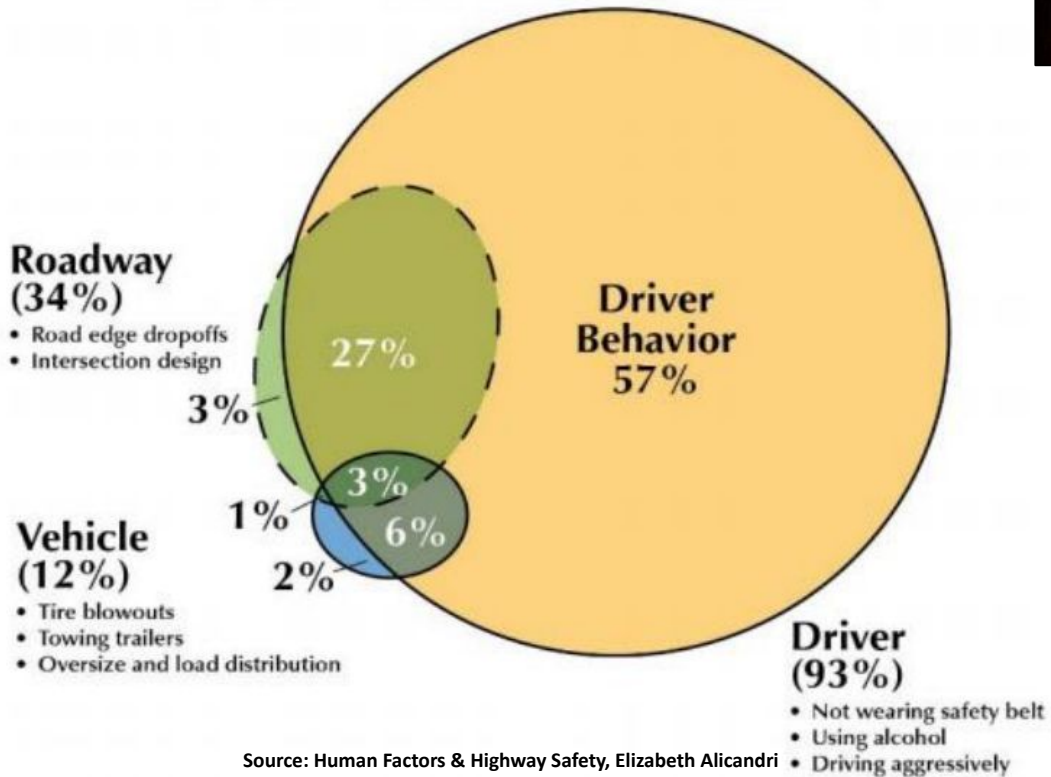
Traffic Fatalities in Arizona

1998-2022*



*2022 data as of 8/7/23

Crash Causation Factors



Source: Human Factors & Highway Safety, Elizabeth Alicandri
 FHWA Office of Safety Programs

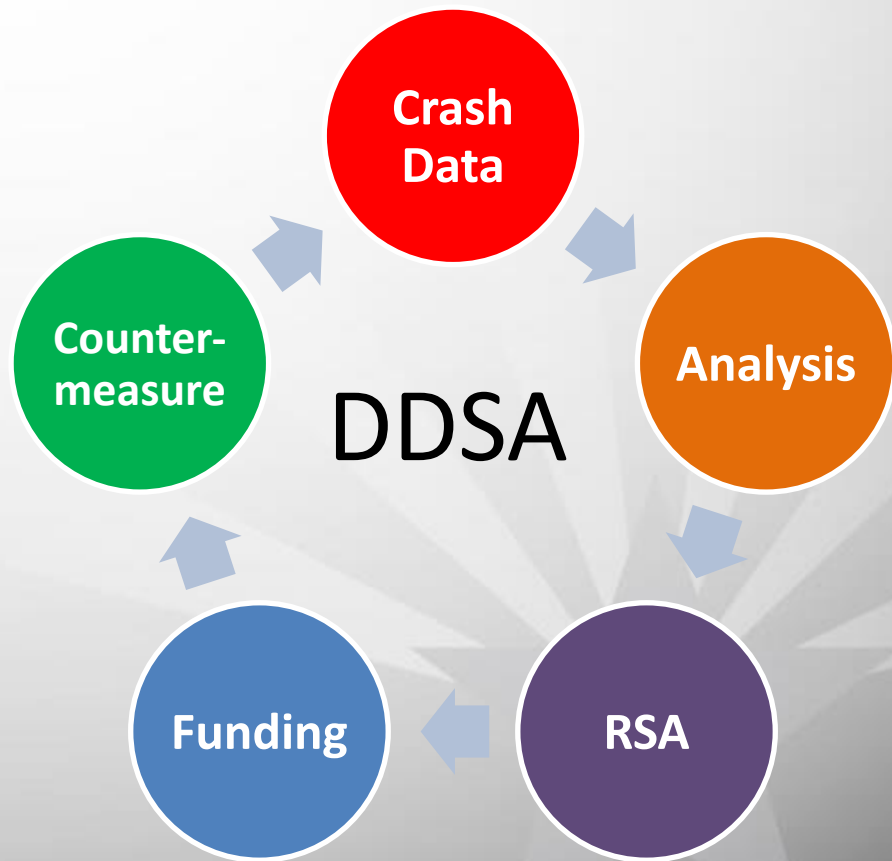


Data Driven Safety Analysis

Scientific method of collecting information, analyzing data and making testable decisions based on the results

Benefits

- Informed Decision-Making
- Targeted Investment
- Improved Safety



Crash Data

ADOT develops Arizona Traffic Crash Form and Instruction Manual

- Reports submitted to ADOT by law enforcement agencies across the state
- Crash data entered into statewide crash database
 - No Personal Identification Information (PII) entered
- Database screened annually to identify high fatal and serious injury hot spots

2023 Arizona

Crash Manual Quick Reference Guide

1) Report ID: Hour represents the time the crash occurred not when reported or when arrived

2) General Information: Estimated Total Damage Compared to \$2,000 Limit/possible injury or greater

3) Location: Use "at" when crash occurred in intersection, "from" when crash occurred outside intersection; do not use addresses unless crash occurred on private property
do not use light poles or other landmarks that are not identifiable on map

4a) In This is Secondary Collision: if occurred as a direct result of or distraction created by prior incident

4b) Roadway Clearance Time: time when collision debris/vehs moved from road

4c) Incident Clearance Time: time when all vehs/debris moved from road-crash no longer distraction

5) Traffic Unit 5a: Autonomous Veh box checked if vehicle had autonomous capabilities; then check whether veh was being manually controlled at time of crash or whether it was autonomous; if unknown then check Unk box

Partial automation: examples: electronic stability or automatic braking; cruise control along with lane centering

Full automation: driver not expected to provide any vehicle control

5f) Safety Devices: For motorcycle driver/passenger, must use either 1-None Used or 5-Helmet Used

5h) Injury Severity: Possible injury: reported or claimed but nothing observed
Suspected Minor injury: observed at the scene; bump on head, abrasion, bruise, minor cut
Suspected Serious injury: severe cut where tissue, muscle, organs exposed, severe lacerations, broken bones, crush injuries, severe skull or chest injuries, significant burns, unconscious when taken from scene, paralysis

14) Relation to Junction: 2-Intersection related: usually within 150' of intersection
7-Diveway or alley access: Be sure to check this box if crash is caused by vehicle entering/leaving driveway/alley

15) Trafficway Description: 4-Two-Way, Divided, Unprotected Median
Depressed, raised or flush with the pavement, grass, landscaped or pavement exceeding 2' in width
5-Two-Way, Divided Positive Median Barrier
Concrete wall, guardrail-not trees, curbing, rumble strips or drain depressions

17) Manner of Crash Impact: Angle vs. Left Turn
Angle: typically T-bone crash (front impacts side of veh
Left Turn: 2 vehicles traveling opposite directions & one vehicle makes left turn
Include arrows on diagram to show direction of travel

Analysis

(Arizona Crash Information System)

Statewide database of all traffic crash reports geo-coded to roadway system

- Allows Statewide Network Screening
- Screening by agency, region, segment or intersection
- Production of maps, charts and dashboards

Database contains NO personal identifying information (PII)

Road Safety Audits (RSA)

- RSAs performed on crash hotspots throughout the system
- RSA teams:
 - Investigate problem
 - Develop solutions
 - Recommend countermeasures
 - Develop preliminary cost estimates for countermeasures



Funding

Federal, state and local safety funding opportunities

- Usually require Benefit-Cost analysis
- Some programs require local match
- Countermeasures must address fatal and serious injury crashes
- Tribal projects usually very competitive

FEDERAL HIGHWAY ADMINISTRATION



**ARIZONA HIGHWAY SAFETY
IMPROVEMENT PROGRAM MANUAL**

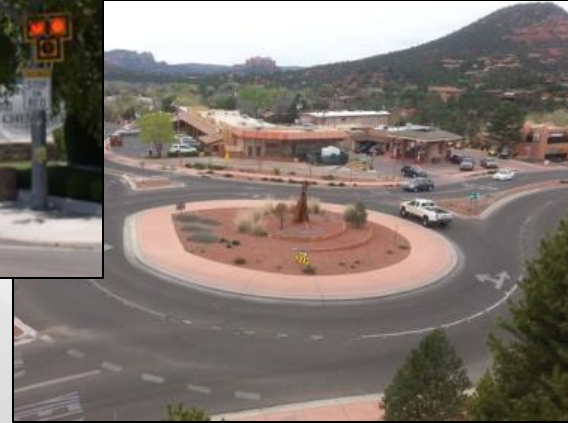
Arizona Department of Transportation
Transportation Systems Management & Operations Group

Traffic Safety Section
May 2015

(Revised February 2017)

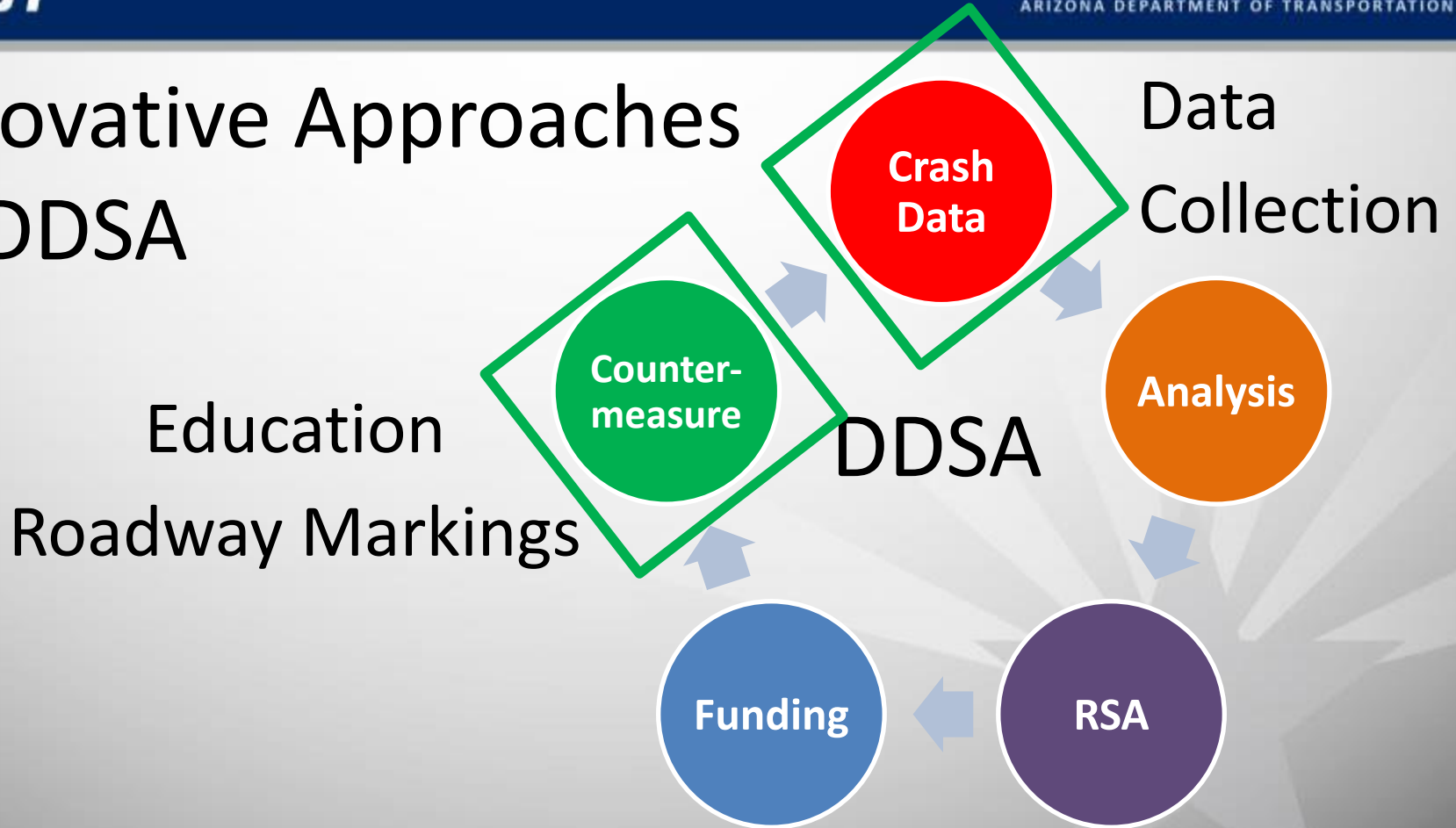


Countermeasures



Is There More We Should Be Doing?

Innovative Approaches to DDSA



Today's Presentations

Alcohol Awareness Class for Teens - Training Resource for Tribes

- **Sgt. Dan Webb**, Arizona Department of Liquor Licensing and Control

Traffic Safety Ingenuity

- **Steve Latowski**, Director, Mohave County Public Works

NHTSA Tribal Crash Reporting Toolkit and Analysis and Funding

- **Adam Larsen**, Safety Program Manager, FHWA Office of Tribal Transportation Specialist

Thank You!

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