In order to chase with the College of DuPage, one must fill out a waiver form that states that the participant fully understands and accepts the risks associated with storm chasing. It is entirely possible that some of you may have a somewhat distorted view of storm chasing. Perhaps there are those who have not thought through some of the risks before. So, in order to ensure that you fully understand the risks involved, and to make sure that all of our participants do not have the wrong impression on what storm chasing entails, we ask you to read the following pages carefully. Should you have additional concerns or questions, please do not hesitate to contact us. Remember, your safety depends on your understanding the hazards of storm chasing and the methods of minimizing the risks.

Storm chasing can stir up different feelings for different people. There are hundreds if not thousands of people that storm chase in a given year, yet the reason they do so can vary widely. Some are very involved in thunderstorm or tornado research and they chase so that they can witness the Nature's processes first-hand. Others can be called "yahoos" - people who chase in a careless or reckless nature hoping to drive into a tornado or just get as close as possible to get the ultimate thrill. There is an entire spectrum of possibilities in-between as well, such as ordinary folks paying money to be tourists just hoping to witness a tornado at some point in their lives.

How you feel about your storm chase experience has a lot to do with how the chase measured up to your expectations. If you expected to see dozens of tornadoes and failed to see one, chances are you will feel very disappointed. If you went into the experience looking forward to seeing a variety of weather features and enjoying the company of others, you will come out of the experience with a more favorable impression. Therefore, we must first talk about what to reasonably expect weather-wise.

Here at the College of DuPage, we are forced to choose the time of our chase trips well in advance of the departure date. This is due to the fact that we must get 18 people with different schedules and lives together at the same time. We must rent the vans that we use and the instructors must make alternate arrangements for the other courses we teach. We are simply not able to chase when the conditions look best for tornadoes, therefore poor weather conditions for thunderstorms could very well face us on one or more of our trips! We are simply at the mercy of the weather. Our chase dates happen to coincide with dates that, at least climatologically, offer the best chance to encounter tornadoes. However, any given year can deviate from climatology, and those deviations are beyond our ability to forecast.

Last year (2004), every one of our four trips encountered a tornado. That was the first time in the history of the COD chase program that every one who went with us saw a tornado. Some of the tornadoes last year were better than others, but at least everybody walked away from the experience being able to say they saw a incredible tornadic storm. There have been some trips in years past when no thunderstorms (let alone tornadoes) were spotted. On the other extreme, there have been trips where ten tornadoes were seen in just one day! What happens on a particular trip simply depends on the weather patterns for that week, and our ability to forecast the weather accurately in order to put ourselves in the right place at the right time to witness Mother Nature at her worst.

Simply put, we can not guarantee you a tornado. We can not even guarantee rain! The only thing we can promise is to take the group to the location where we think the best place for thunderstorms will be that day. Even on days when thunderstorms and tornadoes are occurring, other factors such as the road network, hills, trees, and other events completely out of our control can inhibit our ability to get within sight of a tornado. It is not easy to see a tornado.

On days when thunderstorms will not happen within our reach, we will try to do something fun as a group – such as go to a National Park, a museum, or experience part of Americana. However, these kind of down days could be spent traveling many hours to get us to an area where storms might form the next day. While we strive to make our trips enjoyable for everybody, we can not guarantee that you will be entertained constantly throughout the entire chase trip. Your participation and attitude is the single most important factor in creating an enjoyable trip.

Risks Associated with Storm Chasing

Driving

One of the most significant risks associated with storm chasing is the simple act of driving. Normal driving presents many risks on a daily basis. During a storm chase, the risks due to driving increase. Most drivers tend to get distracted when they want to look at the storm instead of the paying full attention to the driving chore. Some drivers could get nervous and begin to race home to attend to their children and belongings, or to get their car out of the way of dangerous hail. Finally, storm chase yahoos could be speeding down the road (and not necessarily in the correct lane) in order to get in a close position to the storm. In short, driving gets even more hazardous near thunderstorms.

The road conditions can also take a turn for the worse. For instance, hail can cover the ground completely. Heavy downpours of rain can leave ponds of water on the roadway and lead to hydroplaning if the driver is not careful. The storm could have knocked down power lines, trees, or other debris onto the roadway. Torrential rainfall can reduce visibility to near zero. Finally, flash flooding could turn our road into a river! We minimize these risks by using only well-qualified and experienced drivers during the most hazardous conditions.

Lightning

Lightning is an obvious hazard. Lightning kills dozens of people every year, yet most people hear the statistics that the odds are very low to be hit by lightning. One statistic says that a person has a one in 600,000 chance of being hit by lightning. The problem with that statistic is it is calculated for the general public. The odds of a storm chaser being struck are higher because we behave in ways that the general public does not – we go outside and attempt to get close to a thunderstorm!

Because our purpose is to experience and view a thunderstorm, there is little we can do to alleviate this risk. We are seeking out thunderstorms, and there is no safe place to be relative to a thunderstorm to avoid lightning. In order for a thunderstorm to be called a thunderstorm, it must have lightning! Lightning does not need to give warning signs before it strikes, so it can strike you in the blink of an eye.

Because this is a serious hazard we do try to minimize the risk where possible. It is always the prerogative of the student to remain in the van should lightning be perceived as a risk. When lightning appears too close or too frequent, the instructor may order the chase participants into the vehicle. Vehicles offer good protection from lightning. The exterior metal of the vehicle will allow the electricity to flow around the shell and go to ground, keeping the occupants safe. One problem with this is our vehicles have many antenna cables going into the van from the outside. Lightning can travel inside the van along these cables, and anybody touching them or the radios could receive quite a shock. When you are in the vans, make sure you are not in contact with these cables. Remember, lightning is unpredictable and one stroke is all it takes to be deadly. Treat lightning with respect.

Hail

Hail was already mentioned as a hazard for driving. It is also a hazard to you should you be standing outside when large hail begins to fall! A hailstone about the size of a golf ball can be falling at a speed of nearly 80 miles an hour. If it strikes you on top of the head, that can injure you seriously (if not kill you). Hail does not kill many people per year, but fatalities have happened in the past when people are outside as hail begins to fall. Hail can also cause damage to the vehicle (exterior damage, broken glass, etc.) that you are riding in.

Fortunately, large hail falls in a particular region of a thunderstorm that can often be avoided. However, there could be times when the road network, storm movement, or other factors put us in the wrong place at the wrong time.

Gusty Winds

Strong winds occur near thunderstorms, and these winds are capable of knocking down trees, power lines, or picking up debris that can fly through the air and cause injury. When the winds get strong or are about to be strong, nobody will be allowed outside of the vans.

Tornado

It may seem surprising to you that the most violent hazard contained in thunderstorms is last on the list of hazards! It is obvious to everyone that tornadoes are a hazard and the only safe place to be near a tornado is underground in a basement or storm cellar. We hopefully will never find ourselves in an unsafe position relative to a tornado, but it is something that we can not guarantee. Storms can sometimes change character on us, or the road network that our GPS and maps showed us could be under construction or closed. Situations can arise outside of the instructor's control that could put us at risk from a tornado.

How Does a "Typical" Storm Chase Day Go?

What happens on a particular day on a particular trip certainly can vary widely depending on the situation we are in. However, what follows will give you some idea on what a storm chase is like.

The day begins in a hotel. The time that we wake up and leave the hotel depends on where the storms are going to be later that day and how far the forecast area is from our current location. If we are in the target area, we can sleep late and meet in a hotel room late in the morning to discuss the weather situation and teach you what we look at when we forecast for the storm chase. If we are hundreds of miles from our target, that means we must wake up early and leave without any kind of briefing at the hotel. In that case, the instructor will brief everyone while on the road via the ham radio. In the mornings, everybody is on their own for breakfast. The time that is announced for meeting downstairs in the lobby is the departure time, so make sure you do everything that you need to do before then.

Lunch is usually the one meal of the day that we can count on eating some good, healthy food. This of course won't happen if we have a lot of distance to travel (in that case, we will be stuck with fast food as we fill the vans with gas). Otherwise, we try to find a good sit-down restaurant and eat a good meal. The reason for this is dinner is something that can't be counted on during a chase day – we will be either chasing storms or getting ready to do so, and we simply do not have the time to sit down at a restaurant. Fast food is generally the norm for dinner during a chase, but if storms fire early and we are already in storm chase mode by mid-afternoon, dinner can be just chips and candy bought at a gas station! Of course, we enjoy great food and know of many fantastic restaurants we have visited over the years, so we will stop at them when

time permits. And, after seeing a tornado, a celebratory steak dinner at some point is the custom in the storm chaser community!

In the early afternoon, if we are in our target area, the instructors will normally try to find access to the internet. This can be accomplished at truck stops, hotels, or a public library. When we stop for data, everybody else will remain in the vans or go to a gas station to fill up the vans and clean the windows. Taking a large group into a public library is shunned by librarians, and 18 people can't easily see a computer screen anyway! The instructors will certainly brief you on developments when they return to the van. If the analysis process is taking some time, or if we are in a good area and there is no need to leave our source of data, then the vans usually take you to a park to play Frisbee, softball, or just relax.

At all times during the chase day, we ask that you watch what you drink! In particular, soft drinks that will make you go to the bathroom frequently. Bathroom stops take time away from the storm chase overall, and all the added time of stopping for bathroom breaks could be sufficient in delaying our arrival to our target and result in us missing something good. It usually takes at least fifteen minutes to have 18 people use the restroom – sometimes longer if we are in a very rural location and the gas station has only one bathroom for everybody! Every storm chaser can tell you stories of missing a tornado by just minutes, ourselves included. After driving thousands of miles and knowing you missed a tornado by just minutes, you can imagine how disappointed one feels! Therefore, as a general rule of storm chasing, we would rather hurry up and wait. So, the fewer times we have to stop, the better.

At some point, the instructor will get an idea on where they think a thunderstorm will initiate that will be the best storm of the day. As the instructor gains confidence in his forecast, we will leave our source of data, load up the vans with people, and drive to that location.

Hopefully we will be correct and a supercell thunderstorm will form right where we expect it. We haven't lost all sources of data since we have "nowcasters" back at the College of DuPage that can call us on our cell phones to give us updates or breaking news.

Once the storm fires, the chase is on! We will maneuver our vans with help of GPS mapping software to keep us from getting lost and to make sure we have plenty of road options available in case the storm moves in a way that is different than we thought. Your ability to get out of the van and photograph the storm will depend on a lot of factors, including the speed of the thunderstorm and the quality of the road network. Early in the season when storms tend to move fast, the opportunity to get out of the vans for photographs is more seldom than later in the year. The instructors know you want to get out of the vans to take photographs, but keeping up with the storm is our first priority.

When you are standing outside the vans watching the storm, do not stand in the middle of the road. Many other storm chasers may be watching our same storm, and some of them are known to drive dangerously and quickly. The safest place to be is on the shoulder of the road. When you walk on the shoulder, take care to watch where you walk! Snakes, bees, and other critters may be in our area and it would certainly ruin the day for you or the entire group if someone is bitten!

When the instructor says "get in the vans," that should be done as quickly as possible. When you are outside watching a storm, do not walk away a far distance from the van. An unsafe situation could be present, or we need to move quickly to get into a better viewing position. Again, we are doing everything to get you the best chance of seeing severe weather. Your cooperation and understanding is appreciated and needed in order to get our large group moving as quickly as possible.

After the storm chase is over, the next task is to find a place to spend the night. Your instructor throughout the day has also been looking at the next day's forecast in order to get an idea of where to spend the night. If the next day's target is far away, a long drive at night is usually in store for the group. If we are in the next day's target area, then we usually try to find a restaurant to eat a late dinner (9-10 p.m. is not unusual) and to go to the hotel.

All trip participants usually share a room with 2-3 other people. This is done to not only keep the overall trip cost down, but also to make it easier to find 5 hotel rooms at the same hotel! These days, there are a handful of chase tour companies as well as a handful of college groups like ours that gobble up hotel rooms. When we are in rural areas, there are few quality hotels and the rooms go quickly. The fewer rooms that we ask for, the better chance we have to actually get a hotel. Any special needs must be pre-arranged with the instructor.

In an entire trip, we can expect to drive at least 4,000 miles in a ten-day trip. There have been some trips where over 6,000 miles were driven in a ten day span (600 miles a day average!). If you get car sick easily, then storm chasing may not be for you. People whose only idea of storm chasing comes from the movie "Twister" or storm chaser documentaries fail to grasp how much driving is involved. They may think that storm chasing is thrills and chills a minute, and those people are usually disappointed to discover that storm chasing is a lot and lot and lot of driving! It is a lot of driving through monotonous landscapes and small towns. The amount of time that you enjoy a thunderstorm compared to the amount of time spent in the vans driving around the United States is pretty small. It is important to understand this!

If you have questions that you would like answered before you decide to join the team, please e-mail us at www@weather.cod.edu. One of our instructors will gladly address your questions or concerns.