Driver Education Chapter 12\

Driving in Adverse Conditions

12.1 Reduced Visibility

Drivers need more time to use the IPDE and Zone Control in this situation.

Always keep your windows clean to give you as much vision as possible.

Sun Glare can be a problem.

Low Levels of Light

Headlights—High beam to see further down the road. Vehicles should be more than a half mile ahead of you.

Switch to low beam when you see headlights coming at you or see taillights in front or a car passes you.

If you meet a car with headlights on high beam

If the vehicle you are meeting is far away you can flash the headlights to bright.

If they are still on bright—slow down move to lane position 3, and glance at the right edge of the road.

If still on bright look beyond, don’t look into headlights.

Overdriving headlights—Driving at a speed that makes your stopping distance longer than your lighted distance. Do not overdrive your headlights.

4- Second stopping distance rule

Pick a fixed checkpoint ahead the instant the check point appears lit by your headlights.

Count off 4 seconds

Check your vehicle’s position. When you have just reached your fixed checkpoint, you can assume your stopping distance on dry pavement is within the range of your headlights.

Visibility and Weather

Fog—When headlights shine into the fog the light is reflected back and it makes it hard to see. Be prepared to get off the road and stop. Use your hazard lights to warn others you are stopped— Better to get in a rest area or parking lot.

Rain—Heavy rain reduces visibility

Snow—Wind driven snow , slush, ice,

Use low beam headlights is the best, Reduce speed, Delay travel if necessary.

12.2 Reduced Traction

Rain, snow, ice, sand, and other material can limit your traction. Reduced traction creates higher risk driving.

Wet Roadways—Rain starts to fall it mixes with dust and oil on the road. This makes it slippery until water washed the mixture away. Reduce speed.

Hydroplaning—Tire loses road contact by rising on top of water and no longer has contact with the road. Slush snow and water creates this.

Deep Water—Don’t drive through water that you don’t know the depth,

Estimate water depth by other markers/cars

If the water is over the rim, drive slow and avoid the shoulder.

When driving low speed use the brake a little to keep friction in brakes.

Check your brakes when out of water to make sure they operate.

Snow—Different types of snow create different driving situations

At freezing

Fresh cold

Packed

Driving techniques for Snow

Gentle acceleration, steering, braking are the keys

Use all season tires or snow tires. If you wheels slip release your accelerator and start over again. Chains can help as well.

Rocking—Drive forward a little and then back a little. Repeating until you free yourself.

Straighten your front wheels,   
 Gently accelerate forward(don’t spin your wheels, shift reverse and gently move backwards. Let up on your accelerator and drive forward.

Ice—Squeeze brakes lightly to check traction. Do this only at a low speed. If you start to slide you are on ice. Extremely dangerous.

Ice on Bridges, Black Ice, Ice in Tire Tracks.

Other Reduced Traction Situations

Gravel, Leaves, Construction Areas.

Skidding—tires lose grip on the road. This can happen on any surface

While braking, accelerating steering.

Loss of traction—if you realize sooner you can correct with proper driving techniques.

Loss of traction to power wheels and you are accelerating—

Front wheels you sit and spin

Rear wheels you may feel the rear end slide.

Release accelerator and slow down so the tires gain traction.

When turning and you are sliding forward with a front wheel drive release accelerator so tires can re-establish grip. This is understeer.

Loss of traction to rear wheels—oversteer situation and rear end starts to slide or fishtail

Release accelerator or brakes, manual transmission depress clutch

Steer in the direction your vehicle needs to go. Don’t over correct

As your speed drops your control will improve.

Try to maintain your vehicle balance and not over steer

Controlled Braking—Reduce peed as quickly as possible while maintaining steering control of your vehicle

Press on your brake pedal hard enough so slow vehicle rapidly without locking wheels.

If you wheels lock ease up on the brake.

Keep squeezing and relaxing until you stop

Most new vehicles have ABS systems that won’t lock up. Continue to press. It will not shorten your stopping distance.

12.3 Other Adverse Weather Conditions

Wind—Reduces vehicle control especially tall vehicles, lightweight vehicles. Meeting trucks can shake your vehicle.

Hot weather—may cause a vehicle to overheat. Check coolant

Tornado/storms—try to find a safe place.

Cold Weather—Exhaust leaks—Carbon monoxide gas

Don’t set your parking brake, Don’t race a cold engine

Tips for Smooth Winter Driving

Pay attention to weather reports/road conditions.

Keep windows clear.

Respect Lower Speed—Better to be late and safe.

Keep a Safe Following Distance

Try to Keep Moving in Snow

Use Lower gears on slippery roads.

Avoid Cruise Control!!!!

Adverse Conditions Videos;

<https://www.youtube.com/watch?v=syDoMg_fbUI>

<https://www.youtube.com/watch?v=qnxBftLDlcI> Old

<https://www.youtube.com/watch?v=4ZSAtKKeuJA> --AAA

<https://www.youtube.com/watch?v=3GEgB-xui0M> Better