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Riding in the Rain

“Even rode my motorcycle in the rain,
And you told me not to drive,
But, I made it home alive
So you said that only proves that I’m insane”

Excerpt from “You may be right” by Billy Joel

Insane may be the way most motorcycle riders would describe motorcyclists who ride in the rain on purpose. Unfortunately, whether we like it or not, as professional law enforcement motor officers, it is inevitable that we will find ourselves riding our duty motorcycles in the rain. Unlike our civilian counterparts, most of us cannot simply decide not to ride if it is raining or if the weather forecasters are reporting that rain is likely. Many aspects of our job, such as specialized enforcement or escort duty will require us to ride rain or shine.

As professional riders, we must prepare ourselves for all potential risks that could affect our ability to perform our duty. The first step in this preparation is to learn as much as we can about this and other areas affecting our job.

Equipment

It is imperative that you have good rain gear (and have it with you on your motor). There are many quality products offered by a variety of manufacturers to suit your needs. Rain and inclement weather produce low light conditions and other vehicles produce road spray all combining to limit your conspicuity (visibility) to other road users. That is why many departments have gone to a highly reflective, bright colored rain suits to combat this issue.

Waterproof boots and gloves are also a must. Throttle, clutch and brake controls on a motorcycle all require feeling and dexterity of your hands and feet. Once your hands and feet get wet, it will only be a short time before they get cold and you reduce or lose your ability to manipulate your motorcycle controls. Also, being wet and cold will distract you from your attention to riding, something you don't want to happen while you are riding in the rain. You want to maintain your mental edge.

You should have clear lenses for your glasses or a clear face shield (if your department is using that style of helmet) to permit clear vision. Be aware of fogging of your glasses or shield in rain conditions. Cracking your shield open a bit or moving your glasses further away from your eyes will permit air to flow on the inner side of the lenses and keep them clear.

At first sign of rain pull off the road and put on your rain gear. If the type of duty you are performing will not permit a pull off, then you are going to have to make a judgment call about putting on your rain gear ahead of time. The first 10 to 15 minutes of a rain storm are the most dangerous. The rain water mixes with the oil, dirt and road debris that has been sitting on the asphalt to create a greasy, slippery coating on the road. This usually washes away within this time limit. So if you can, pull off under a bridge or other dry spot and use this initial raining time to put on your rain gear and adjust your riding attitude and style to suit these new conditions. Again, if your duty does not permit a pull off then you should ride with heightened caution during this time.

Your motor is part of your equipment and you should always be checking your lights and tires prior to riding. The condition and traction ability of your tire's contact patch can make the difference between the weather being a minor inconvenience to taking a ride in the back of an ambulance. Check your tire pressure and your tread depth. Your tire pressure should be at the

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manufacturer's recommended rating and your tires should have enough tread to channel away water from under your motor's tires.

Traction

Research tells us that a motorcycle will have 75 to 80% of maximum traction in wet weather. If we have been applying effective riding strategies in our motorcycle riding style, nothing else should change when it rains. Good proactive riding habits of eye lead, scanning, anticipating and predicting, combined with effective application of your throttle, clutch and braking systems topped off with proper reactive skills of braking, turning and collision avoidance all still apply to riding in the rain. What wet riding does require is good smooth application of your systems. Wet riding seems to be a lot less forgiving than dry weather riding when it comes to errors of under or over application of inputs. Do your accelerating and braking in a straight line, set your corner speed in advance, smooth application of your clutch, throttle and brakes will keep the wheels of your motor from breaking free from the traction of your tire's contact patch. Keep your eyes up and identify hazards well ahead of time so you can make smooth adjustments. Remember to look where you want to go.

Hazards

Hydroplaning occurs when a tire cannot channel all the water out from under the tire and the tire rides up on top of a thin layer of water and removes all of your traction. You might get away with this on a four wheel vehicle but a crash is almost inevitable on a motorcycle. Many factors affect when a motorcycle will hydroplane; water depth, speed, weight, width of tire, tire tread depth and tread pattern. All tires will hydroplane when presented with the right combination of these factors. The experts say keeping your speed below 55mph (90km/h) will reduce most of this risk, but there are no guarantees. If you do hydroplane, do not steer, lean or apply any braking but maintain your direction and PRAY. Good eye lead and scanning the road surface for hazards including puddles can help avoid potential hydroplaning situations. Riding in the track of the vehicles ahead may also help avoid these situations as the tires of that vehicle will disperse the water on the road so your tire won't have to work as hard. Also, when the vehicle ahead hits a puddle the spray from the puddle will indicate a hazardous situation for you to avoid.

Along with the risk of hydroplaning in pooling or ponding water, you must also be aware of varying road surfaces reacting differently to rain. Steel plates, streetcar tracks, grated metal bridges, earth, painted road markings, wood bridges and railway tracks all change their coefficient of friction (grip) to differing degrees when wet. Avoid riding on multiple surfaces if possible.

Rain + Night (a double whammy)

Every drop of rain lying on the road, in puddles, on your windshield, on your glasses or visor, refracts light given off by headlights, tail lights and street lights into your straining eyes. Add flashing emergency lights to this equation and you may overload your optical inputs. Remember to focus on the fog line (the outside white line on your lane of the roadway) to avoid being dazzled by oncoming lights. Try to use the weaker glare off the tail lights of the vehicle in front of you to identify puddles or hazards in your riding path. Remember you must keep your eyes moving, don't fixate on one spot.

Train/practice in the wet/rain

Training should be as real as possible. Either train on a rainy day or simulate wet road conditions by watering down your training pad. Practice all your life saving skills: Braking/collision avoidance/cornering and turning in wet conditions. You will have much more confidence in both yourself and your bike the next time you get caught in the rain.

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Ultimately, the best application of a life saving motorcycle riding skill, is to employ a “system” for motorcycle riding that helps you identify and avoid hazards so you don’t have to employ the life saving skill in the first place.

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