



National Fire Fighter Near-Miss Reporting System:

Reports Related to Apparatus in Icy Road Conditions

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Report Number: 05-0000582

Report Date: 10/20/2005 19:09

Synopsis:

Apparatus, responding in icy conditions, strikes curb and rolls over.

Demographics:

Department type: Paid Municipal

Job or rank: Fire Chief

Department shift: 24 hours on - 48 hours off

Age: 52 - 60

Years of fire service experience: 27 - 30

Region: FEMA Region X

Service Area: Urban

Event Information:

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 10/19/2005 10:32

Hours into the shift: 0 - 4

Event participation: Told of event, but neither involved nor witnessed event

Do you think this will happen again? Uncertain

What do you believe is the loss potential?

- Property damage

Event Description:

While responding to a reported motor vehicle accident with injuries, the apparatus came across a bridge and started sliding on the icy roads. Road conditions at that location were black ice. The apparatus slid for a short distance and then hit the curb and rolled on its side. All occupants of the apparatus had their seat belts and other safety equipment on. There were no injuries. The apparatus sustained extensive damage. The apparatus was a four wheel drive rig with on spot chains. Neither of these were being utilized at the time of the incident.

Lessons Learned:

Road conditions can and will change throughout the day. Seatbelts cannot be over emphasized as making the difference between sustaining injuries and walking away with no injuries. All features of an apparatus must be used appropriately. This may mean engaging 4 wheel drive when necessary and not waiting until you have an accident. Road conditions will determine the speed that the apparatus responds at, if the apparatus doesn't arrive at the scene, they were driving too fast for road conditions.

Report Number: 06-0000588

Report Date: 11/29/2006 03:11

Synopsis:

Engine slides down icy hill

Demographics

Department type: Combination, Mostly paid

Job or rank: Fire Fighter

Department shift: 24 hours on - 24 hours off

Age: 25 - 33

Years of fire service experience: 7 - 10

Region: FEMA Region X

Service Area: Suburban

Event Information:

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 11/28/2006 15:08

Hours into the shift: 5 - 8

Event participation: Involved in the event

Weather at time of event:

Do you think this will happen again? Uncertain

What were the contributing factors?

- Equipment

- Situational Awareness
- Weather
- Decision Making
- Human Error

What do you believe is the loss potential?

- Lost time injury
- Environmental
- Minor injury
- Property damage
- Life threatening injury

Event Description:

Our engine [number deleted] was dispatched to an injured child. This was secondary to a sledding accident on a steep hill in a suburban neighborhood. The address was located at the end of a cul-de-sac, at the bottom of a steeply graded hill. The recent weather conditions had provided snow, sun, and then refreezing temperatures. This had caused the roads to be bare and dry in some places, with other areas fully or partially iced over. The main route to this address was bare and dry. Upon entering the neighborhood where the call was located, the engine company came upon icy road conditions. The driver of the apparatus had already disabled his engine brake. He advised the captain that he was going to deploy his On-Spot automatic tire chains for the access to the address dispatched. As the engine entered the residential street, it was obvious that the road was a solid sheet of ice. We began to descend the mild grade down towards the cul-de-sac. The driver stated that the chains were doing a good job of controlling the apparatus descent and the speed of the descent was controlled using down-shifting techniques. The streets downward grade increased dramatically approximately 200 feet from the cul-de-sac. The engine slowly dropped down the hill into the cul-de-sac, pulling to one side of the rounded street. After stopping, the driver shifted the vehicle to neutral, set the air brakes, and all the members exited the cab of the apparatus. Immediately after exiting the vehicle, the driver set the wheel chock in place behind the driver's rear tire. The other fire fighters and the driver began to remove the EMS equipment from the apparatus. One of the fire fighters noticed the vehicle begin to slide downhill. The engine was picking up speed and heading straight for a house, a vehicle, and potentially, down the side of a hill into a ravine. The engine was sliding with the wheel chock in place behind the wheel. The fire fighter yelled, "The engine is moving" and was running towards the cab. He reached the cab, opened the door and jumped in. He turned the wheel of the vehicle and began to regain control. The fire fighter who jumped in the cab, stayed with the vehicle while the other two members on the engine attended to the patient. This could have been a very bad situation.

Lessons Learned:

We reviewed the incident immediately after the call was under control. All members agreed we should probably have never attempted to descend the hill without either chaining ,or not positioning apparatus so close unless it was a fire. In the future, in a similar situation, we plan on parking farther away on a stable surface and walking in. Emergency pre-planning could have saved us a problem by training us to avoid this specific situation before it ever had the chance to happen.

Report Number: 07-0000656

Report Date: 01/07/2007 17:59

Synopsis:

Emergency vehicle skids on icy road and hits utility pole.

Demographics:

Department type: Combination, Mostly volunteer

Job or rank: Captain

Department shift: Respond from home

Age: 34 - 42

Years of fire service experience: 14 - 16

Region: FEMA Region V

Service Area: Suburban

Event Information:

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 12/01/2006 01:15

Hours into the shift: 0 - 4

Event participation: Involved in the event

Weather at time of event: Cloudy and Snow

Do you think this will happen again? Yes

Event Description:

While responding to an MVC in our district, the med unit was coming to a 3 way intersection when it was unable to stop at the stop sign due to icy road conditions. The unit left the roadway, striking a utility pole and knocking it off its base causing moderate damage. All 3 crew members were belted and did not sustain any injury. The unit was out of service for several hours. This was the areas first major winter storm and it had only been snowing for an hour.

Lessons Learned:

Seatbelts work and save lives. Also, helmets should be worn by crew members during emergency responses, as I had mine on and felt better protected. We also need to be more aware of our

environmental surroundings and not be in such a hurry to respond to someone else's emergency. We will do them no good if we are unable to get to them because of accidents like this.

Report Number: 08-0000068

Report Date: 02/06/2008 15:13

Synopsis:

Apparatus Slides on Ice Narrowly Missing Civilians

Demographics:

Department type: Combination, Mostly volunteer

Job or rank: Fire Chief

Department shift: Respond from home

Age: 52 - 60

Years of fire service experience: 30+

Region: FEMA Region V

Service Area: Urban

Event Information:

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 02/23/2007 00:00

Event participation: Involved in the event

Weather at time of event: Cloudy and Freezing Rain

What were the contributing factors?

- Human Error

What do you believe is the loss potential?

- Environmental

Event Description:

We were responding to a second personal injury accident due to freezing rain. The operator was going too fast for road conditions and slid the vehicle sideways in the road. The problem was a number of individuals were standing on the bridge that the vehicle was sliding on. Fortunately, the vehicle stopped short of the scene or there could have been a number of persons hit by the sliding engine. Also, there

could have been a couple of persons who would have fallen off the bridge. We discussed winter operations after this occurred and have hopefully this has taken care of the problem.

Lessons Learned:

The lesson learned by all is one we continue to stress, slow down for conditions. We reviewed our driving policies and hit the part of "bad weather" driving in the discussion the night of the incident. At the next training, we discussed inclement driving of personal vehicles as well as the department vehicles. We even have trained in snowy/icy conditions so that the Driver Operators are familiar with the action/reactions of the vehicles including our Ladder Truck. The main thing learned that night by the Driver Operator was to ease in because the engine could slip on icy pavement even though the vehicle weighs nearly 40,000 pounds.

Report Number: 08-0000148

Report Date: 03/19/2008 16:17

Synopsis:

Driver loses traction and leaves roadway.

Demographics:

Department type: Paid Municipal

Job or rank: Safety Officer

Department shift: 48 hours on - 96 hours off

Age: 43 - 51

Years of fire service experience: 21 - 23

Region: FEMA Region VIII

Service Area: Suburban

Event Information:

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 12/22/2007 15:46

Event participation: Told to and submitted by safety officer

Weather at time of event: Cloudy and Snow

What were the contributing factors?

- Weather
- Human Error
- Communication
- Situational Awareness

What do you believe is the loss potential?

- Lost time injury
- Property damage
- Life threatening injury

Event Description:

Narrative of Driver/Operator: I was driving [the quint] emergently to a call [# deleted] (car off the road on [Hwy deleted] heading northbound. The weather conditions included heavy falling snow, wind, cold air, and slushy/snow packed/icy roads. Knowing that we were approaching a hill that would likely be icy, I slowed the vehicle to 10 mph or less hoping to avoid any slipping. As the vehicle crested the hill it began to slide sideways facing east. I attempted to correct the slide by turning into the slide, but the vehicle did not correct. The vehicle went over the curb and struck a large pine tree on the Engineer's front corner of the cab. At that time something forced the accelerator into full throttle and the vehicle continued east into the backyard of a home. I shut the engine down and the vehicle came to rest in the backyard. After exiting the vehicle we witnessed multiple vehicles, including a snowplow, sliding out of control in the same section of road.

Narrative of Acting Officer: While en route to an automobile accident on eastbound [Hwy deleted], approximately one block south of the intersection of [deleted] when we approached the apex of the hill that sloped downward. [The driver/operator] was traveling slowly and approaching the hill carefully as we had discussed the danger of that hill in adverse conditions earlier in the day. As he fully removed his foot from the accelerator, the back end of [the quint] began to swerve to the left, turning us sideways. The [driver/operator] attempted to regain control by turning into the slide with no effect. The vehicle jumped over the curb on the east side of [avenue deleted] and struck a large pine tree. This impact ejected the windshield on the [driver's] side and crushed in the dash on the driver's side front corner. By doing this, apparently the accelerator was activated and we continued driving over a portion of cedar fence, into the backyard of a residence. At this point [the driver/operator] and I scrambled to hit the Engine Kill Switch. We did and stopped the vehicle before striking the residence with the vehicle. We all had our seat belts on. We removed ourselves from the vehicle; I checked for injuries with my crew and notified dispatch to send the District Chief, Safety Officer and Medical Officer to our location.

Lessons Learned:

The driver/operator acknowledged during a post-incident interview that he was not totally familiar with that piece of apparatus. As part of his training, the driver/operator recalled that he had received instruction on adverse weather driving to include de-activating engine/transmission brakes on wet/slippery roads, the use of tire chains and On-Spot traction control devices as well as skid control techniques. The driver/operator suggested that despite having been trained to operate an apparatus in adverse weather, the lack of familiarity with [the quint] apparatus coupled with his lack of experience as a relief driver contributed to his not applying his training.

This crew had previously responded on multiple emergency calls and the Acting Officer documented in his report narrative that the crew had “discussed the danger of that hill in adverse conditions earlier in the day.” These discussions failed to trigger appropriate actions to ensure safe vehicle operation during wet and slippery conditions (i.e. disengaging transmission retarder, chaining up, or using On-Spot traction chains). The driver/operator also stated that he was aware that a red light is illuminated on the console when the transmission retarder is engaged. Despite recognizing the red light was on, no action was taken to disengage the retarder during the response.

It is important to note that one of the crew members stated after the accident that he did not routinely use seat belts while riding on the apparatus. Fortunately, he was seat belted at the time of this incident.

The Good (Opportunities Captured):

All three crewmembers were wearing seatbelts at the time of this incident.
There were no serious injuries as a result of this incident.
The apparatus was controlled before it could impact an adjacent structure.
Driver/Operator II training does provide cognitive instruction on operating vehicles in adverse weather conditions.

The Bad (Opportunities Missed):

Severe damage to fire department vehicle and collateral damage to taxpayer property.
Disruption of public confidence.
This incident was avoidable.
Despite D/O II training, steps taught to facilitate the safe operation of apparatus during adverse weather conditions were not implemented.
Chain usage to maintain traction.
Disabling engine/transmission retarding devices.
Knowledge – D/O II class. In this case, possessed but not considered.
Equipment appropriate for the situation was not used correctly.
Transmission retarder.
On-Spot chains.
Tire Chains.
Warning light indicating retarder “engaged” was observed, but not recognized.
The crew did not fully appreciate the hazard potential of the poor road conditions, and as a result the did not take the necessary steps to overcome them.
Department procedures mandate seat belt usage 100% of the time; not just when conditions are bad.
Crew Resource Management (CRM).
Skills – D/O II class and time in position behind the wheel. This driver/operator had no experience operating [the quint] in adverse weather.
Communication – Talk about the situation and identify what needs to be done to solve known or potential problems. The crew was aware of the bad weather and discussed it. These discussions should have triggered action.
Procedures – Fire department should consider a standard operating procedure for inclement weather vehicle operations including operation of vehicles in adverse weather conditions to task books.

Report Number: 08-0000178

Report Date: 04/14/2008 23:17

Synopsis:

FF's avoid being struck on highway

Demographics:

Department type: Paid-on-Call

Job or rank: Battalion Chief / District Chief

Department shift: Respond from home

Age: 52 - 60

Years of fire service experience: 30+

Region: FEMA Region V

Service Area: Rural

Event Information:

Event type: Non-fire emergency event: auto extrication, technical rescue, emergency medical call, service calls, etc

Event date and time: 01/21/2008 14:30

Event participation: Involved in the event

Weather at time of event: Cloudy and Snow

Event Description:

The fire dept was on the scene of State Patrol vehicle with two riders from another accident. They were making a turn around on the roadway when it was hit on the right front by an out of control vehicle on icy road. None of the injuries was life threatening. The ambulance came onto the scene at a very high rate of speed and two of the fire fighters directing traffic had to dive into the snow bank to get out of the way. The driver of this ambulance had responded from 40 miles away and was warned by his assistant to slow down, due to the slippery roads. A fireman at the scene confronted the driver and later in the day, the Chief (who was on scene and saw the mishap) was talked to by the ambulance director because one of the firemen had touched the driver.

Lessons Learned:

Safety on the scene and to watch out for all persons on the scene.

Our fire dept does not have rescue equipment, but the county SOP mandates that a fire department be at the scene of all accidents. The local ambulance has the rescue equipment and personnel that goes to all accidents.

My problem is how to go against county SOP and only go to vehicle fires and not put the firemen in harms way for the accidents.

Report Number: 08-0000394

Report Date: 08/22/2008 13:58

Synopsis:

Tanker slides off driveway and rolls over.

Demographics:

Department type: Volunteer

Job or rank: Fire Fighter

Department shift: Respond from home

Age: 16 - 24

Years of fire service experience: 4 - 6

Region: FEMA Region III

Service Area: Rural

Event Information:

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.

Event date and time: 03/15/1981 06:00

Event participation: Involved in the event

Weather at time of event: Cloudy and Snow

What were the contributing factors?

- Weather

What do you believe is the loss potential?

- Property damage

Event Description:

We were responding to a working confirmed barn fire. As we were traveling down the snow covered dirt lane, our 2500 gallon tanker-pumper started to slide off of the actual driveway and onto the farmer's field, about a 2 foot drop. Once the tanker hit flat ground it rolled over on its passenger side, landing in a 3 foot snow drift. Speed was not a factor; neither was driver error. What contributed were the snow covered narrow driveway and the weight of the tanker. Once it came to rest, the driver and crew, including myself, crawled out of the apparatus. The one firefighter who was riding in the jump seat [name deleted] was thrown clear of the tanker and landed head first into the snow drift. The only damage that occurred was the right rear compartment door sustained a dent when it hit a big rock under the snow. No one was hurt and we all stood there in shock, not really believing what had just happened.

Lessons Learned:

Be aware of weather conditions and the condition of the road or driveway surface you are traveling on at all times. Also know the restrictiveness of your apparatus (height, weight, and maneuverability)

Report Number: 09-0000232

Report Date: 03/03/2009 12:17

Synopsis:

Apparatus slides on icy road.

Demographics:

Department type: Volunteer

Job or rank: Fire Fighter

Department shift: Respond from home

Age: 34 - 42

Years of fire service experience: 7 - 10

Region: FEMA Region VIII

Service Area: Rural

Event Information:

Event type: Non-fire emergency event: auto extrication, technical rescue, emergency medical call, service calls, etc

Event date and time: 10/01/2005 10:00

Event participation: Involved in the event

Weather at time of event: Clear with Frozen Surfaces

What were the contributing factors?

- Human Error
- Situational Awareness
- Decision Making
- Weather

What do you believe is the loss potential?

- Property damage
- Life threatening injury

Event Description:

We received a vehicle accident call. The vehicle was driving on a paved county road, when it hit ice and rolled. We were responding with our rescue unit, a one ton four wheel drive pick up. On the way we were talking to the EMS personnel who were also responding. They indicated the road was getting icier as you got closer to the scene.

As we pulled up, the driver had slowed down to what he thought was a safe speed. But when he hit the brakes, the wheels locked up and we slid right through the accident scene and almost went into a ditch. Luckily no one was hurt and there was no damage.

Lessons Learned:

Slow down on icy roads.

We did find out that the tires on the vehicle are a hard rubber and not very good for snow and ice. We are in the process of replacing them.

There could have been better communication.

Report Number: 09-0000410

Report Date: 04/11/2009 11:00

Synopsis:

Reckless driving results in discipline.

Demographics:

Department type: Volunteer

Job or rank: Fire Fighter

Department shift: Respond from home

Age: 25 - 33

Years of fire service experience: 17 - 20

Region: FEMA Region III

Service Area: Suburban

Event Information:

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 02/28/2009 22:00

Event participation: Involved in the event

Weather at time of event: Cloudy and Freezing Rain

Do you think this will happen again?

What were the contributing factors?

- Individual Action
- Human Error
- Weather

What do you believe is the loss potential?

- Life threatening injury
- Property damage

Event Description:

We were responding to a chimney fire with two other engine companies already on the scene. The driver of the apparatus was instructed to proceed with caution, as road conditions were icy and wet. The driver started to proceed at an unsafe speed to the call, (45 mph in a 25 mph zone). The driver was instructed by the officer to slow the vehicle down. The order was ignored and the driver continued to proceed at an unsafe speed. The officer cancelled the emergency response and ordered the driver to pull the truck over and stop. The driver began to shout at the officer and was not stopping vehicle as instructed. The officer once again told the driver to pull the apparatus over and stop, the driver then slammed on the brakes of the apparatus, sliding the truck sideways in the road. The driver was replaced

and the apparatus continued to the scene and staged at a hydrant. Upon returning to the station, the driver was relieved of driving apparatus.

Lessons Learned:

Drivers are to understand the responsibility they have while driving apparatus; that they carry the lives of each firefighter with them as well as civilians. Drivers are to understand that they are to follow the orders of their officer in any circumstance. Drivers are not to speed to calls and use good judgment in all situations.

Report Number: 09-0000480

Report Date: 05/09/2009 17:54

Synopsis:

Engine crosses median on icy roads.

Demographics:

Department type: Volunteer

Job or rank: Assistant Chief

Department shift: Duty night (in-station)

Age: 25 - 33

Years of fire service experience: 11 - 13

Region: FEMA Region III

Service Area: Rural

Event Information:

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.

Event date and time: 02/22/2009 08:31

Hours into the shift: 0 - 4

Event participation: Involved in the event

Weather at time of event: Cloudy and Snow

Do you think this will happen again? Yes

What were the contributing factors?

- Individual Action
- Weather
- Human Error

What do you believe is the loss potential?

- Other

Event Description:

We were dispatched to a reported vehicle fire on a 4 lane highway with a slight downgrade. Weather conditions were snowy and the roads were icy. Arrived on scene and provided scene size-up of incident at hand. Roadway was closed in the direction the vehicle was traveling. A fire engine came across the median as instructed by the on scene IC as the traffic was shut down. Upon trying to stop, the fire engine could not stop because of the icy road conditions and the slight downgrade. There was already a fire engine working the vehicle fire with a handline and the engine that could not stop went through the area they were working. The already working engine crew had to drop their handline and run for cover. No injuries were sustained.

A slower means of approaching the scene with these road conditions was necessary for this event.

Lessons Learned:

Use caution in bad weather.

Report Number: 09-0001095

Report Date: 12/13/2009 16:24

Synopsis:

Car slides on ice through accident scene.

Demographics:

Department type: Paid Municipal

Job or rank: BLS Provider

Department shift: Straight days (8 hour)

Age: 25 - 33

Years of fire service experience: 7 - 10

Region: FEMA Region III

Service Area: Urban

Event Information:

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 12/12/2009 07:00

Hours into the shift:

Event participation: Involved in the event

Weather at time of event: Cloudy and Sleet

Do you think this will happen again?

What were the contributing factors?

- Equipment
- Human Error

What do you believe is the loss potential?

- Other
- Property damage

Event Description:

At approximately 0700 hours, crews of EMS, Fire, and Police were dispatched to a motor vehicle accident with entrapment. The weather conditions were rainy/cloudy and a temperature somewhere below freezing. The first arriving medic and fire units reported a vehicle over a hill with entrapment. The road conditions were very icy.

A rescue truck and I (following in a medic unit) approached the crest of a hill that was sloping downwards towards the scene. There were multiple police, fire, and medic units already at the location. As the rescue truck started down the hill at a slow and safe rate of speed, I stopped the medic unit at the top of the hill. Within 50 feet of the rescue driving down the hill, it began sliding towards the scene of the crash. The rescue truck started to slide sideways towards the scene and the operator did an outstanding job of steering the apparatus away from the scene.

The rescue truck came to a stop after sliding at a slow speed into a medic unit. This caused minor damage and no personnel were inside the medic unit. At this time, I felt that driving the medic unit down the hill towards the scene, was not the safe thing to do. I had placed my medic unit at the top of

the hill on a defensive angle and was blocking traffic from going over the hill. I wanted to deflect any sliding vehicles off the medic unit into the guide rail rather than them sliding into the scene.

At this time all roads were shut down by local police. My partner exited the medic unit and started down towards the scene. After securing the medic unit, I exited the truck and noted an approximately 1/4" of ice covering the roadway. I utilized the medic unit as a railing to walk towards the center double yellow lines where there was rumble strips I could use as foot traction. As I pushed myself from the driver's side rear corner of the truck towards the rumble strips, I noticed head lights coming towards me. The headlights were coming from a civilian vehicle that cut through a local mall parking lot to avoid the road block. The vehicle was traveling at a high rate of speed. The driver of the vehicle hit the brakes and turned the vehicle away from the medic unit which sent the vehicle sideways towards me. At this time, I was approximately one foot from the medic unit and standing in the center of an icy roadway.

My initial thoughts were how to get myself behind the medic unit. I had no success with this because of the icy road conditions. The civilian's vehicle slid past me with an approximately three foot gap between me and the vehicle. The vehicle continued sliding down the hill towards my partner whom was now on a sidewalk. The vehicle slid into an upward slanted front yard which acted as a launching ramp for the vehicle. The vehicle left the yard air born. It cleared approximately ten foot of grass, struck an unoccupied parked vehicle head-on that was in a driveway (this pushed the unoccupied vehicle approximately ten foot into the side yard and turned it sideways), and struck a telephone pole approximately four feet off the ground with the passenger side door of the vehicle. Needless to say, all parties involved in the accident were extricated and transported to local emergency departments. All public safety personnel were safe and not injured.

After the incident was over, all of us talked about the call. If I would not have parked the medic unit in the manner that I did, the civilian's vehicle would have continued with the rate of speed it was traveling (if not faster) towards the original crash scene. I personally feel that if the driver of the rescue truck was not properly trained with defensive driving tactics, or if I was not trained with highway safety and situation awareness, multiple public safety personnel would not be returning home to their loved ones.

Lessons Learned:

Lessons that were learned from the incident were that training is a very important factor in saving our lives on a daily basis.

Report Number: 09-0001108

Report Date: 12/17/2009 15:49

Synopsis:

Seatbelts save FFs from injury.

Demographics:

Department type: Paid Municipal

Job or rank: Other : Standards Manager

Department shift: 24 hours on - 48 hours off

Age: 52 - 60

Years of fire service experience: 30+

Region: FEMA Region IV

Service Area: Rural

Event Information:

Event type: Non-fire emergency event: auto extrication, technical rescue, emergency medical call, service calls, etc

Event date and time: 12/14/2009 06:23

Hours into the shift: 21 - 24

Event participation: Told of event, but neither involved nor witnessed event

Weather at time of event: Clear with Wet Surfaces

Do you think this will happen again? Yes

What were the contributing factors?

- Individual Action
- Situational Awareness
- Equipment

What do you believe is the loss potential?

- Life threatening injury
- Property damage
- Lost time injury
- Minor injury

Event Description:

We were dispatched to a motor vehicle accident (MVA) involving a pickup truck and rolled over semi-tractor trailer with ensuing fire under a bridge overpass. Initial dispatch was a multi-unit assignment comprised of 2 pumpers, 1 pumper tanker, and an ambulance provider. Incident weather conditions consisted of dense fog causing poor visibility and wet/slippery road conditions. All response routes leading to incident scene were 2-lane rural roads with speed limits posted between 45 and 55mph. The tanker pumper (3,000 gallon, tandem axle, commercial truck design) responded with a crew of 2

personnel from the first-due station located approximately 5 miles away. This unit within approximately 1 mile of the incident scene was approaching a sweeping “S” curve at approximately 35mph. When the driver released the accelerator to slow down, the exhaust braking system engaged causing the rear tires to break road traction. The brakes were applied, but the skid on the “black ice” was already in a right-rear motion. As the brakes were applied, the tires came in contact with the off-road surface causing the tires to grab and roll the apparatus to its right side. The unit rolled completely over one full rotation landing upright on its wheels and coming to rest on top of the roadside guardrail. Damage was extensive to all sides of cab and water tank. The guardrail fortunately got entangled with the rear tandem tires which prevented the unit from a continued slide or subsequent rolls down a moderately steep embankment. Additional units were diverted to this call and upon arrival both the driver and officer were triaged, stabilized, and packaged for transport. Both were ground transported with one being taken to the nearest hospital and the other to the local trauma center. Both were treated and released with minor injuries.

Lessons Learned:

The happy ending to this storyline is that both the driver and officer survived this serious rollover accident because they were properly using and wearing seatbelt harnesses. Our agency is a proud supporter and participant in the National Firefighter Seatbelt Pledge Campaign with 100% compliance. This pledged support (in writing) adds a higher level of safety awareness. If our personnel had not been wearing their seatbelts, this rollover incident would have most certainly resulted in a very different and tragic ending with both crew members being ejected and potentially crushed by the rolling apparatus. Apparatus can be replaced – our firefighters cannot. The other important point under lessons learned is that drivers should make sure that exhaust braking systems are NOT engaged when traveling or responding on wet and/or slippery road surfaces. Dense fog conditions produce a moisture film on road surfaces, which in this case turned to what drivers in the south call “black ice” conditions. Drivers should check the operational status of these systems before responding. During wet/slippery conditions, these braking systems should be disengaged with use of the brake pedal only per the manufacturer’s operator manual recommendations.

Report Number: 10-0000145

Report Date: 01/19/2010 14:25

Synopsis:

Engine rolls over on ice covered road.

Demographics:

Department type: Volunteer

Job or rank: Fire Fighter

Department shift: Respond from home

Age: 16 - 24

Years of fire service experience: 0 - 3

Region: FEMA Region III

Service Area: Suburban

Event Information:

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 02/06/1989 05:00

Event participation: Involved in the event

Weather at time of event: Cloudy and Freezing Rain

What were the contributing factors?

- Weather

What do you believe is the loss potential?

- Life threatening injury

Event Description:

We were dispatched in the early a.m. hours to assist a neighboring company on a barn fire. Arriving on scene, we were given the assignment of water supply for tender truck operations. We traveled approximately 1.5 miles to a local creek to dam it up and began drafting. We were able to draft sporadically, but we were having problems maintaining a productive flow due to equipment failure.

After about two hours into the operation, we were given the command to discontinue operations and return to the station. We broke down our operations and begun to travel home. While enroute to our station, we encountered icy conditions. We were traveling down a two lane roadway which was winding and approximately a 30 degree slope. The engineer encountered black ice and tried to keep control of the engine. The truck's front passenger side wheel left the roadway causing the driver to lose control. The truck flipped onto its driver's side spilling all of its hose and equipment into the roadway. There were five personnel on the truck at the time of the crash. Injuries were contained to one person attempting to disembark the truck. Radio communication was limited to poor signal strength in the low lying area. It took over one and a half hours to get assistance to us due to weather conditions.

Lessons Learned:

Know changes in environment while on calls and change the route if necessary.

Report Number: 10-0000154

Report Date: 01/19/2010 18:14

Synopsis:

Tanker driver loses control on ice covered road.

Demographics

Department type: Paid Municipal

Job or rank: Fire Fighter

Department shift: 24 hours on - 48 hours off

Age: 25 - 33

Years of fire service experience: 0 - 3

Region: FEMA Region V

Service Area: Rural

Event Information

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 06/13/2000 14:00

Hours into the shift:

Event participation: Involved in the event

Weather at time of event: Clear with Frozen Surfaces

Do you think this will happen again?

What were the contributing factors?

- Weather
- Human Error
- Decision Making

What do you believe is the loss potential?

- Life threatening injury
- Property damage

- Lost time injury

Event Description:

During my probation year, I was driving a [name deleted] tanker on a winter day. I was supplying water for a house on fire in a rural area of a neighboring county. I dropped the load and headed back to the hydrant which was three or four miles away on a curvy, ice covered road. On a curve, I started fish tailing and tried to keep the tanker on the road and get it under control. Another department's engine was coming up the hill and rounding a curve headed straight for me. Luckily, I got it under control and in my lane before a head-on collision happened.

Lessons Learned:

I thought I was going slow enough, but apparently I was not. Now when I think I am driving slowly enough, I go even slower.

Report Number: 10-0000281

Report Date: 02/15/2010 08:31

Synopsis:

Engine slides on ice and crashes, FFs trapped.

Demographics:

Department type: Volunteer

Job or rank: Safety Officer

Department shift: Respond from home

Age: 25 - 33

Years of fire service experience: 7 - 10

Region: FEMA Region III

Service Area: Suburban

Event Information:

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 02/14/2010 13:29

Event participation: Told to and submitted by safety officer

Weather at time of event: Clear with Wet Surfaces

Do you think this will happen again?

What were the contributing factors?

- Weather
- Training Issue
- Human Error

What do you believe is the loss potential?

- Property damage
- Minor injury

Event Description:

On [date omitted] at approximately [time omitted], fire departments from [location omitted] were responding to a report of a working house fire in the [location] area of the county. Engine [1], out of the [name omitted] station, was operated by Firefighter [A], who responded with the equipment out of the [name omitted] station.

While proceeding down [street name omitted] near the [street name omitted] intersection, Firefighter [A] lost control of the pumper/tanker after hitting a patch of ice/water and the apparatus spun around in the road. As a result, the cab of the truck on the driver's side impacted a frozen snow bank on the side of the road. After striking the frozen snow bank, the pumper/tanker then spun around again, impacting the large traffic signal pole at the [name omitted] intersection.

After the impact, the pumper/tanker came to rest against the pole up on the concrete island. Firefighter [A] and the passenger, Firefighter [B], were trapped in the cab of the apparatus for a short period of time. Firefighters [C], [D], [E] and [F], who were riding in the crew cab of the pumper/tanker, were transported to the hospital. They were treated and released with minor injuries, mostly bumps and bruises, and all are resting at home.

Lessons Learned:

Speed, control of the vehicle, awareness of road conditions, seat belt use: all could contribute to preventing accidents and the resulting injuries of this nature in the future.

Report Number: 10-0000431

Report Date: 03/11/2010 09:25

Synopsis:

New vehicle slides on icy roadways.

Demographics:

Department type: Paid Municipal

Job or rank: Assistant Chief

Department shift: 24 hours on - 48 hours off

Age: 52 - 60

Years of fire service experience: 27 - 30

Region: FEMA Region V

Service Area: Rural

Event Information:

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 02/07/2005 13:00

Event participation: Involved in the event

Weather at time of event: Clear with Frozen Surfaces

What were the contributing factors?

- Weather
- Equipment
- Situational Awareness

What do you believe is the loss potential?

- Lost time injury
- Property damage
- Life threatening injury

Event Description:

I was the driver of a new response vehicle for our department. It was a winter day and the roads were icy. The car hit an icy spot on the road and slid to the right. We went off the road, heading for a brick wall. I remembered to turn into the slide, which was hard to do. The car stopped sliding and I was able to steer it out of the slide, not hitting the brick wall. It was a near-miss, but with a good outcome.

Lessons Learned:

Our department takes this vehicle out of service when the roads are icy because it slides easily. We learned through experience that this not a good first response vehicle when road conditions are bad. Driver training and experience was helpful in this situation.

Report Number: 10-0001280

Report Date: 12/15/2010 19:42

Synopsis:

Engineer avoids collision on icy road.

Demographics:

Department type: Paid Municipal

Job or rank: Battalion Chief / District Chief

Department shift: 24 hours on - 24 hours off (4s & 6s)

Age: 34 - 42

Years of fire service experience: 17 - 20

Region: FEMA Region VII

Service Area: Urban

Event Information:

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 12/13/2010 09:00

Event participation: Told to and submitted by safety officer

Weather at time of event: Cloudy and Snow

Do you think this will happen again?

What were the contributing factors?

- Weather

What do you believe is the loss potential?

- Life threatening injury

Event Description:

Quint [1] was being driven by the engineer on icy and snowy road conditions. The driver was maintaining a safe speed and following all traffic laws. A passenger car was pulling onto the road from a parking lot. The passenger car broke loose on the ice and slid onto the road at a high rate of speed with no warning, presenting what appeared to be an inevitable and unavoidable "T-bone" accident with Quint [1]. The engineer had enough awareness of our surroundings, as well as exceptional and professional control of our apparatus, to pull into the turning lane, avoiding a collision with only inches to spare.

The potential for loss of life was extreme, due to the size and weight of fire apparatus. I believe that this accident was avoided due to the professional skill exhibited by the driver/operator as well as department driver/operator/safety training.

Lessons Learned:

Lesson learned: Always be aware of your surroundings and the abilities of your apparatus. Continue to complete driver training on a regular basis.

Report Number: 11-0000346

Report Date: 11/15/2011 13:41

Synopsis:

Ice puts rescue truck sideways.

Demographics:

Department type: Paid Municipal

Job or rank: Fire Fighter

Department shift: 10 hour days, 14 hour nights (2-2-4)

Age: 34 - 42

Years of fire service experience: 7 - 10

Region: Canada

Service Area: Urban

Event Information:

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 11/10/2011 02:00

Hours into the shift:

Event participation: Involved in the event

Weather at time of event: Clear with Frozen Surfaces

Event Description:

Our department was called to a single vehicle roll over. This incident required an engine and a rescue truck. I was driving the rescue truck. Driving to the incident, my lieutenant and I noted that road conditions were icy in some areas. The engine arrived on scene first, broadcasting over the radio that conditions were very icy. As I approached the scene I reduced my speed to approximately 20-30 km/hr. Approaching the scene I could see a slight downhill grade that was icy. As we proceeded toward the incident, the rear end of the truck started to slide. I corrected the slide and began a series of fish tails until the rescue truck slid 180 degrees. The front end of the truck went off the road (onto the shoulder of the ditch) with the back end swinging around until it also came in contact with the shoulder of the ditch. This resulted in an abrupt stop with a lot of torsion being put on the frame and making a loud noise. I believe a slightly higher rate of speed would have resulted in the truck tipping over on its side.

Lessons Learned:

Driving slow in icy conditions reduces your chances of losing control of your vehicle, although under the right conditions even a slow rate of speed can cause a truck to go off the road. Our engine truck is a heavier truck, and made it down the hill without losing control. Understanding different characteristics of apparatus is important to the engineer. In some situations it may be necessary for trucks to stage further from the incident in order to ensure safety.