

# When Retail Customers Count

*How understanding customer traffic patterns can help good retailers become great retailers*

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# 3

CHAPTER

## **The Impact of Weather on Traffic**

You can't control the weather,  
but you can control what you do  
when weather happens.

## The Impact of Weather on Traffic

IN MANY WAYS THE WEATHER and traffic are kindred spirits. Like weather, traffic is somewhat unpredictable and constantly changing. Although the science of meteorology and the technology meteorologists use to forecast the weather has advanced significantly, forecasts are still only forecasts.

Like the many factors that can influence retail traffic patterns, weather is no different. In this case, management can really claim they have no control over this one! What happens to traffic when a major snow storm hits? What happens when the weather is sunny and warmer than normal? Heavy rain? Extreme cold?

Weather forecasting has evolved and the availability of weather information and forecasts has increased significantly over the years. With this greater availability, retail managers have a potentially powerful tool at their disposal. Of course, weather forecasts aren't always right, but they have never been better. If a retail manager has an understanding of how different types of weather have impacted his store's traffic patterns historically, then he will be able to make an educated guess at what might happen the very next time that particular weather occurs.

### THE WEATHER

- Traffic and weather
- Store characteristics and the weather
- Managing the weather

In this chapter we will explore the different ways weather can impact retail traffic. It may not be exactly what you thought. In addition to describing the impact on traffic patterns, we'll also discuss how managers can make the most of weather—even inclement weather.

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## Traffic patterns and weather

Naturally the type of weather conditions that impact retail traffic will depend upon what typical or normal conditions are for a particular geographic area. Obviously, the kind of weather that will impact retail traffic in Buffalo will be different in Miami.

The key is for retail managers to understand specifically what types of weather conditions or events affect his or her store. In order to do this effectively, retail managers need to stay on top of weather forecasts and consider how those forecasts might impact traffic in their store based on historical patterns.

When we consider the impact that weather can have on retail traffic patterns, it is helpful to think of the weather impact as a positive response (traffic increases), a negative response (traffic decreases) or neutral (traffic patterns are unaffected).

Weather conditions can have a positive impact on traffic, a negative impact or no impact. Bad weather can impact traffic in different

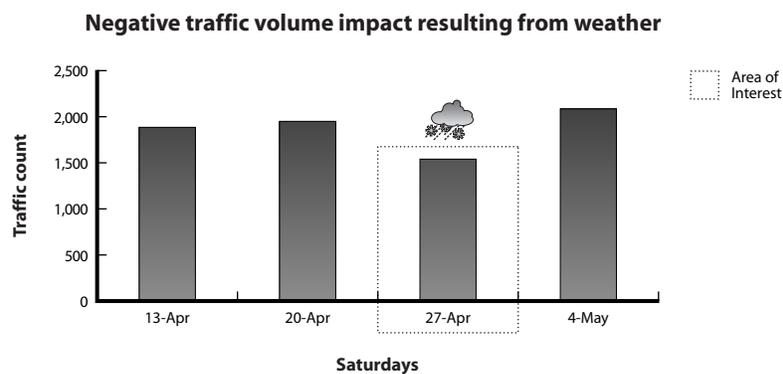


Figure 3-1

ways. For example, the chart in Figure 3-1 shows the traffic levels by day for a range of Saturdays for a particular retailer. On April 27, there was a material weather event and, as the chart shows, the traffic response was negative—that is, traffic dropped by 22%.

In the next example of an inclement day shown in Figure 3-2, bad weather actually resulted in a positive traffic response for this retailer—traffic actually went up by 17% compared to the non-inclement Saturdays.

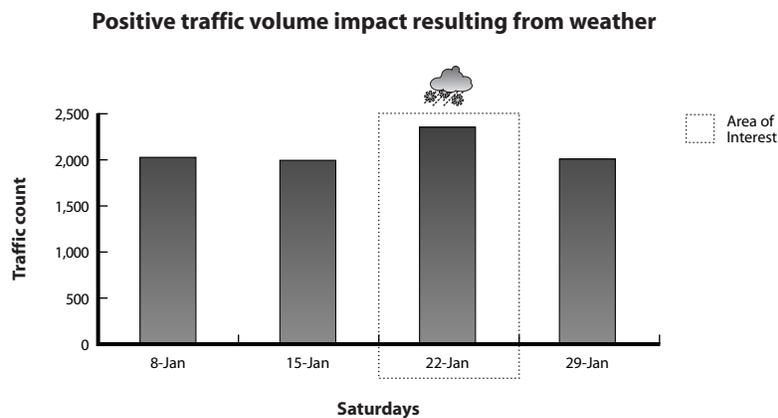


Figure 3-2

We'll now look at some examples of more specific traffic responses to various weather conditions—both positive and negative.

### Precipitation

Generally, any type of weather that impacts prospects' mobility will have a negative impact on traffic. As one might expect, snow, especially snow storms with blowing snow that create poor visibility, have a significant impact on traffic. Snow that accumulates on the streets and walkways tend to have the most negative traffic response. Although any type of precipitation can negatively impact traffic, the more severe the precipitation, the more negative the traffic response will be, as illustrated in Figure 3-3.

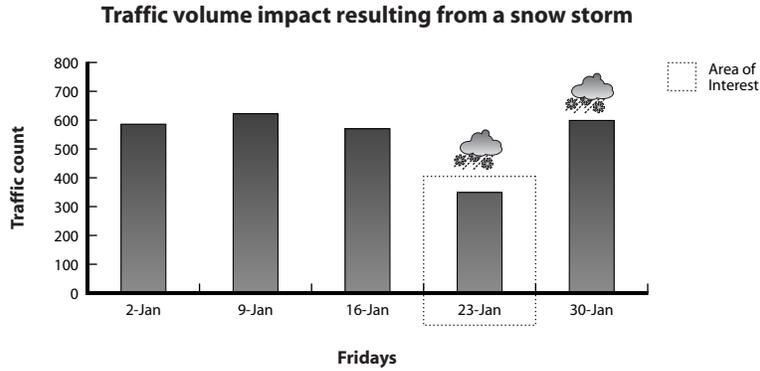


Figure 3-3

### Negative traffic response

Weather can have a significant impact on traffic volumes. The chart in Figure 3-4 below shows traffic volumes by day for the month of January. From January 2 through January 24, average daily traffic volumes were approximately 11,300 counts. From January 25 through January 30, the region was hit by a strong blast of winter weather. Temperatures dropped significantly below seasonal averages and there were large accumulations of snow. As the chart

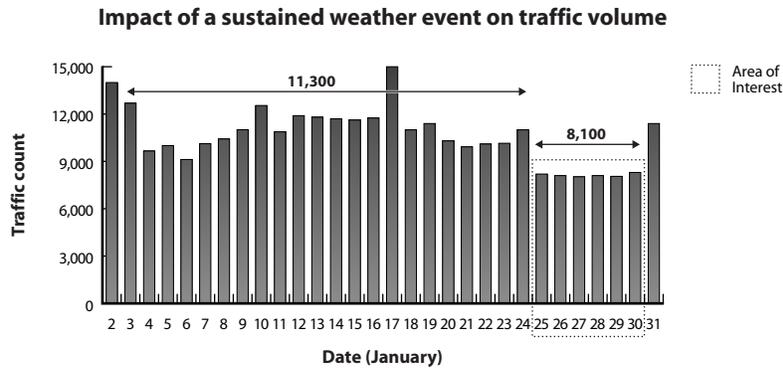


Figure 3-4

shows, the average daily traffic during this period was just over 8,100 counts—that’s 28% below the daily average prior to the inclement weather! Once the weather returned to normal, traffic increased—but only back to seasonal average levels, which means some traffic was lost.

### Positive traffic response

Inclement weather does not always create a negative traffic response. In fact, bad weather can actually create a positive traffic response for some retailers. In the chart below, a nasty winter storm rolled into the area, bringing with it freezing rain and treacherous driving conditions. As the chart in Figure 3-5 shows, the retail traffic response in this retail location was actually positive! How can this be possible? Freezing rain significantly and negatively impedes mobility—how can the traffic response be positive?

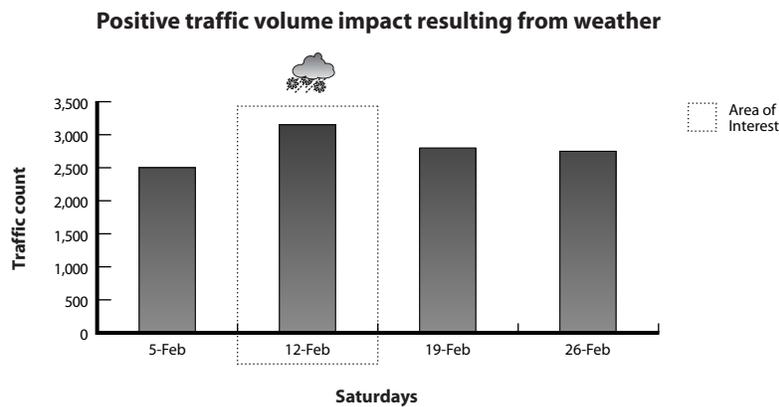


Figure 3-5

Although it is instructive to generalize about traffic responses to weather, as previously mentioned, traffic response will vary based on a number of factors including product offering, store location, and other site characteristics which we will now examine in more detail.

Oh, and as for this example where the positive traffic response seems counterintuitive—what do you want to bet that this particular retailer sells bags of ice salt, snow shovels and various other

items that are extremely popular and almost necessities for making walkways and driveways safe in freezing rain conditions?

## **Store characteristics and weather impact**

Although we can generalize how different types of weather events may impact traffic patterns, in order to understand how weather might impact your store, we need to first understand more about your location. Weather impacts different types of retailers in different ways—bad weather for some retailers can drive traffic up; for other retailers good weather can drive traffic down.

### **Product Offering—selling umbrellas on a rainy day**

Fundamentally, traffic response as it relates to weather will be directly affected by what you sell. If what you sell is what people desperately need, regardless of the weather, your traffic may remain relatively unaffected. To the extent that your customers can defer their purchase to another day (*i.e.* when the weather gets better), your traffic will be impacted to some extent. Clearly what you sell will affect how weather affects traffic in your store. Let's look at the two broad categories: necessities and deferrable purchases.

#### **Necessities**

Regardless of the weather, if customers need what you offer, traffic may be relatively unaffected by weather conditions. That said, it is important to keep in mind that almost any purchase can be deferred—at least over the very short-term. For example, generally, people cannot defer grocery shopping for an extended period of time; regardless of how inclement the weather is, people will still need to buy food. If the weather is really bad, you might decide to dig a little deeper in the pantry to find something that could work and hold off on grocery shopping until the next day or even the day after, but if you have a baby in the house and you are out of baby formula or diapers, it won't matter how inclement the weather is, Mom or Dad will make the shopping trip—they have no choice. And of course, in the case of extreme weather events like hurricanes, for example, retail traffic in hardware and grocery stores can spike dramatically as people clamor to stock up on survival items.

## **Deferrable purchases**

As mentioned, almost any purchase can be deferred, but some purchases are more deferrable than others. Retailers who sell products like automobiles, furniture or consumer electronics for example, tend to see significantly more negative traffic responses to inclement weather. It just makes sense. Who in their right mind is going to risk life and limb to travel out in a blizzard to check out the latest in home theatres or to have a peak at the new model sports sedan at their local dealership? The reality is that a few brave souls still will venture out, but many more won't. The challenge facing retail management is to predict how many—quantifying the expected traffic response. However, just before we tackle this issue, let's review how physical site characteristics can also affect traffic response.

## **Physical location characteristics**

In addition to the types of products a retailer offers, a number of physical site characteristics can influence the traffic response to weather—both positively and negatively. Given that precipitation is a key variable in traffic response, location and accessibility need to be considered.

## **Mall locations**

Although extreme weather can influence any type of retailer, malls tend to be affected in different ways. Inclement weather with precipitation can actually increase traffic as customers flock to malls to get out of the elements. Furthermore, mall shopping enables prospects to visit many retailers all under one roof. Interestingly, mall traffic can also be driven up when the weather gets extremely warm as people flock to the comfort of air conditioned malls to get a respite from the heat.

## **Freestanding destination locations**

The proximity to parking and the distance from the parking lot to the store entrance will influence the traffic response to inclement weather. Naturally, if customers have a long walk or if there are any other factors that might mean that customers are more exposed to the elements, then traffic may be negatively affected.

### City center locations

Inclement weather tends to impact free-standing suburban locations more than stores located in city center locations. This is intuitive as prospects traveling to a city center offices are already forced to travel to the area anyway.

The charts in Figures 3-6 and 3-7 show the traffic responses at two stores from the same chain in the same market. Store A is located

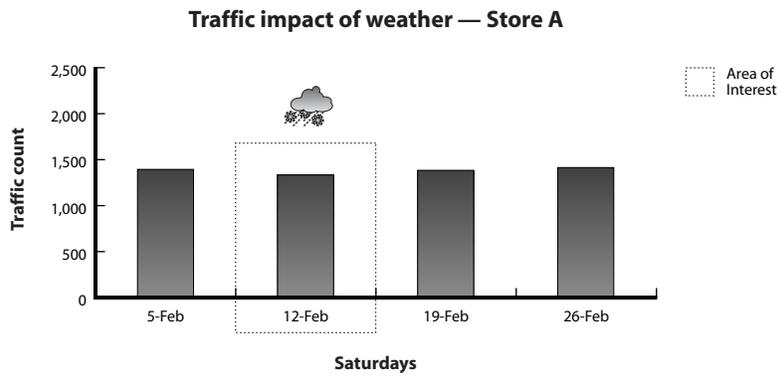


Figure 3-6

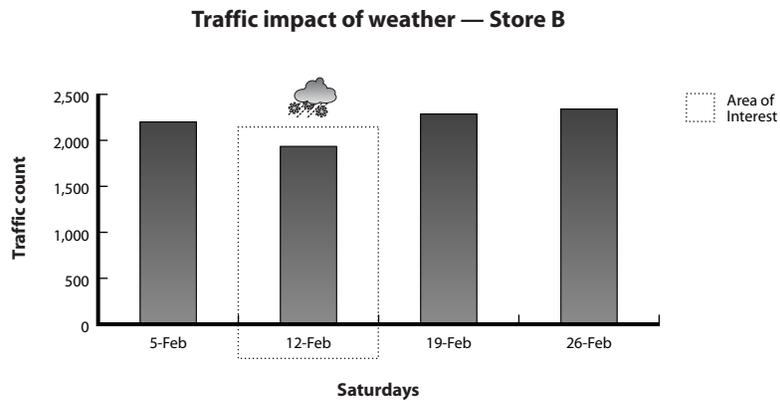


Figure 3-7

in the city's downtown core, while store B is located in a suburban power center. As the charts show, the traffic response to the inclement weather at store A is significantly less than store B. Specifically, store A received traffic levels only 5% off the average daily traffic for the period, while store B was off 15% from the average.

### Travel distance and vehicular traffic

The travel distance required getting to your shopping destination and the complexity of the trip will impact the traffic response to a weather event. For example, driving around in a major city like Chicago in bad weather is a considerably more daunting task than driving in a smaller city like Peoria. If you are a furniture retailer located off a major freeway in Chicago, naturally you would expect a more negative traffic response than a suburban location that does not require travel on a major freeway.

### Weather and seasonality

In a way, the changing of seasons is just another weather change. While we tend to think of weather events in the short-term (*i.e.* the current conditions), a change in season is essentially a larger change in the prevailing weather for a specific geographic area.

Naturally weather changes over the seasons—and so does retail traffic in your store. Good and bad weather is relative to the season. Bad weather in the summer might be a major rain storm;

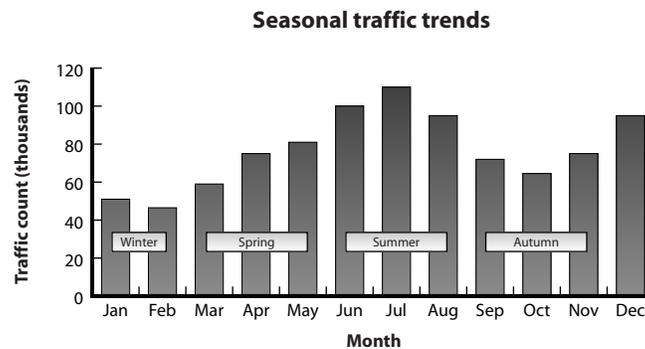


Figure 3-8

bad weather in the winter might mean freezing temperatures and a blizzard.

In order to manage the impact of the weather, retailers need to understand not only how their traffic changes based on short-term or extreme weather conditions, but also how it changes over the seasons. Traffic patterns over the seasons might look like the example in Figure 3-8.

## **Managing the weather**

Of course there really is no way to “manage” the weather—that said, by knowing what the likely traffic response to various weather conditions and weather events in your store, you will be in a position to guess a lot better than you might have otherwise. There is no question that weather will impact traffic—the management challenge is to try to estimate what the impact will be and then undertake store-level strategies that benefit the business.

The key to this is to make sure you have enough data points to make an educated guess. If you really only consider what happened the last time a particular weather event occurred (assuming you can actually remember), you may guess wrong.

In this section we will discuss specifically how managers can use weather and traffic information to optimize performance and reduce costs.

## **Statistical weather modeling and other rocket science**

The statisticians reading this book might say that in order to accurately and precisely understand the traffic response to weather, formal statistical techniques need to be employed. This may indeed be true, and in fact, with enough traffic and weather data you could actually use statistical models to calculate probabilities on the impact of weather; however, like meteorologists who employ very sophisticated models and techniques for forecasting the weather, no matter how sophisticated the models, they are not always right. Retail managers have a lot to manage—doing complex traffic modeling based on weather forecasts is likely not something a typical retail manager is trained to do or should spend time doing—hey, you have a store to run here!

## Management tactics

Although most retailers intuitively understand that weather can impact business, it can be onerous to track, measure and recall previous weather events and the corresponding impact on traffic. The extent of management focus on weather is usually minimal if it exists at all. For example, you might overhear a manager saying, “The last time we got hit by a snow storm like the one they’re forecasting, the store was dead.” Hardly a rigorous analysis, though directionally correct. And, that’s the point. Being *directionally* correct is really all a manager can hope to be. Moreover, being directionally correct can be a very powerful tool in helping make the most of what Mother Nature throws at you.

Specifically, here is what retail managers should do in order to manage the impact of weather in their store more effectively—to make the most out of the weather:

### 1. Monitor traffic

In order to have any hope of managing the impact of weather, managers need to track traffic. Without a baseline of traffic patterns, it’s impossible to measure what the impact will likely be. It’s not good enough to say, “last time we had a snow storm like this the store was dead.” The key problem with this type of weather assessment is that although it may be directionally correct, it relies on human recollection—which is never very reliable—and it’s not quantifiable. What does “dead” mean? Was traffic down by 50%? 25%? Or something else?

### 2. Review previous traffic patterns

The only way a manager will be able to practically make decisions about the weather with traffic data is if she can quantify the likely impact. Assuming the retailer has been tracking traffic over an extended period, the first step is simply to review what happened to traffic during similar weather events in the past. For example, the chart in Figure 3-9 shows a series of days where a significant snowfall occurred. By comparing these snowfall days to average traffic volumes for these days shows that the traffic response ranged from a decrease of 15% to 25%. Now the manager has something to work with—I guess “dead” means a 15% to 25% decrease in traffic!

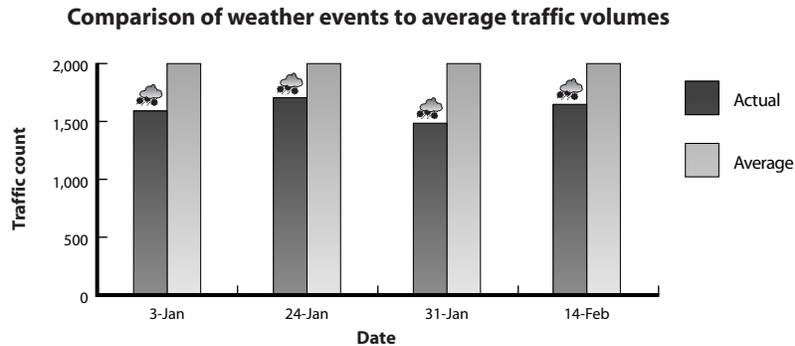


Figure 3-9

By understanding what has happened in the past, management will have a good idea of what might happen to traffic when similar weather is forecast and can start to quantify the impact.

### 3. Review staffing levels and adjust

Staffing is usually the first place to start in deciding what to do about weather. Depending on the retailer, a manager might decide to reduce staffing in anticipation of a decrease in traffic as a result of expected weather. In this case, if a manager expects a 20% decrease in traffic, he might adjust staffing levels by this amount. That said, because weather is unpredictable, the manager would be well advised to be more conservative in their staff reduction because you can never tell exactly how traffic might be affected. For example, the manager might conservatively decrease staffing by only 10%—this would deliver an expense reduction to the company, but also provide enough staffing in the event that the traffic response is not as significant as expected. If the manager cuts too aggressively, say 25% of staff, and traffic levels were only modestly impacted or (hard to imagine) the weather forecast was not correct and the store traffic was either normal or above normal, this decision could hurt the business as frustrated prospects walk out because of long lines at tills or because they can't find a salesperson.

#### **4. Other “non-customer” activities**

The answer is not always to look at reducing staff. As mentioned, the weather and the resulting traffic response cannot be estimated with complete certainty. However, if historical traffic patterns show that traffic will likely drop given a particular expected weather event, there's a good chance it will again—but it might not. Can you afford the risk? Some managers just don't feel comfortable reducing staff or, because of company policy and/or expectations on the part of employees of getting a minimum number of working hours in a week, they simply cannot alter staffing levels.

In these situations, there are other ways managers can use traffic and weather information to their advantage. In retail, customers come first, or that's how it should be—however, there always seems to be more to do than there is time in the day. When the weather turns bad and the result is decreased prospect traffic, this is an excellent opportunity to start tackling those countless tasks that are important but there never seems time for. Two classic areas are merchandising and training.

- **Merchandising**

Even in stores that are impeccably merchandised, there is always something to do. Major changes to plan-o-grams and store layouts can require a significant effort. Whether it's a total re-set of a particular department or just a modest clean-up, taking advantage of reduced prospect traffic to merchandise the store is a great use of the time. If a manager is expecting a decrease in traffic during the upcoming weekend based on a weather forecast, she can create a merchandising “to do” list in advance of the weather event. If the weekend comes and the weather forecast was wrong, no problem—it's business as usual. If the traffic response is materially negative, she will be ready to get staff working on merchandising right away.

- **Training**

Whether it's learning about company policies, new systems, products or good old-fashioned sales techniques, training is always a challenge to schedule and deliver at the store-level. Like merchandising, inclement weather that results in a

negative traffic response provides an excellent opportunity to conduct training. The key is to plan ahead and be flexible. Once the manager has estimated what the traffic response might be to the forecast weather event, she should then devise a mini-plan that balances training requirements with service levels. For example, it would not be prudent for a manager to plan an “all hands” training session based on weather. However, the manager could organize a short training session in such a way that if more prospects visit the store than was expected, the team would be ready to jump back into action.

Inclement weather that negatively impacts prospect traffic is not always a bad thing. As this section shows, sometimes this type of weather is really a great opportunity for managers to get ahead by knocking off some of those things that they never have time to do. These activities might not improve sales on the day of a major snowstorm, but it will prepare the store and staff to be even more effective when the weather gets better—and that will positively impact the business in the long-run.

## Chapter Summary

- You can't control the weather but you certainly can control what you do when weather happens.
- The traffic response to weather can be negative (*i.e.* traffic drops compared to average levels), it can be positive (*i.e.* traffic increases compared to average traffic levels) or it can be neutral (*i.e.* there is no impact on traffic patterns).
- One of the key determinants to traffic response is precipitation, and more specifically, precipitation that negatively impacts prospect mobility.
- In addition to precipitation, there are numerous location-specific factors that will affect the traffic response to weather including product offering and the physical characteristics of the location.
- Product offering also plays a role in traffic response. When the products offered are necessities (*e.g.* food, medicine, *etc.*) traffic will be less affected than for retailers who offer products that are not necessities.
- Physical location characteristics such as mall versus non-mall, city center versus suburban, travel distance and market size (*i.e.* large city versus small town) can all influence the traffic response to weather and need to be considered on a location-by-location basis.
- The changing seasons represent changes to the prevailing weather patterns for a particular geographic region. Managers should be aware of how the changing seasons impact traffic.
- Although managers can employ more robust statistical methods to develop a higher level of precision in modeling the traffic response to a given weather pattern or event, it is likely not practical or necessary for a manager to do this. By reviewing previous traffic patterns compared to weather

events, managers can get a good idea of what will likely happen—at least directionally. By looking at the traffic and weather data in a little more detail, they can quickly develop a quantitative estimate of what the traffic response will be. With this estimate in hand, the manager can either make a staffing adjustment (*i.e.* staff up or down in anticipation of the traffic response) or plan to do other “non-customer” activities such as merchandising or training.