

SANITARY SEWAGE, WATER SUPPLY, PARKING REQUIREMENTS AND.....FOOTBALL?

You may not know this (since the Colts aren't playing), but next Sunday is the Super Bowl. I know all of us are probably not football freaks, but in honor of the season, I thought it would be cool to tie some geeky equations to the game. (And that's why engineers are horrible at dinner parties, folks. We think stuff like this is cool.)

In any event, here goes.....

PEOPLE VISITING TAMPA BAY

Tampa's resident population is approximately 385,000 people (that a little bit larger than the population of Allen County, IN.) Around 115,000 people are estimated to travel to the Super Bowl site each year (depending on the source of the information.) In Tampa's case, (if everyone that went to the Super Bowl came from out of town) that would result in a population spike of around 30%!

Every one of these visitors from out of town will need support to remain comfortable and safe while in Tampa. And by support, I mean a bathroom.

UTILITY TOURISM?

We often hear about how much money will be dumped on a community during a major event like the Super Bowl

(more on that later), but what I would like to discuss first is everything else that gets dumped on a community during the event. (This is the fun stuff that makes us unbearable at dinner parties.)

A "normal" human being in the United States of America uses about 50 gallons of water per day. Some of that water is for washing clothes, which may be reduced while visiting another city, so we will reduce our demand for tourists down to about 35 gallons of water per day, just for fun. (If you're surprised by that number, just think about all the washing, cooking, cleaning, etc. that you and your family do every day.)

So, if we are allowing for all 115,000 tourists to use 35 gallons of water each day they are in town, how many gallons of water do we need to get ready? About 4 million gallons of water have to be purified, tested, and ready to go for their guests. (And you thought cleaning the bathroom was a chore.)

Does that mean they will get the water ready ahead of time? Probably not. You see, there is actually just a small percentage of the water supply that is stored up and ready to deliver on a moment's notice. Most water treatment facilities are built to

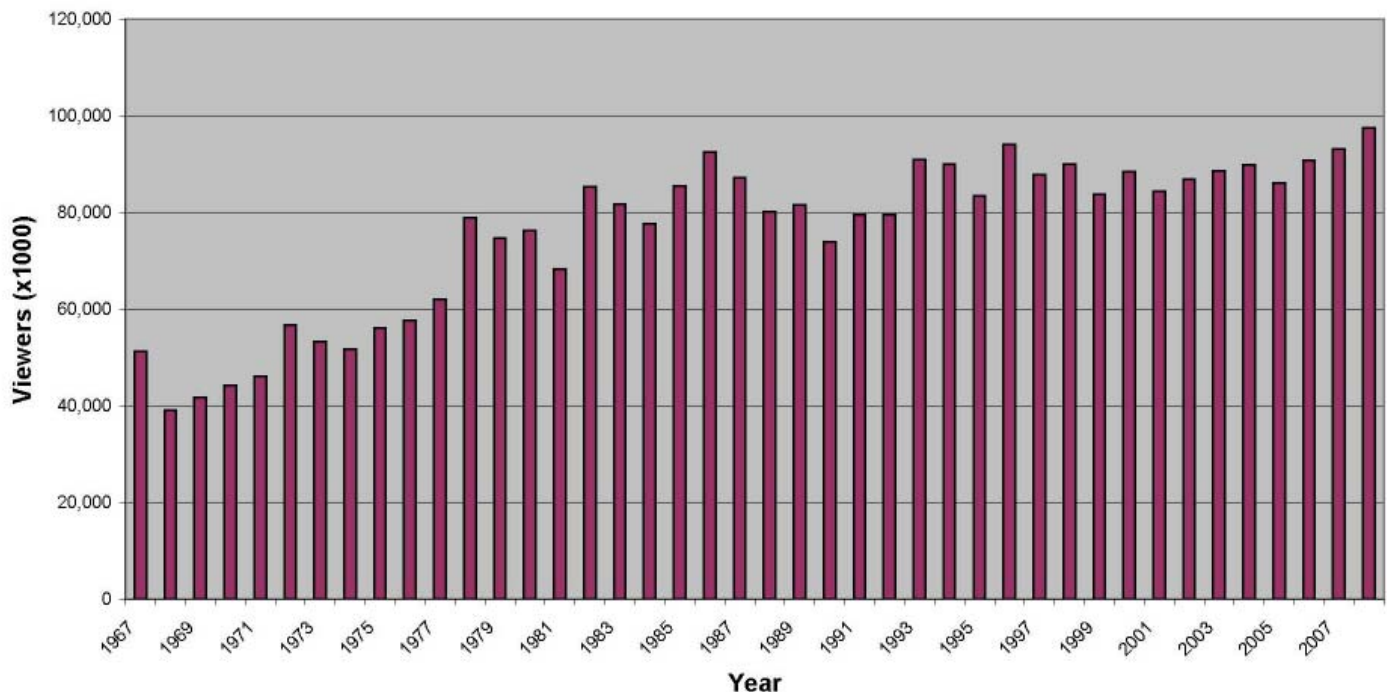
accommodate a peak demand that is significantly higher than their normal "every day" demand. That additional plant capacity could be stretched by this event, however. Especially with a 30% spike in population on the big day.

SANITARY SEWER

Obviously, drinking the water is not the end of the road. Everytime we run the faucet in the sink, wash the dishes, wash our clothes, take a shower, or use the toilet we send some water down into the sanitary sewer collection system.

This collection system (pipes, man-holes, pumping stations, etc.) will deliver that sewage to the waste water treatment plant to clean up the water for discharge back to the environment. Again, we can't treat the water ahead of time (although the Tampa sewage system might have storage devices within the collection system that could all be emptied ahead of time to make sure they can keep up with the flow....), so they have to make sure that their treatment plant can survive a 30% spike in flow on that day. If it can't keep up with the flow and there aren't enough places to store the effluent, raw sewage will be discharged into the environment.

Estimated Super Bowl Viewers (x1000)



SUPER BOWL TOURISM...CONT.

What happens if it's raining, too?

A little-known fact about sanitary sewer collection systems is that they end up handling some rainwater right along with the sewage from the utility customers. It is very difficult to keep all the rainwater and ground water out of the system, and some of it ends up going to the plant for treatment.

In fact, in some communities, the wet weather flow to the plant can be multiple times as much as the dry weather flow to the plant. Therefore, rain plus Super Bowl could mean big problems for their receiving streams and rivers.

TRANSPORTATION

You might think that Tampa wouldn't have too many problems with a lot of these issues because they do have a professional football team in town, and they should be used to the crowds, right? Well, that will definitely help, but the Super Bowl is a whole different animal than a regular season game.

First of all, most of the Tampa Bay fans that regularly attend games are going to live within driving distance. They may even live close enough to the stadium to walk or take a bus. Additionally, they know the area because they have been there many times before and can slide into their preferred parking areas with just a little hassle.

Now, imagine all the visitors from Pittsburgh and Phoenix showing up in town for the first time. Some of them drove down because they couldn't get all their beer and luggage on the plane. Some of them left most of their libations at home, flew down, and then rented cars. The last few of them flew and took taxis. That last segment is the ones that will cause the least amount of trouble for the transportation network, but the taxi industry could be stretched to the max.

All those out-of-towners will be looking for someplace to park really close to the stadium so they can tailgate and enjoy the festivities. Every road and every parking space will be packed to the gills with yellow and red fans looking for a good time.

Here's a little fun fact for you:

Tampa's airport has been handling about

25,000 incoming passengers (average per day during December, 2008). If 40% of the tourists for the Super Bowl want to fly into Tampa and avoid travel from another town, that will result in 46,000 additional passengers on top of their 25,000 per day average. Chances are, the airport can't handle that volume. That means more people will be landing in other towns nearby (Sarasota, Orlando, Fort Myers, etc.) and driving rental cars into Tampa for the game. That number could be as high as 100,000 people coming into town in a car. If we guess that those people will car pool at a rate of about 2.5 people per car, that means 40,000 cars.

You can park about 100 cars per acre in a standard (dense) parking lot. That means Tampa will need about 400 acres of empty asphalt sitting around somewhere to handle all their guests.

MONEY, MONEY, MONEY

So, why bother with all the hassles of hosting a Super Bowl, anyway? Wouldn't it

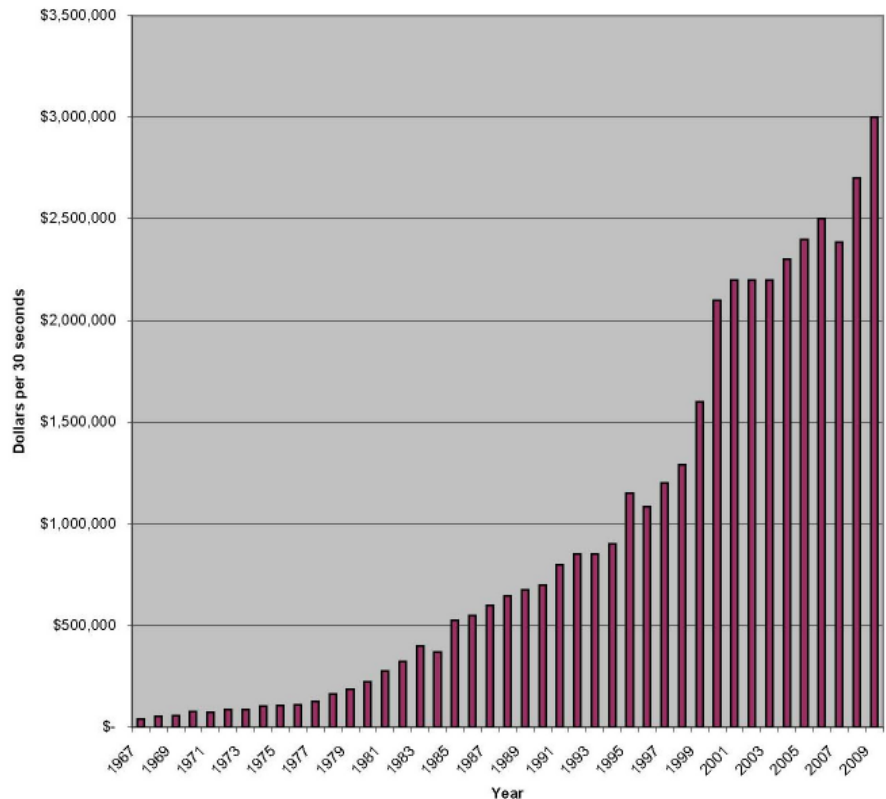
be easier to just coast along and not worry about all this additional loading on your city's infrastructure? Well, it would be easier to coast, but you don't get paid as much.

Estimates for spending in the local economy of Tampa range from \$150 Million to \$400 Million during the event. A pretty good percentage of that money is spent by local businesses and merchants cleaning up, marketing, and stocking inventory for the game. The rest of it is spent by the fans of the game, who might spend an entire week in Tampa prior to the game. Some estimates put individual tourist spending at over \$600 per person per day!

This pile of cash is what makes all the effort to attract and host the Super Bowl worthwhile to the local community. Hopefully, Indianapolis will experience the same windfall when they host the Super Bowl in a couple years.

See you next month!

Super Bowl-30 Second Ad Cost



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