



Washington FARS



April 2014 Issue 5

Every Driver is Responsible for Keeping Motorcyclists Safe

By Mark Medalen, WTSC Program Manager

In Washington, motorcycle deaths are not steadily declining like overall traffic deaths. Motorcycles make up just 4% of the registered vehicles on our roads, but account for almost 15% of the traffic fatalities (2009—2011 average).

Motorcycle riding are just around the corner. May is national Motorcycle Safety Awareness Month, which serves as a good reminder for all car, truck and bus drivers to watch for, and share the road with, motorcycle riders.

On a per vehicle mile basis, motorcyclists are *more than 30 times likely to die* in a crash than occupants of cars, and *five times more likely to be injured*. To raise awareness of these tragic but preventable crashes, 16 large reminder road signs are scheduled to be installed by May in locations in Washington where fatal motorcycle crashes are highest. These signs should remain in place 10-15 years.

See Page 4, Motorcycle Highlights from Washington's Strategic Highway Safety Plan: Target Zero (2009-11 data)

Year	Total Traffic Deaths	Motorcycle Deaths	% of Total
2009	492	69	14%
2010	460	70	15%
2011	454	72	16%
2012	438	83	19%
2013 (prelim)	440	72	16%

Spring has come to the Pacific Northwest, which means improved weather and motorcy-

Fatal Crash Reporting

2014 Qtr I Hall of Fame

The following agencies submitted fatal crash reports within 4 days per RCW 46.52.030.

Top Reporting PDs:

**Auburn
Edmonds
Everett
Lacey
Lynnwood
Puyallup
Richland**

Top Reporting SO's:

**Benton
Clallam
Kitsap
Lewis
Mason
Pierce
Snohomish
Thurston**

Top Reporting Tribe:

Yakama Nation

&

WSP

**THANK
YOU!**

2014 Target Zero Awards



Honored for their contributions "above and beyond the call" toward our shared goal of zero traffic deaths in Washington, these award winners represent all facets of our state's traffic safety community.

IMPAIRED DRIVING

Deputy Todd Miller, Spokane County Sheriff's Office

Dep. Miller demonstrates commitment to reducing the rate, currently of 50%+, of impaired driving fatalities in Spokane County. In the last two years, he has arrested an astounding total of 430 impaired drivers.

Jessica Brooks

Fifteen years ago, when Jessica was only 7 years old, her life was changed forever when her mother was killed by an impaired driver just minutes away from her home. Jessica works with Kitsap County's Target Zero Manager, sharing her personal story.

Nancy Fiander, White Swan Arts & Recreation Coalition

White Swan is located in a rural area of Yakima County. This area has had a disproportionately high traffic fatality rate compared to the state. Nancy identified DUI and underage drinking as root causes and is working to make a change.



Take a moment to Remember Dr. Couper if your agency received extra DUI enforcement funds!

*Fiona Couper, Ph.D., Director
Washington State Patrol Toxicology Lab*

Dr. Couper has received the 2014 Target Zero Award in the category "Traffic Data Systems" for her contribution to reducing impaired driving in our state.

Many traffic safety professionals work hard every day to reduce deaths and serious injuries on Washington's roadways.

Dr. Couper, Director of the State Toxicology Laboratory, is one of the behind-the-scenes experts whose work impacts impaired driving in Washington in profound ways.

Federal DUI enforcement (410) funds, amounting to over \$2M per year for Washington, are awarded to states that meet specific criteria. One of those criteria is that the state must collect 1% more fatal crash driver blood alcohol content (BAC) results each year than

the previous year. Whether the driver is surviving or deceased, whether the BAC is negative for alcohol or off the charts, each laboratory result counts toward reaching that goal.

State law requires that the lab routinely conduct toxicology testing of blood, urine, and other bodily fluid samples taken from fatal crash victims, as required by RCW 46.52.065. However, results from deceased drivers are only half the story.

Dr. Couper personally reports surviving driver toxicology results to Washington's Fatality Analysis Reporting System (FARS), enabling the Impaired Driving Program to meet eligibility criteria for those much-needed 410 funds. Her extra efforts helps the traffic safety community understand the scope of Washington's impaired drivers and plan effective countermeasures.

The next time your agency conducts special DUI enforcement patrols, remember Dr. Couper's work helped our state obtain the DUI overtime funding. She's hard at work in the lab, collecting and reporting the results of your crash investigation and DUI enforcement.

Fatal Crash Reporting

2014 Qtr I

Hall of Fame

The following agencies submitted fatal crash reports more than 4 days post-crash but within 10 days.

Top Reporting PDs:

- Bellingham**
- Kennewick**
- Kent**
- Seattle**
- Spokane**

Top Reporting SO's:

- Chelan**
- King**
- Spokane**

The following agencies submitted fatal crash reports more than 11 days post-crash but within fewer than 45 days.

Top Reporting PDs:

- Bellevue**
- Federal Way**
- Longview**
- Olympia**
- Vancouver**

Top Reporting SO's:

- Clark**
- Cowlitz**
- Okanogan**

THANK YOU!

Crash Investigators!

THANK YOU for:

- prompt and accurate reporting
- responding to telephone and email inquiries
- noting supplemental information in the crash narrative

FEEDBACK: This newsletter is intended to open discussion between investigators and crash data crunchers. Please let us know what topics are of interest to you. Guest contributors are welcome! Contact Mimi Nickerson (mnickerson@wtsc.wa.gov) or (360) 725-9892.

Award Winners, continued from Page 3

LIFETIME OF ACHIEVEMENT



MIKE BUCKINGHAM

Mike Buckingham passed away on January 2nd of this year after a long battle with cancer. Mike was a trooper in the Washington State Patrol who was involved in a nearly fatal car crash when attempting to stop a drunk driver in April 1981. Mike was severely burned in the crash and unable to return to his trooper duties. After his retirement from the Washington State Patrol, he dedicated 30 years to traffic safety education and DUI prevention.

Mike's life was an inspiration to anyone that met him. The impact of his story and his influence on those he came into contact with truly cannot be measured. He leaves an incredible legacy and powerful message that is being carried on after his death.

INTERSECTION SAFETY

Robert Klug & Michael Derleth, Clark County Public Works

Clark County is a large urban area with 3- and 5-lane arterials carrying more than 10,000 vehicles per day. Clark County Public Works set about locating funding and modernized their entire traffic signal system.

RUN-OFF-THE-ROAD CRASHES

Thurston County Public Works

Thurston County experienced 177 severe crashes on its unincorporated roads from 2005—2010. An in-depth analysis revealed that almost 50% of the serious and fatal crashes were happening on horizontal curves. The challenge was to effectively screen the roadway network and identify potential problem areas while prioritizing investments and developing low cost improvement strategies.

DISTRACTED DRIVING

Charlotte Helland, Hoquiam High School Cheer Team Coach

Young drivers are a Level One priority in the Target Zero Strategic Plan because of the high number of young people involved in crashes. Charlotte, recognizing that distracted driving was a serious problem for students, applied for a \$500 State Farm grant and rallied the cheer team to raise awareness and change the driving culture at Hoquiam High School.

KEEP YOUNG WASHINGTON DRIVERS SAFE

Sgt. Josh Sainsbury & Trooper Ryan Raymond

Between July 2010 and February 2010 Grant County lost six teenagers to impaired driving and speeding related crashes. This devastating loss led Sgt. Sainsbury and Trooper Raymond to create a presentation that they took to every high school in the county.

Puyallup Police Department, Party Intervention Patrols

Party Intervention Patrols were initially conceived and piloted in Pierce County to reduce the number of youth killed or seriously injured in alcohol-related crashes. From the beginning of this project the Puyallup Police Department has taken the lead role.

TRAFFIC DATA SYSTEMS

Fiona Couper, Ph.D., Washington State Patrol Toxicology Laboratory

(See article, Page 2.)

UNLICENSED DRIVERS

Facial Recognition Program, Department of Licensing

The Department of Licensing instituted a Facial Recognition System in December 2007 to coincide with the rollout of the new Enhanced Driver License. Currently the Department

issues about 6,000 driver licenses to Washington citizens each day.

SPEEDING INVOLVED CRASHES

Snohomish County Speed Project

The Snohomish County Speed Project was a year-long project that started in response to a significant increase in speed-related injury and fatal collisions in Snohomish County.

UNRESTRAINED OCCUPANTS

Ruby Nelson

For the last 13 years, residents in the Forks area have known where to go for any type of car seat help. Ruby, who works for Clallam County Health Department, works with young parents, educating them on child passenger safety.

CLICK IT OR TICKET CHILD PASSENGER

SAFETY PROJECT

Nancy McClenny-Walters, Cesi Velez, Eveline Roy, Erika Simmons, Karen Wigen,

Child passenger safety is an extremely important component of statewide traffic safety programs. There are many events and programs across the state where parents can seek help for proper car seat installation, but this project was different. It was designed to reach parents that were not safety conscious and as a result put their children's lives at risk.

UNRESTRAINED OCCUPANTS

Deputy Tyson Voss, Grant County Sheriff's Office

It's not very often that someone in law enforcement gets to see first hand how educating the public can help reduce injury and save lives. But that's exactly what happened last year when Deputy Voss took a little extra time to make sure two children were properly restrained.

HEROIC EFFORTS SAVED A LIFE

Trooper Mark Svinth, Washington State Patrol

On November 19, 2012, during hazardous weather conditions, Trooper Svinth was dispatched to multiple trees blocking State Route 101. No amount of training could have prepared him for what happened next.

EXEMPLARY TARGET ZERO LEADERSHIP

Sergeant Mike Merrill, Kitsap County Sheriff's Office

For over 20 years, Sgt. Merrill has been a member of the Kitsap County Traffic Safety Task Force, committed to reducing traffic fatalities in his home community.

Sergeant Bob Thompson, Puyallup Police Department

Sgt. Thompson has been an active member of the Pierce County-Tacoma DUI Traffic Safety Task Force for the last 17 years. His consistent "above and beyond" efforts have helped make Pierce County a leader in fighting DUI, and his leadership has been crucial to the success of the Party Intervention Patrol project.

LIFETIME ACHIEVEMENT See Page 2



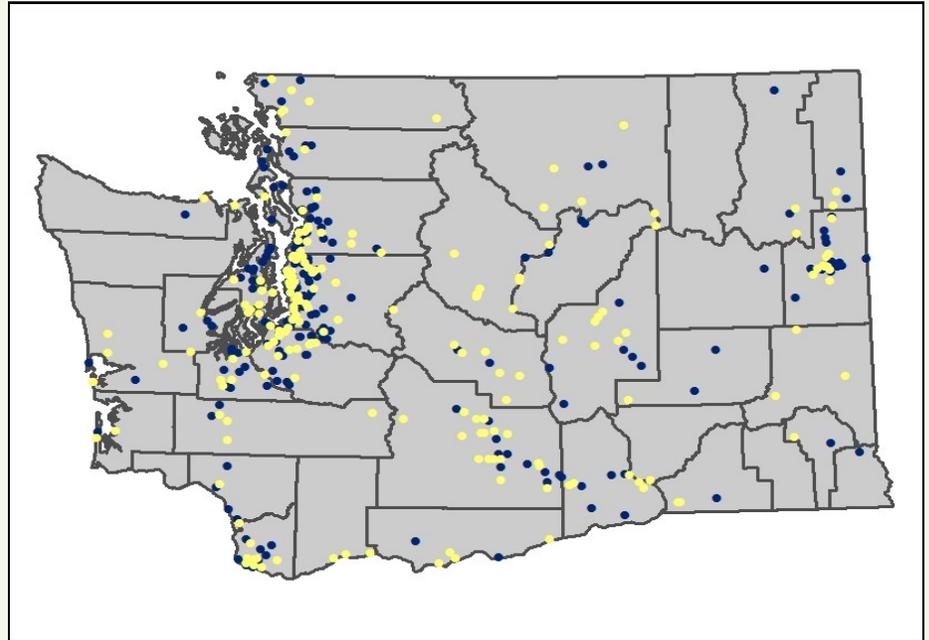
Gary Montgomery,
RADD Map Guy

Beyond the Pin Map

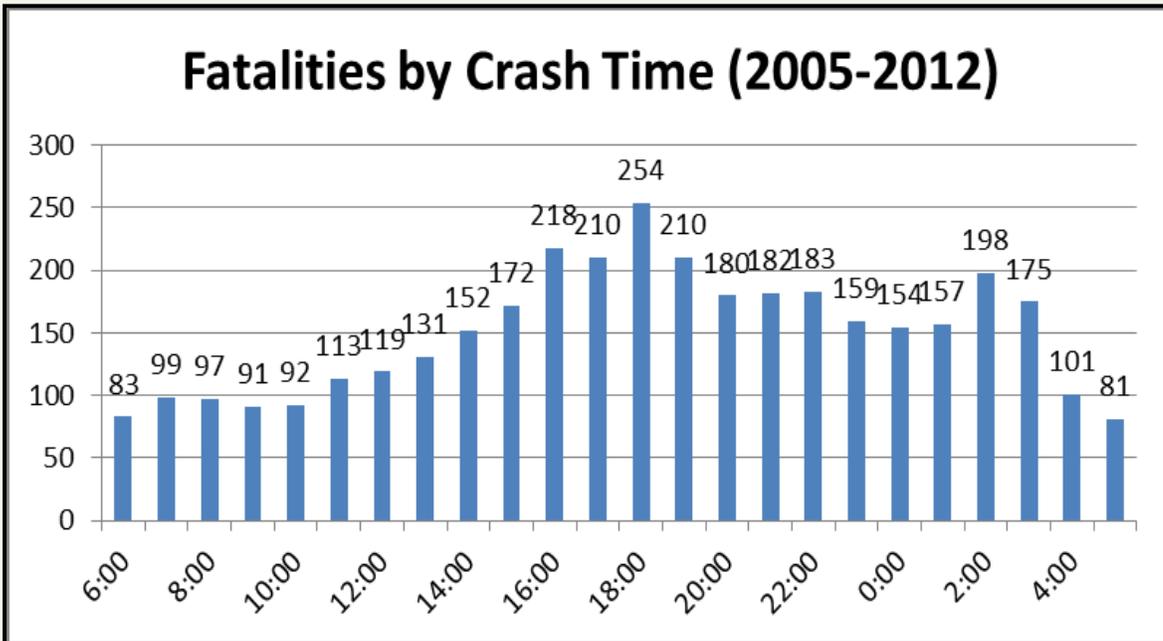
The challenge of good cartography is to present complicated information in a way that's easy to comprehend. Usually this means sticking numbers to a bunch of points on a map, and then doing something interesting with those numbers so that an observer can glance at the result and say not just, "Oh, there are a lot of crashes on that stretch of road," but acquire an insight on *why* crashes are occurring at a given spot.

So what number? That depends. In GIS, it's simple to represent longitude/latitude values on the map with a point. While you're scattering points about, it's trivial to add any of the data from the crash records to those points. Maybe what you're interested in is crash time—did the crash occur during the day or at night? It's pretty easy to break that down in a map.

Figure 1. Fatal crashes in 2012 (N=397). Blue crashes (N=204) occurred between 1800 and 0600 – yellow crashes (N=193) occurred between 0600 and 1800. Crashes without lat/long coordinates not depicted.

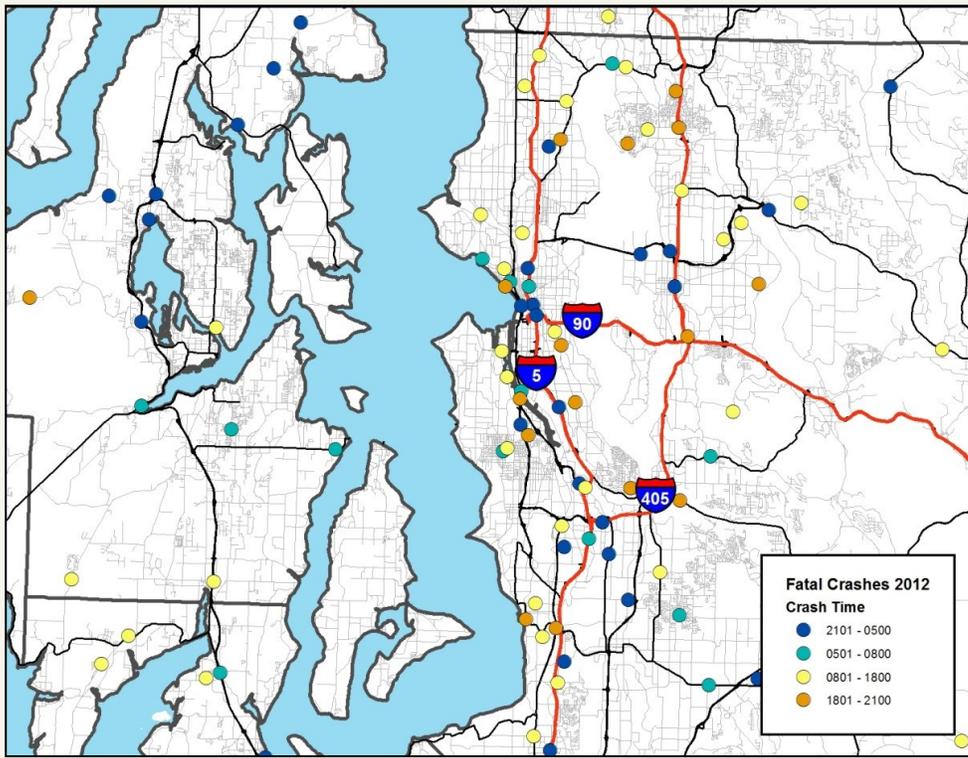


But this quickie map doesn't tell you all that much, just that the crashes are pretty evenly split between the *totally arbitrary* hours of 6am and 6pm. Here, a bar graph is way more useful:



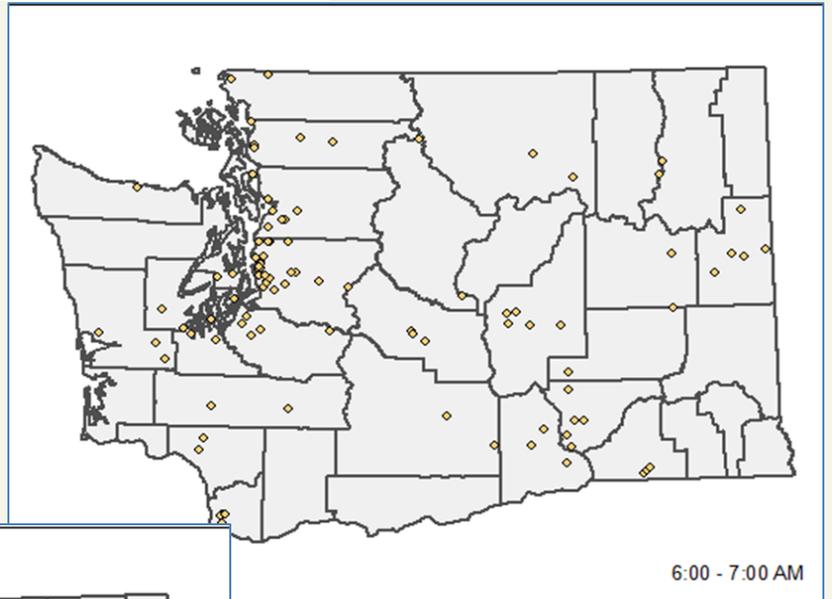
GARY
M

That 1800-1900 peak and the 0200-0300 peak are plain to see, and arguably more useful from an enforcement standpoint. It may not tell you *where* but it does tell you *when*. How can we combine these two? For starters we can divide the categories of crash time a little more finely than two twelve-hour blocks.



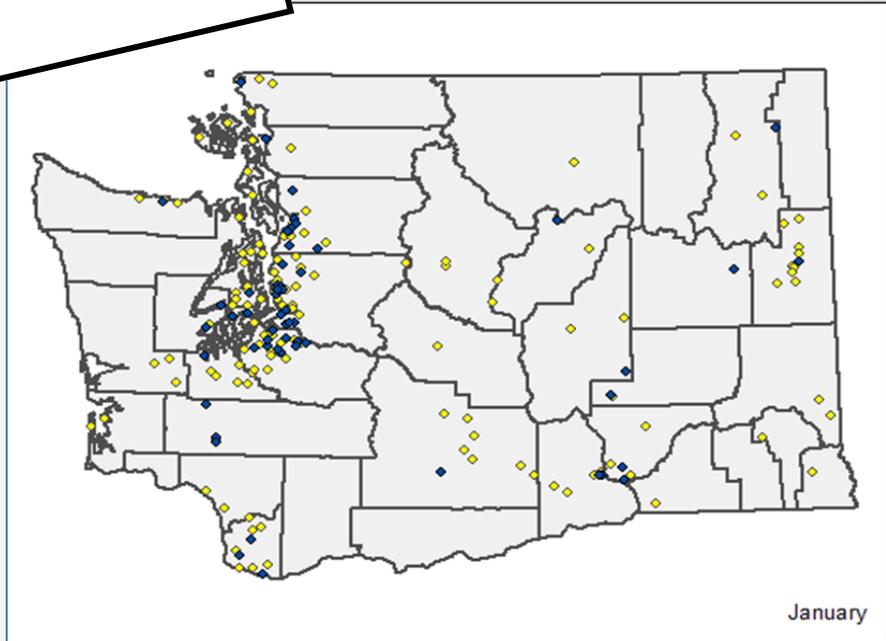
Dividing crashes up into 4 categories reveals a few nuances. Visually, morning and daytime crashes seem to be spread farther out, while evening and night crashes tend to be along major routes (we could do some statistics to verify this, but we want to inform you, not bore you to death). But this is still a static map and about as intriguing as powdered milk. Wouldn't it be nice to be able to see where crash occurrence changes spatially *and* over time? Through the miracle of computer nerdery, we can do that.

Figure 2. First frame of an animated GIF that shows the changes in crash time and location. Data from FARS, 2005 - 2012.



6:00 - 7:00 AM

**S RADD
MAPS**



January

Figure 3. First frame of an animated GIF that shows changes in crash time (day or night per month based on mean sunset/sunrise time). Data from FARS, 2005 - 2012.



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*Fatality Analysis Reporting System



RADD welcomes its newest member,

Joyce Fan, Ph.D.

Data Integration Specialist/
Epidemiologist

Joyce Fan is an Epidemiologist. She received her Ph.D. in Epidemiology from the Medical University of South Carolina, her MS degree in Food Science from Washington State University, and her MS degree in Plant Pathology from Beijing Forestry University. Prior to joining WTSC, Joyce worked at the Safety and Health Assessment and Research for Prevention Program in Washington State Department of Labor and Industries. She has research experience in evaluating the impact of occupational health and safety regulations on worker injury rates and costs, identifying and preventing of work-related musculoskeletal disorders, and describing workers' health and work injury burdens. She also worked on the fetal origins of adult chronic disease. With her extensive knowledge and work experience in diverse data sources and quantitative research, she is currently a data integration specialist and will conduct advanced epidemiologic studies of morbidity and mortality of traffic crashes utilizing linked data.

Motorcycle Highlights from Washington's Strategic Highway Safety Plan: Target Zero

Training and Endorsement:

Around 75% of fatalities involve: 1) riders with less than two years' experience, 2) unendorsed riders or 3) riders with unknown experience levels. [Approved motorcycle rider training schools](#) can be found at many locations around the state.

[A license endorsement is required in Washington](#) to ride a motorcycle.

Data shows that endorsed riders have fewer infractions and are less likely to be involved in fatal collisions when compared to unendorsed riders.

2007 legislation was passed allowing law enforcement to impound unendorsed riders' bikes when they've been pulled over for a routine traffic stop. The result was a dramatic increase in new riders taking training courses on their path to endorsement.

Motorcycle Helmets: Universal motorcycle helmet laws are effective at increasing helmet use, and are recommended by NHTSA as a "countermeasure that works". [Review Washington's helmet law.](#)

Impaired Riding: Alcohol impairment was involved in 25% of fatalities. And motorcyclists are the only person group where drug impairment, involved in 29% of fatalities, exceeds alcohol impairment. This means one in four motorcyclists killed on our roads were under the influence of drugs and/or alcohol.



Speeding: Speeding was involved in 57% of fatalities and 30% of serious injuries among motorcyclists.

Age: Young and middle aged riders are over-represented in fatal crashes. Overwhelmingly younger riders choose a "sport bike" which is generally a low to the ground, high performance and very fast. The middle aged riders frequently choose "cruisers" which are heavy, large, highway type motorcycles designed for comfort and longer rides.

Gender: Male riders were involved in 92% of fatalities and 83% of serious injury collisions.

Violations: The average number of violations for all endorsed motorcyclists is a 1.1. Endorsed riders in fatal collisions have had an average of 4.1 violations.