



OUTDOOR SPORT WEATHER SOLUTION

A BUYING GUIDE



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Athletic Safety & Weather

Sports and recreational activities have tons of benefits for participants. Outdoor activities provide athletes with fresh air, exercise, teamwork and leadership skills, and so much more. These events also provide spectators and guests with a form of entertainment in the great outdoors. While playing sports and spending time in the fresh air can be a lot of fun, it can also be dangerous if you're not careful.

It seems like everywhere you look there are threats to your athletes and guests at schools, parks, and sports complexes. When most people think about the dangers of sports or outdoor activities, broken bones or concussions come to mind first. These types of injuries from both contact and non-contact are common and serious but they aren't the only threats lurking.

Both newsworthy and every day weather events can have a profound impact on the overall safety of your outdoor recreation activities. If you don't know anything about weather safety at schools, parks, or sports complexes, this is a great place to start. Get ready to learn to build your outdoor sport weather safety policy from the ground up and how to implement an effective weather technology stack to make your safety procedures automated, effective, and second nature at your facilities.

The goal? Achieving a safe environment free from weather threats for your athletes, staff, and visitors while having time to focus on other operational initiatives.



Weather Threats and Impacts to Schools, Parks, and Sports Complexes

The first step to creating a weather-safe facility is understanding what weather events can cause danger in the first place.

Weather presents similar problems to single schools, entire school districts, park and recreation departments, and sports complexes. Your job as the one in charge of weather safety at your facility like an Athletic Director at a school or district level, a Director of Parks and Recreation, or even an Operations Manager at a sports complex, is to know what weather threats are coming and to have the tools and processes to manage them.

Depending on your location, there are a ton of dangerous and destructive weather events that may cause trouble for your outdoor activities.

These include:

- 1. Big severe weather events like hurricanes and cyclones**
- 2. Every day severe weather events like lightning, extreme cold, high winds and heat waves**

Whether it's a high-impact, low-frequency event like a tropical cyclone, or something more common like extreme heat, there are plenty of stakeholders affected. It can be overwhelming to think about all at-risk parties, so we like to break it up into four distinct operational groups.



1. Athletic Director for a single school



2. Athletic Director for a district



3. Director of Parks and Recreation



4. Operations Manager at a sports facility or complex



The first two groups are for educational professionals. The first group includes **Athletic Directors, Athletic Trainers, and other staff at a single school**. You're in charge of making sure students, spectators, coaches, referees, and opponents are safe during school athletics and sporting events. Your challenge is effectively monitoring severe weather threats, swiftly alerting all stakeholders when there is incoming danger and initiating your safety protocol.



The second group is a little different because it includes **Athletic Directors and staff on a district level**. While you're still in charge of everything listed above, you're also in charge of these things at multiple locations. When it comes to choosing a safety process and solution, you must pay special attention to collaboration, coordination, and communication abilities.



The third group is in the parks and recreation industry. **Directors of Parks and Recreation** are in charge of the safety of all operations within outdoor spaces at their facilities. This could include kids, teens, or adults participating in sports leagues, exercise classes, water activities, and leisure activities. Your stakeholders most likely vary every day, so it's important to have a solution that is wide reaching and easily understandable that's also swift and timely.



Last, but certainly not least are **Operations Managers at sports facilities**. This group includes Operations Managers, Facilities Managers and their teams who host sports leagues, tournaments, and other events. Safety and coordination are big areas of focus when it comes to selecting a weather solution for these folks as well.

By identifying what group you fall into, you can more easily learn about how to build an outdoor sport weather safety policy and implement it at your facility.

Developing a Weather Safety Policy with the Three Pillars

Weather safety policies are necessary for everyone who focuses on safety for sport and outdoor recreation management. Once you figure out where you belong, it's easier to develop a weather safety policy. The goal of any weather safety policy is to mitigate human risk, property damage and business disruption. For the latter, that would mean canceling a sports game, practice, or any other outdoor recreational activity. An effective weather safety policy includes three pillars. These pillars are

1) Analyze, 2) Plan, 3) Implement

STEP ONE: ANALYZE

Whether you're an Athletic Director, Director of Parks and Recreation, or Operations Manager, you must analyze several things in order to build an effective weather safety policy for your specific stakeholders. Your checklist should include:

✓ ASSETS AND EXPOSURES

Who or what are you trying to protect? Why are they in danger?

✓ ACTIVITIES AND EVENTS

What activities put your people/assets in danger?

✓ THREATS POSED BY WEATHER VARIABLES

(Frequent threats include lightning, heat stress, high winds, storms, and thunderstorms): What weather events are you susceptible to?

✓ SANCTIONING BODY GUIDELINES

What rules do you have to follow? What rules do certain stakeholders (Like referees and emergency officials) have to follow?

✓ EVACUATION PROTOCOLS AND SHELTERING LOCATIONS

What do you do during each threatening event? Where does everyone take shelter?

When creating your draft, make sure you write everything down. It's fine to include details, notes, or questions. This will help you craft the most effective policy. We also recommend having others in your group look over your analysis to ensure you didn't miss anything.

STEP TWO: PLAN

Now it's time to pull everything into a practical plan. You should build a custom policy spreadsheet based on the results of your analyses. This will include separate policies depending on the goal of the policy, type of outdoor activity, assets and exposures, season or month, and responsible parties.

For example, Athletic Directors at a single school should have different plans for practices and games. Athletic Directors on a district level should have those plans for each location as well as coordination plans. When it comes to educational institutions, it's also a good idea to make plans with other internal parties for other outdoor events like graduations, field days, and classes. A Director of Parks and Recreation should have plans that cover all recreational areas of your facility, different weather events, and different activities like sports or concerts. A Manager of Operations should have plans that cover different weather events and varying sizes of guests or tournaments. When you're making your spreadsheet, you must include a plan of action. This will have the following:

- ✓ **Forecasting and detection**
- ✓ **Alerting procedure(s)**
- ✓ **Criteria for outdoor event suspension and resumption**
- ✓ **Safety protocols**
- ✓ **Designated shelters**
- ✓ **Chain of command**

Severe weather can be frightening and chaotic. When you have comprehensive policies that are specific to your operations you ensure that everyone is on the same page. These policies will lead you through the stress and panic so that safety can be restored throughout your facility.

STEP THREE: IMPLEMENT

Now that your comprehensive policies are drafted up and ready to go, it's time for you to implement. You may be wondering how to get these policies up and running at your facility. Don't worry: We have an implementation checklist that you can follow below:

- ✓ **Identify and install technology or technologies to support your customer policy**
- ✓ **Activate alerts for your established protocols**
- ✓ **Disseminate policies and procedures**
- ✓ **Communicate with external associations and emergency departments**
- ✓ **Educate all parties about threats and safety protocols**
- ✓ **Communicate the chain of command**
- ✓ **Test, evaluate, and monitor everything**

You can't control the weather, but upon completing these three pillars you'll control exactly how your school, district, parks and recreation facility, or sports complex reacts to inevitable weather threats. If all three areas are researched, detailed, and supported, your facility's quick automated reaction will minimize negative effects of severe weather like event disruptions, property damages, and injuries.

Building the Ultimate Weather Safety Stack

While reading through this guide, you may have noticed that a weather-safe outdoor athletic facility requires an effective automated monitoring and alerting solution to support its weather safety policy.

This next part is extremely important as we'll outline the most popular tools that you should be using to build a comprehensive weather safety solution.

There are eight components of the ultimate weather safety stack. Together with your meticulous planning, these technologies will support total protection for severe weather at your school, district, park, or sports complex. Here are the eight components you should look for.



1. REAL-TIME STORM TRACKING

The forecast can change a lot from when you listen to the weather report on your drive to work to when athletes, officials, and fans end up at your facility for the big game. That's why real-time storm tracking is so important to have in your weather safety stack. Modern visualization tools enable severe weather intelligence by incorporating dozens of up-to-the-minute data points like total lightning information, National Weather Service alerts, and radar.

KEY FEATURES TO LOOK FOR:

- Real-time systems with outstanding weather network quality providing updates every 2 seconds
- An extensive library of visual layers that you can add to your map for a more customized and integrated analysis

INDUSTRY EXAMPLES:

- Real-time storm tracking is perfect for Athletic Directors keeping an eye on any number of schools or field locations. With storm cell data, including direction, schools can know ahead of time what systems could impact their outdoor activities for the day.
- Parks and recreation centers can keep an eye on systems near and far to help guests plan their activities. For example, a park with hiking trails could warn hikers that storms are a certain number of miles away and could pose a lightning threat in a certain matter of time.
- Sports complexes can track real-time storm data to plan activities and ensure everyone on campus is informed that storms could be a risk. Real-time storm tracking also makes a difference when it comes to making a decision on whether to delay or reschedule a game or practice.



2. LOCALIZED WEATHER FORECASTS

Real-time weather information is important, but so is looking ahead. While forecasts can change, they're still an asset when planning for the days ahead. Unlike the forecast you hear on the news, a localized weather forecast focuses just where your campus is located. This is provided through on-site weather equipment connected to weather networks with comprehensive coverage around the United States.

KEY FEATURES TO LOOK FOR:

- 👁️ Network-based data so that your forecasts include information from your exact location, not the nearest airport

INDUSTRY EXAMPLES:

- Localized weather forecasts are integral to helping Athletic Directors plan for school events and district events on a weekly basis. While the weather can change quickly, accurate forecasts give you the most reliable look into the future weather.
- Parks and recreation centers host their fair share of outdoor events. When it comes to costly events like concerts, festivals, or company picnics, it's important to know what the weather will most likely look like before you start set up.
- Often tucked away from airports and large cities, sports complexes with lots of fields and acreage have their own unique weather conditions. It's important for Operations Managers to understand that the weather forecast they hear on the morning news probably isn't local to their specific complex. That's why localized weather forecasts are so key.



3. CUSTOMIZED MOBILE ALERTS

One important component of an ideal weather safety technology stack is alerting capabilities. You should be picky about your alerting tools and insist on using providers that enable full alert customization. The best alerting systems allow users to customize what weather events trigger the alerts, the distance when each event triggers the alerts, how the alerts are delivered, and who receives them.

KEY FEATURES TO LOOK FOR:

- 👁️ Real-time data delivery methods rely on push methods. This means the tools that use real-time data send the information automatically, without any manual requests made by the user.
- 👁️ Multi-channel delivery. Get alerts in a way that works for you. Look for providers that offer text message, email, desktop, and in-app notifications.
- 👁️ Multi-recipient capability is also key. You more than likely have a team of multiple admins and on the ground enforcers that need to stay in the know, so keep that in mind.
- 👁️ Threat and distance-specific alerts. For example, different alerts for total lightning when it's 12, 8, and 4 miles away from campus.

INDUSTRY EXAMPLES:

- If you're an Athletic Director managing multiple teams or even multiple schools, you're most likely on the go. With mobile alerts you can make sure you're always up to date on the latest weather threats that impact your students' locations as well as your current location.
- You don't have to operate a park that spans hundreds of miles to know that not everyone is always in the same place. Mobile alerts make it easy for recreation personnel to receive critical weather warnings no matter their location in the park.
- Everyone from the parking lot to the field house to the fields themselves need to know when dangerous weather approaches your sports complex. When your staff receives mobile alerts, they can mobilize guests and athletes no matter their location on your premises in order to move them to safety before they're at risk.





4. OUTDOOR ALERTING HORN AND STROBE

While your staff certainly need alerts to put plans into action, it's also imperative that you include a mass notification system that doesn't require access to a cell phone or smart device. That's where automated high-decibel audible and visible alerts come into play. Known as outdoor alerting systems, outdoor alerting strobes, or lightning horns and strobes, these tools make it easy to put your weather safety plans into action as long as all stakeholders know where to seek shelter.

KEY FEATURES TO LOOK FOR:

- Systems that use robust network-based weather detection technology pull storm information from global networks. Unlike single-node tools, network-based weather warnings see the whole picture and minimize back-and-forth situations.
- The latest systems provide a countdown clock so that decision-makers can clearly see how much longer they must wait to resume activities and communicate that information to all involved stakeholders.

INDUSTRY EXAMPLES:

- Works great in both school and district setting because it keeps trainers, coaches, staff, and visitors on the same page regarding weather threats. And most importantly, it ensures students know when to get to shelter the second danger is detected.
- It makes all the difference for parks and recreation centers where there is both a large area to alert upon and a lot of people at risk. The visual and audible components work for different settings too, like pool decks, beach front, and large parks.
- Sports complexes face a similar issue to both athletic programs and parks. Horns and strobes take away the guesswork and ensure all stakeholders understand weather threats are imminent.
- Often tucked away from airports and large cities, sports complexes with lots of fields and acreage have their own unique weather conditions. It's important for Operations Managers to understand that the weather forecast they hear on the morning news probably isn't local to their specific complex. That's why localized weather forecasts are so key.





5. 24/7 ACCESS TO METEOROLOGISTS FOR EVENTS

Imagine being able to pick up a phone and talk to an expert about a potential severe weather event at your facility. That's what it's like when you have meteorological support. When it comes to more complex weather events, there is nothing more valuable than the ability to talk to a meteorologist and get their advice.

You should look for meteorologists who will tailor forecasts to your needs, answer the call no matter the time or day, and answer any questions you may have without judgment.

KEY FEATURES TO LOOK FOR:

- 👁️ 24/7 coverage so you have expert advice no matter where your location or what the clock says
- 👁️ A team of meteorologists who meet, confer, and check each other's forecasts and alerts to ensure quality

INDUSTRY EXAMPLES:

- The weatherman on the radio says there will be rain in your region but your real-time weather data says it'll just miss your school location. Should you call the game or not? You can take the guesswork out of decision-making by consulting an expert meteorologist.
- Just exactly how much rain is going to fall at your park? Will you be able to host that 5K run tomorrow morning? Rain rates will only tell you so much. Meteorologists can hop in and let you know the amount of rain expected and how it will impact your different running surfaces.
- What about more obscure weather threats? What if there are wild fires in the general area causing bad air quality? Do you call off your event?
- When you manage a sports complex, you need your large tournaments to be a success for everyone. That's hard to do when severe weather looms in the distance. Meteorological advice is the strongest level of protection from severe weather. Their input will help you make the right decisions and stop second-guessing yourself so that you can make sure your tournament is a success.



6. ONLINE WEATHER CENTER

An Online Weather Center gives your entire team a centralized place to go to see current weather conditions like wind speed, temperature, lightning, WBGT readings, and humidity. Good ones also include space for weather warnings, forecasts, and weather camera views.

An online weather center is a great communication tool for all stakeholders and gives administrators the opportunity to link to on various websites. This will improve overall weather awareness and safety at your recreational facility.

KEY FEATURES TO LOOK FOR:

- 👁️ Real-time conditions updates that are easy-to-read and share
- 👁️ Personalization options that include space for school name, logo, location, and live weather camera feed integrations to improve school spirit

INDUSTRY EXAMPLES:

- An Online Weather Center look great on school websites and let everyone in the community know of current weather conditions and forecasts. The best part is you can view these next to any game or practice changes due to the weather.
- A great way to spruce up your recreation and parks website is with an Online Weather Center. You can personalize your site experience even more by adding advice for each type of weather condition as it pertains to the different activities at your park.
- The leagues and teams that frequent your sports complex could be traveling from far away. An online weather center allows a central location for teams far and wide to understand and plan for the specific weather conditions at your facility.





7. PUBLIC WEATHER DISPLAY

Most facilities find it beneficial to provide weather information in a physical spot on campus. We recommend you do this with a public weather display. You can set up this display in a welcome area, field house, lobby or any other centralized location where other important notices are posted to give guests and staff a physical center for weather information.

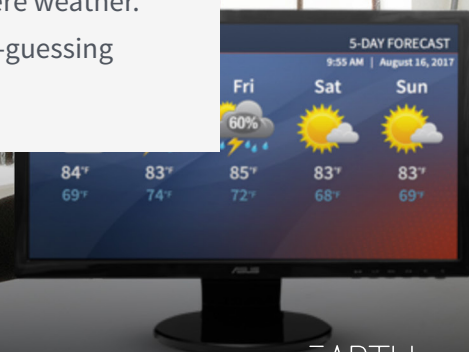
Another element to a public weather display is the ability to integrate the visualized weather data into existing operational platforms like websites, intranets, social media accounts or apps. Ultimately, the goal is to keep the public informed through all channels, so finding a solution that allows for that is key.

KEY FEATURES TO LOOK FOR:

- 👁️ A display that includes basic conditions so that community members can quickly digest weather information and carry on with their day
- 👁️ Customization that allows you to include your organization's name, logo, location, or a message of your own
- 👁️ The ability to integrate weather data into existing systems

INDUSTRY EXAMPLES:

- A public weather display in the main office at your school provides students, staff, and visitors with a physical location to access hyperlocal weather data.
- At parks and recreation centers, a public weather display does well in main buildings, bathroom buildings, or any other main area that's protected from the elements.
- For sports complexes, a public weather display is a great way to show weather forecasts for teams that are playing later in the day or maybe a few days down the road.
- When you manage a sports complex, you need your large tournaments to be a success for everyone. That's hard to do when severe weather looms in the distance. Meteorological advice is the strongest level of protection from severe weather. Their input will help you make the right decisions and stop second-guessing yourself so that you can make sure your tournament is a success.





8. MANAGED WEATHER EQUIPMENT

Weather stations, lightning sensors, and weather cameras are three important pieces of weather equipment that outdoor recreation facilities use to protect stakeholders from severe weather. They're only beneficial to your overall weather safety plan if they function properly. As with any safety purchase, you want to make sure your weather safety solution is long-lasting. That's where the value of a weather maintenance team lies.

If one of your tools isn't working properly, a well-positioned team of weather maintenance experts should only be a call away to help your safety plan get back to business as usual.

KEY FEATURES TO LOOK FOR:

- 👁️ You'll want your weather equipment managed by an in-house team of experts, not onetime contractors. This ensures the people maintaining your equipment are accountable
- 👁️ As an added value, some organizations have meteorologists on their maintenance teams, so you know you're getting the best possible service.

INDUSTRY EXAMPLES:

- When schools install weather stations, lightning sensors, and weather cameras they are not only safer, but they enhance STEM learning as well. Your science and math teachers will love to play with the data from your school weather station.
- Recreation and parks departments are supposed to provide their communities with a safe place to participate in sports, recreation, or arts programs. You can make sure guests know exactly what to expect with weather data straight from your facility. It doesn't hurt to show them a live image from your on-site weather camera, either.
- Sports complexes benefit from having an on-site weather station as a way to let everyone who plays there know what the weather is like before they arrive.

While you can pick and choose which weather protection tools you'd like to include, please note that only by using all of these together will you have the strongest weather safety policy.



Conclusion

To review, you are now ready to put in place a best-in-class weather solution.

As a recap, don't forget to review these six considerations:

1. What weather events commonly impact school athletic programs, parks and recreation facilities, and/or sports complexes
2. Which stakeholders feel those weather impacts
3. Which group you fit into
4. The three pillars of an effective weather safety policy (Analyze, Plan, Implement)
5. What eight components go into an effective weather safety stack
6. Where to go for more information

Need help designing and implementing your weather safety policy? We are here to help! Give us a call at **301-250-4000** | Email us at **info@earthnetworks.com**

