Information in Air Quality Management

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Good morning. Now I have to tell you all up front that I was the second choice for the Keynote Speaker today… so if you don't like it, realize that you're not getting Ed and Jerry's first choice. Actually, Mollie O'Neal, who is waiting to be confirmed as the new AA for EPA's Office of Environmental Information was their first choice and until that process is completed, Mollie is limited in what she can do… so you got me instead.

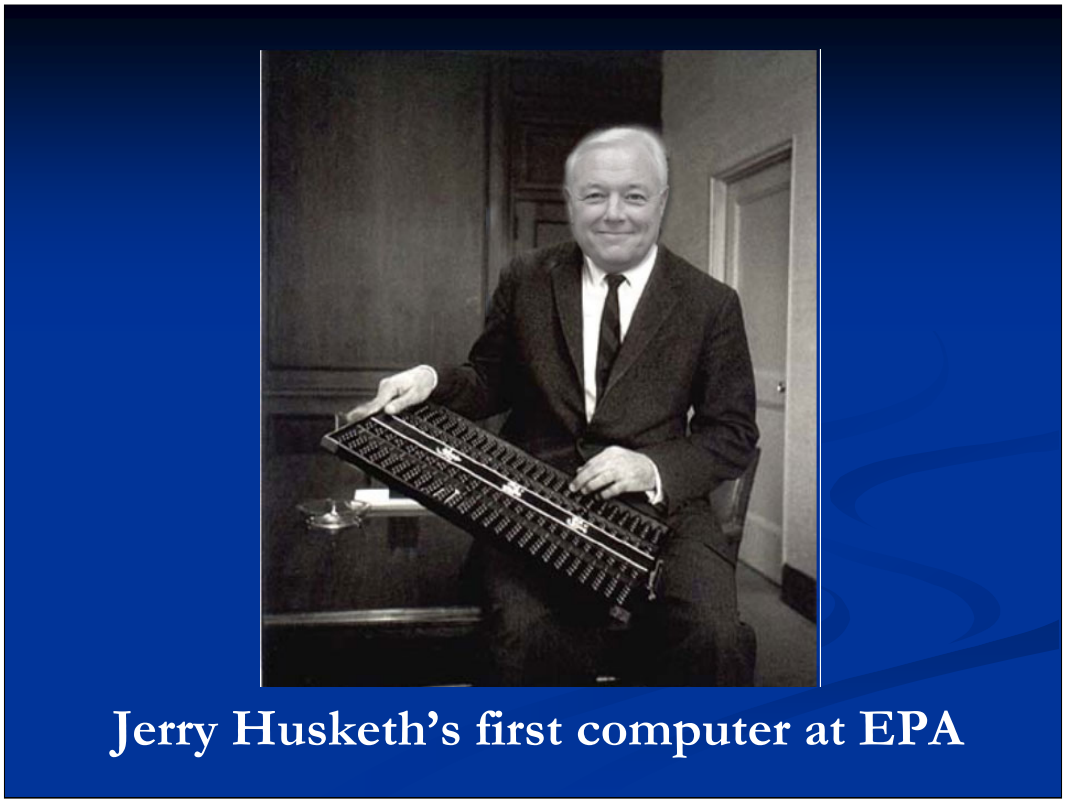
Of course the good news for me is that I don't have to be great… I'll just tell Ed, well what did you expect for your second choice.

But seriously, I am thrilled to be here in my new role as Associate Director of the Outreach and Information Division and to speak with all of you and I thought I'd focus my address on just how information (specifically air quality data) is used in air quality management. It's a lot different than it was 20 years ago.

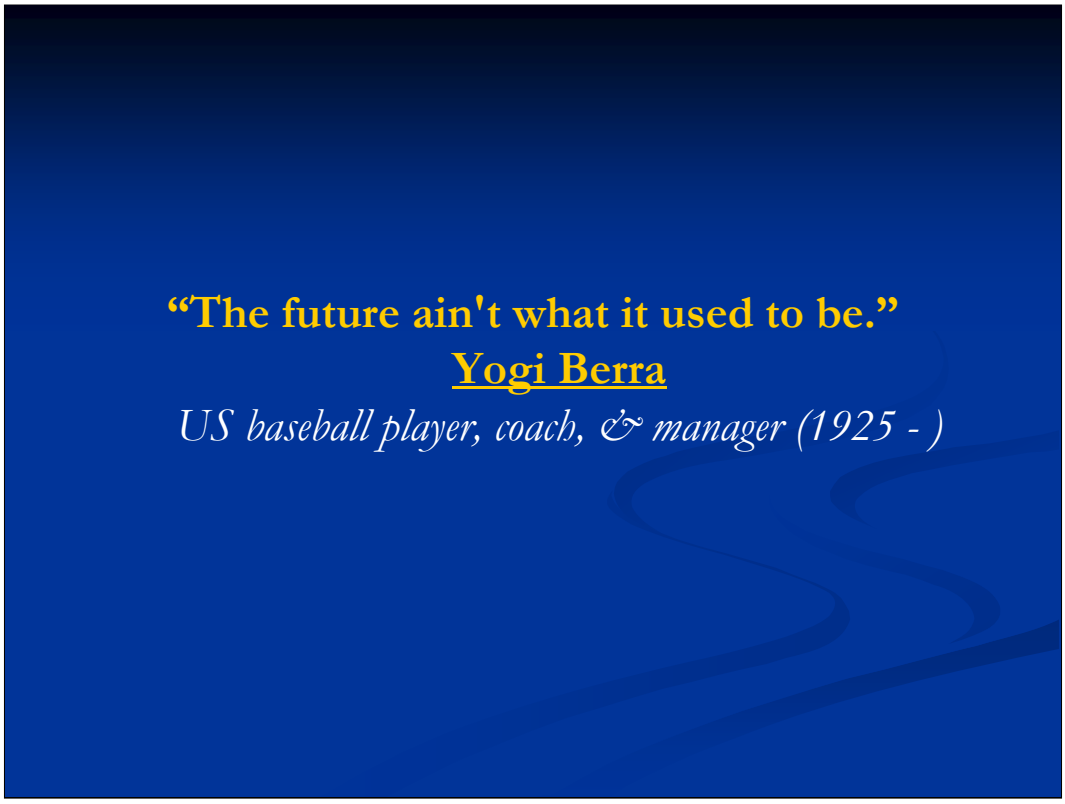
Donora, Pennsylvania - 1948

This eerie photograph was taken at noon on Oct. 29, 1948 in Donora, PA as deadly smog enveloped the town. 20 people were asphyxiated and more than 7,000 became seriously ill during this horrible event.

Air quality has come a long way… as evidenced by this noontime photo from Donora, PA in October 1948… and data processing has come along way.

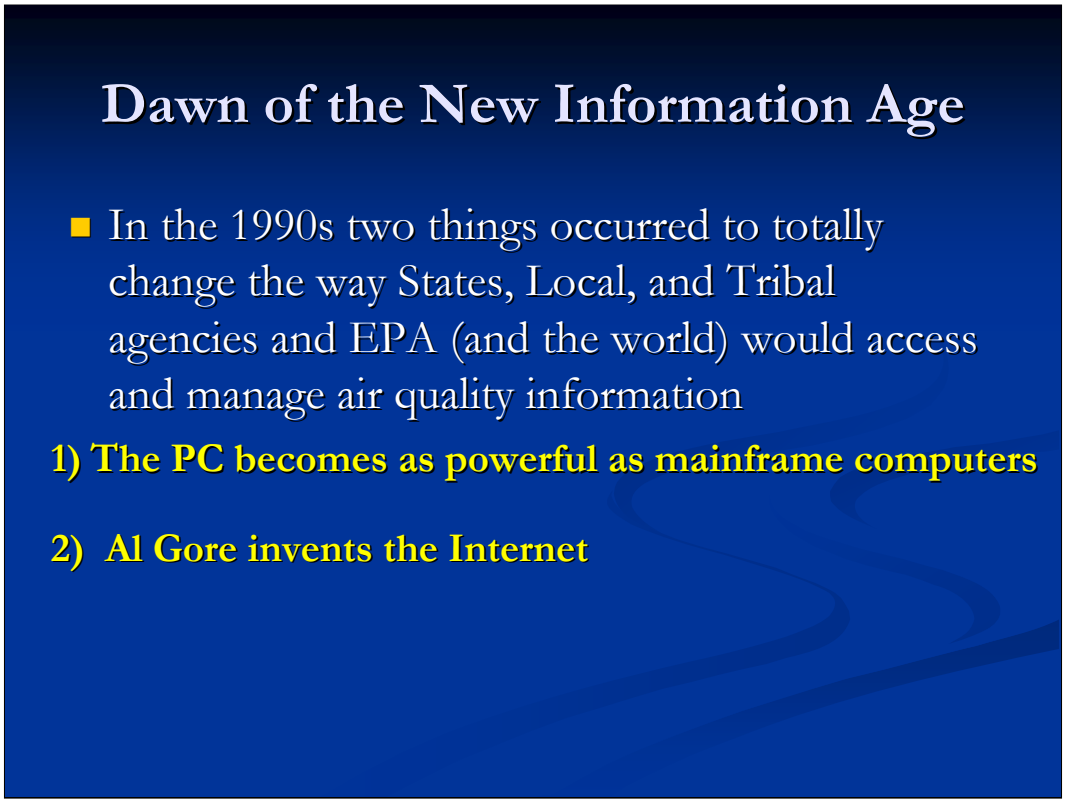


… as evidenced by Jerry Husketh's first computer when he came to EPA. Information management and data processing have come a long way or as that great philosopher Yogi Berra once said…



"The future ain't what it used to be". In reality he is correct. Who could have envisioned where technology would have brought us to today 20-30 years ago. In that same light… who can fully appreciate where will be in another 20 years. The one thing we do know is that information and data will be more easily accessible by many more people and will influence many more decisions. And that is why the role that you all play is ever so critical… even more so today than in the past.

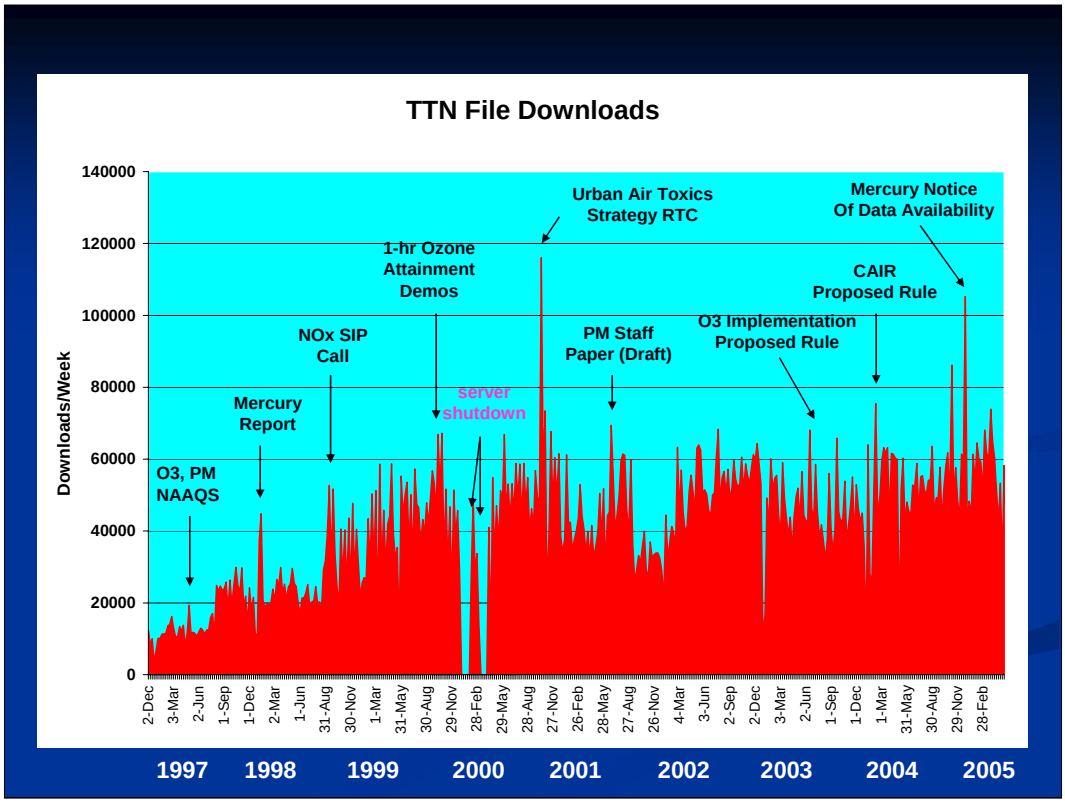
I think in the old days, people envisioned the air quality data manager almost like the Maytag Repairman… data comes in every so often… we have months to look it over, massage it and then like a fine wine, we will not release it before its time. Technology has changed all of that… and it really started in the 1990's, which I like to call the Dawn of the New Information Age.



Two significant events happened in the 1990's that forever changed the way we all would access and manage air quality…

1)Your desktop became as powerful as a mainframe… data processing, analyses, interpretation, etc. could now be done by anyone with a PC.

2) Al Gore invented the Internet… OK, even if he didn't … the explosion in access to information through the internet drastically changed the way air quality scientists, managers, and politicians all did their jobs. It also empowered a lot more people to become "experts"

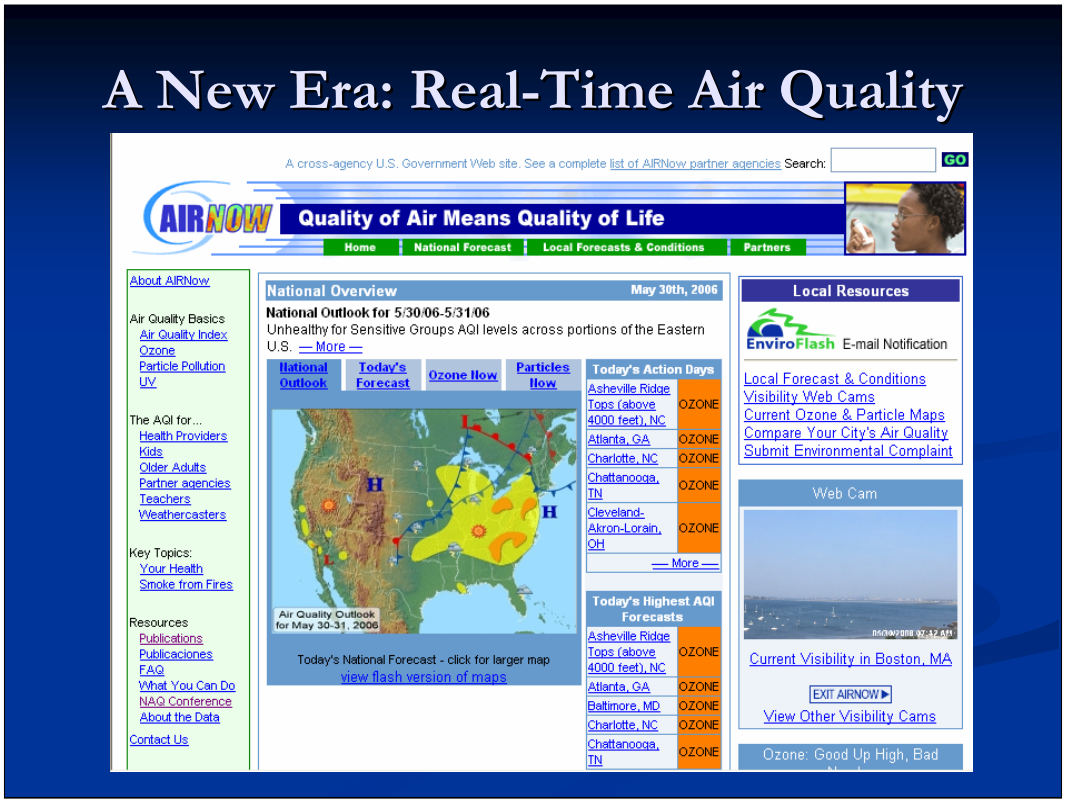


I like to toss this slide in at this point to just graphically show the impact of the internet from one simple case study… the TTN, which was an old bulletin board system (for those of you younger than 30… that meant we actually had dial up modems for access) was the state-of-the-art system for getting data and information to key state/local/tribal agencies in the late 1980's, early 1990's.

Around 1996, we converted TTN from the BBS system to a web-based internet system. In 1997 we released what we thought was one of the biggest EPA air announcements since the CAAA of 1990 in the new ozone and PM standards… that's that little spike right there. You can see where that stands compared to other downloads since that time… now I can't think that there are that many more state/local/tribal agencies since 1997… so more people are now accessing what we use to think was pretty technical information.

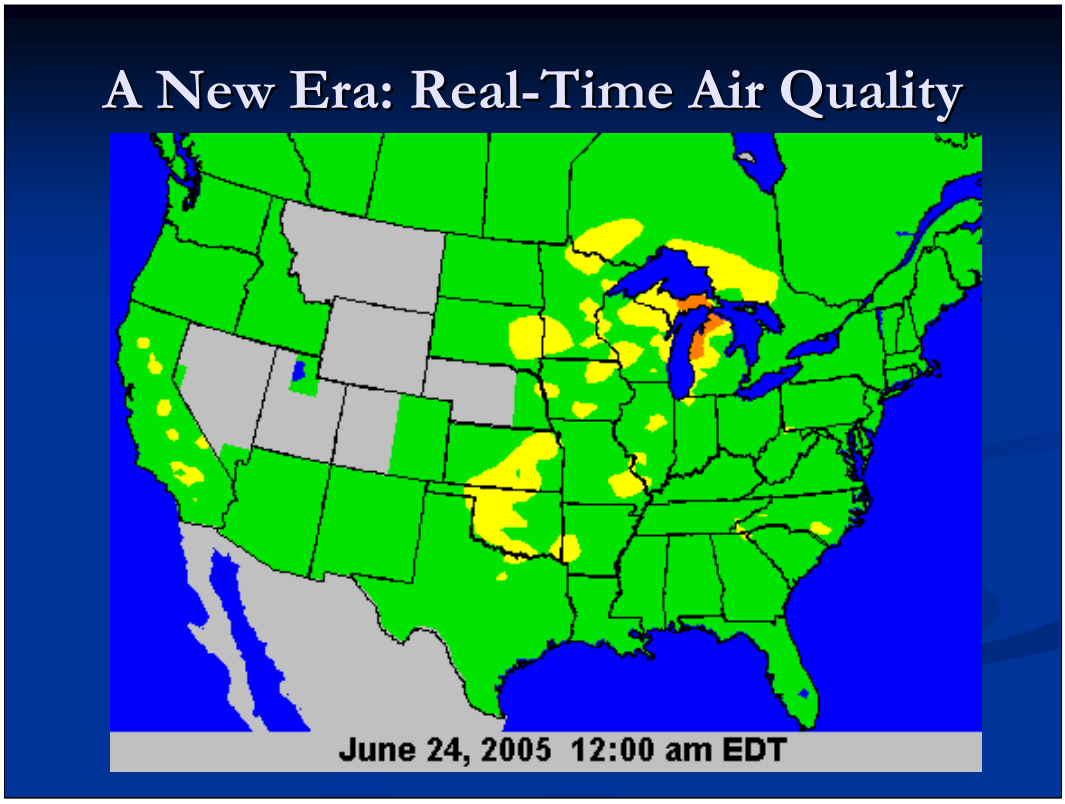
Now before I get too carried away with technology and the future, it is important to note that even historically, air quality data has been the foundation on which air quality management programs have been built. It is essential to attainment determinations, critical for modeling assessments, for setting national standards and accountability of our programs and assessing health effects.

However, technology has opened up a whole new world for air quality data uses and benefits…

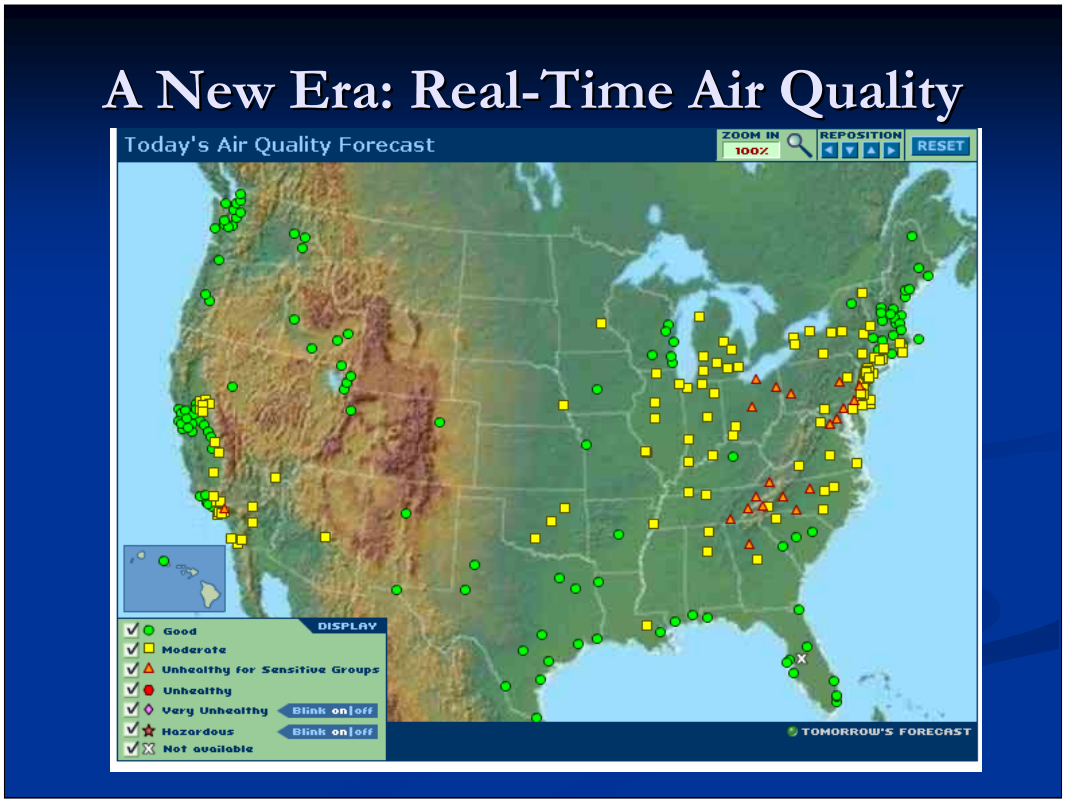


It created the ability for us to move air quality data in real-time… and AIRNow was born. In 1998, EPA began the AIRNow program which began providing real-time air quality data and air quality forecasts… all of a sudden the public, researchers and the media could have access to measurements from the last hour and forecasts for tomorrow! The entire data analysis and management philosophy for air quality literally changed overnight.

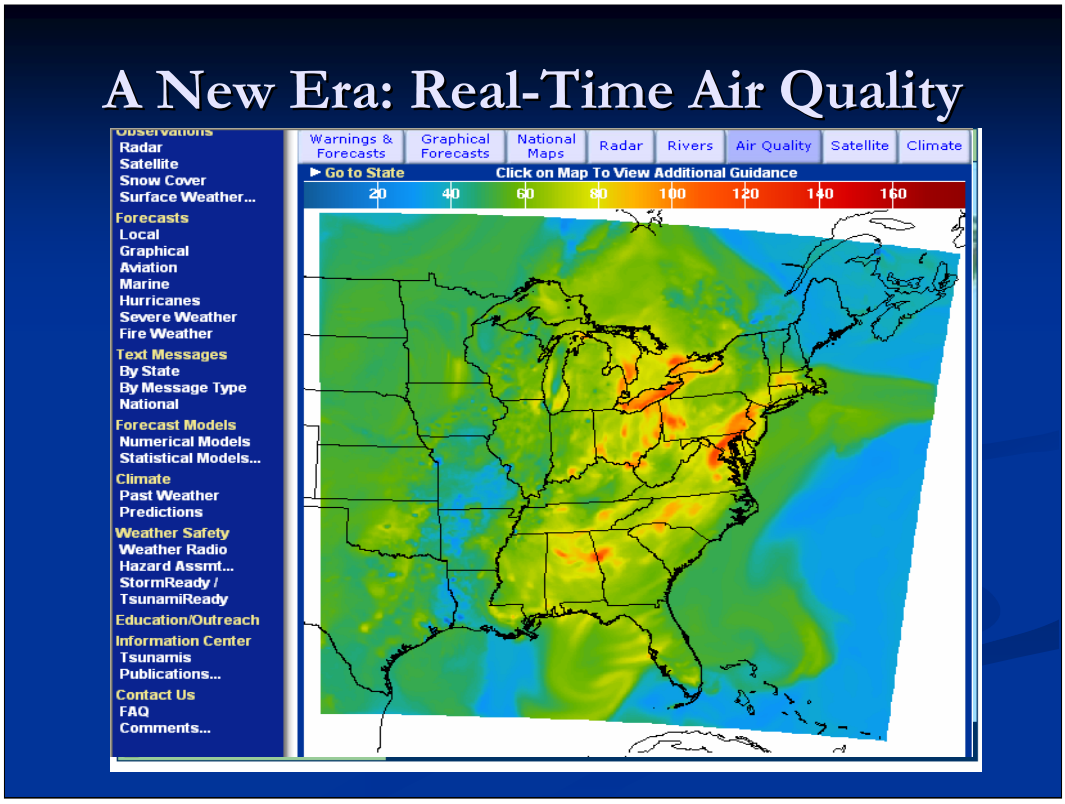
1) Air quality data has become something routinely checked by people every day



2) Real-time data allows for people to “view” air quality as it is occurring and adjust their lifestyle to reduce exposure on bad air days

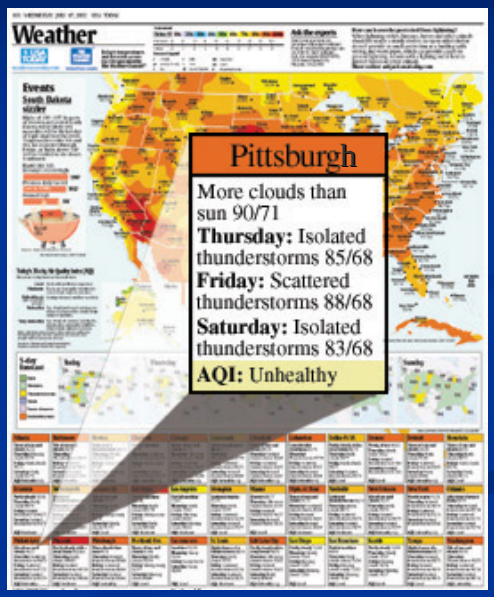


3) Real-time data has led to the development of air quality forecasting tools that were dependent on timely information that have allowed for air quality forecasts in almost 300 cities across the U.S.



4) .. and led to the National Weather Service getting into the air quality forecasting arena along with EPA and state/local/tribal agencies.

Air Quality in the Media

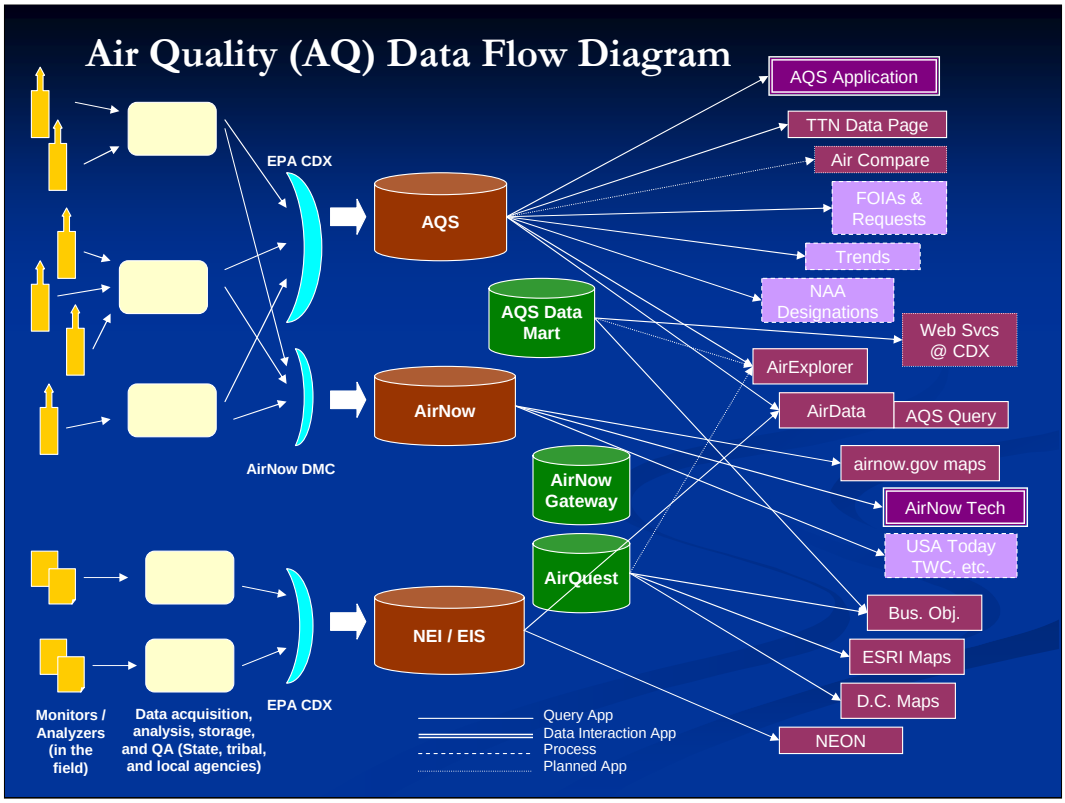


It has lead to an awareness about air quality that would have been unheard of 10-15 years ago… through unprecedented coverage by the media

… and today… air quality data/information can even be pushed right to the individual via email or cell phone through the EPA's EnviroFlash program run jointly with state/local and tribal air agencies.

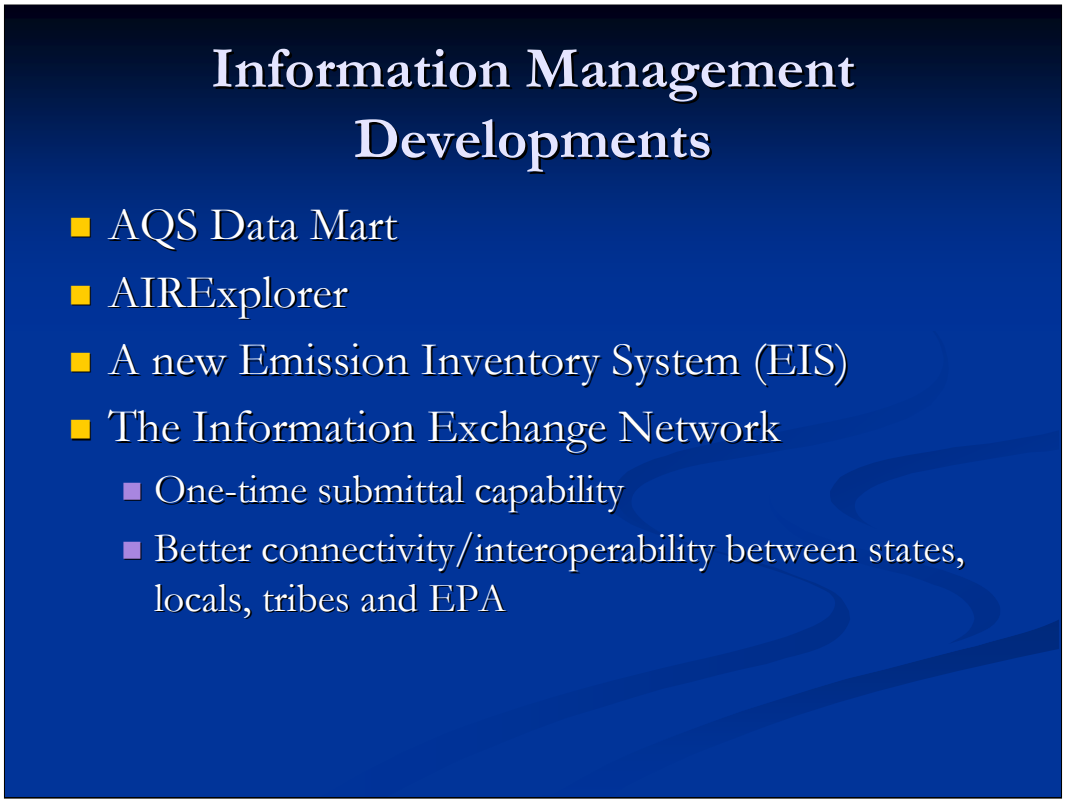
Hard to imagine all this when even 10 years ago when we were still processing data on mainframes and tapes.

Even harder to imagine that this is where we are today on the data management side…



A lot more advanced than simply sending data to one system for a few users to look at.

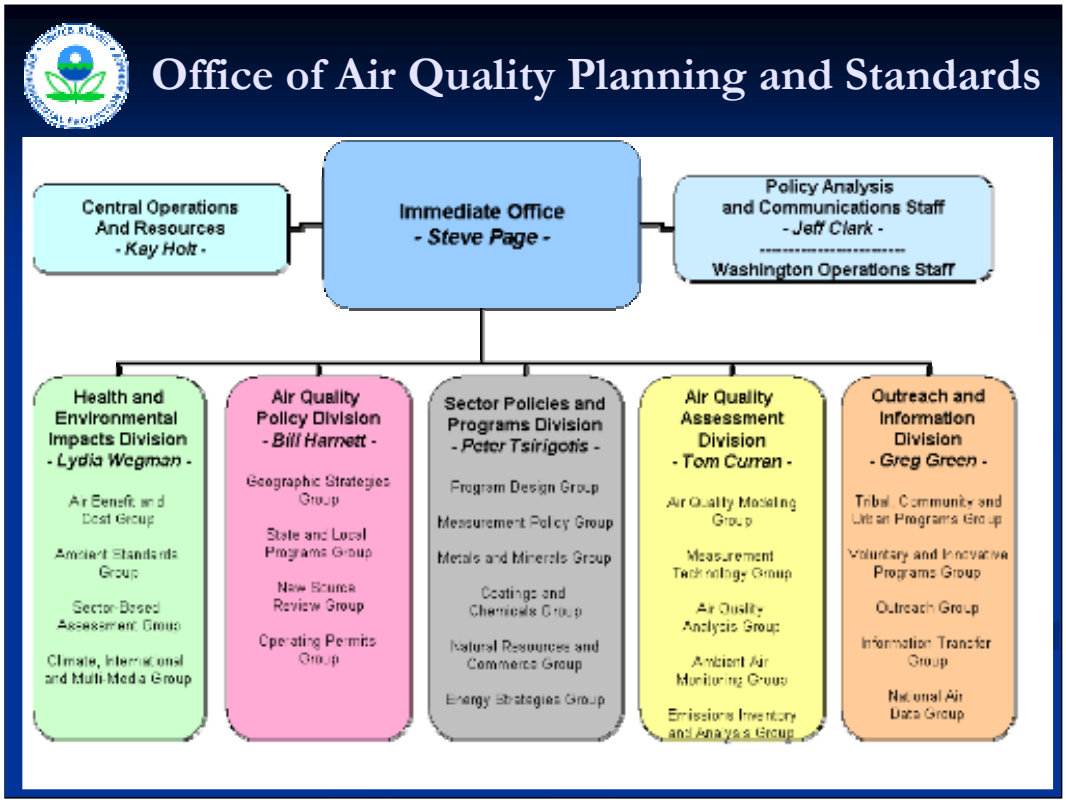
So the future of information management is changing and we need to change with it…



You will hear more on much of this later in the conference, but I did want to mention these items and just highlight something very new that many of you may not be aware of yet. EPA will be developing a new Emission Inventory System using much of this new technology to collect, process, QA/QC and report emission inventory information.

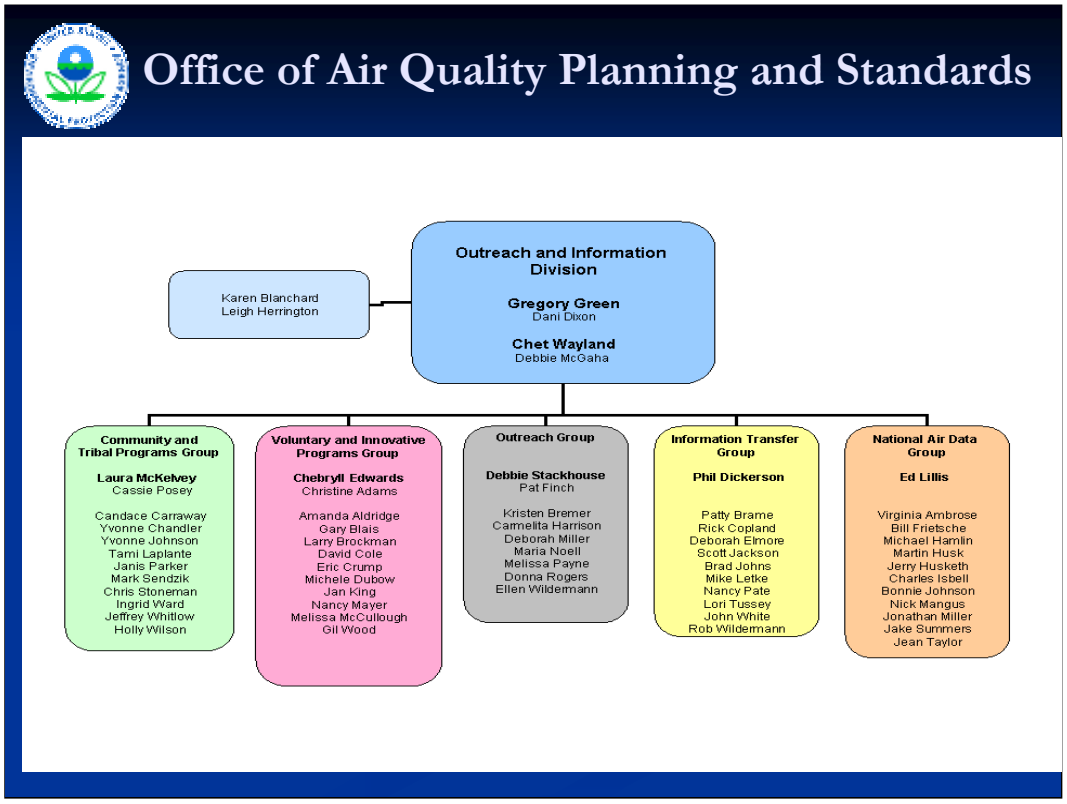
AQS has set the standard for large data systems and has stood the test of time. We plan to build on that foundation and knowledge as we develop this new Emissions System that should be ready for the 2008 inventory that will be processed in 2009.

And finally, with the ever changing technology, WE must change as well and OAQPS recently underwent a reorganization that had many specific goals, but one of which was to consolidate our information and outreach functions under one umbrella.



Quickly, here is a brief look at the reorganized OAQPS. We have moved from 4 divisions to 5, with the following goals. The office will be more multi-pollutant oriented, more sector based and increase our emphasis on information, outreach and voluntary emissions reduction programs.

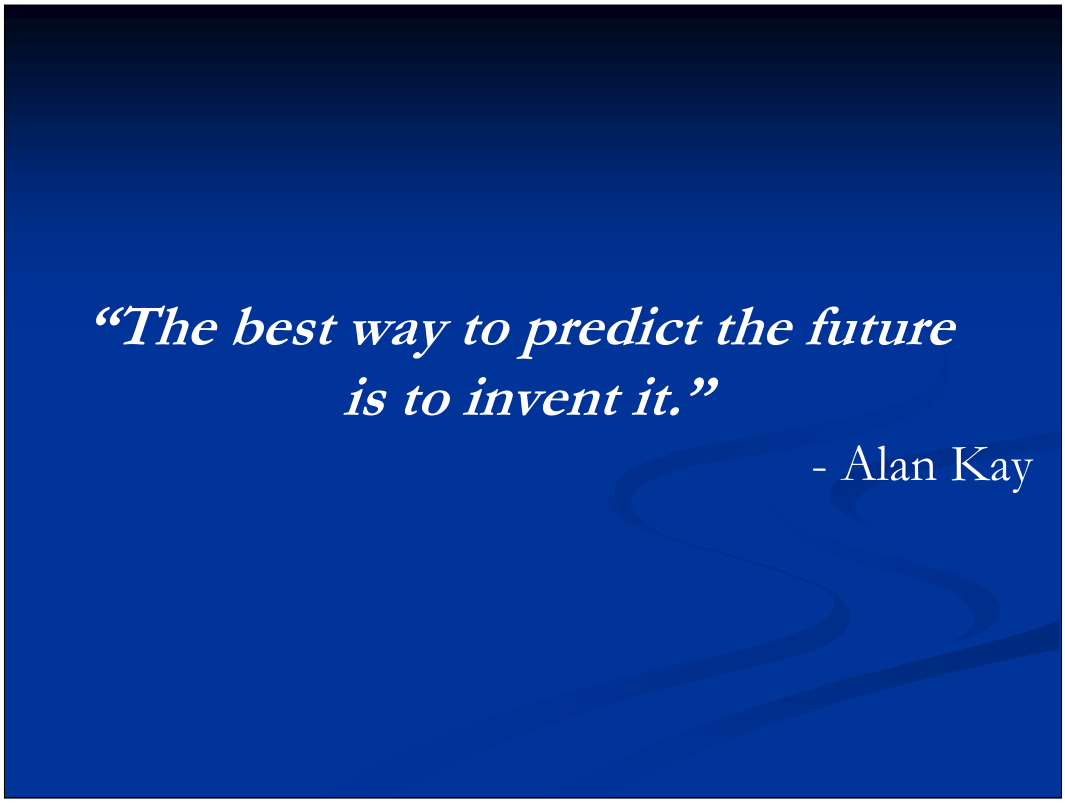
The area that is most relevant for this conference is the last division… Outreach and Information



… and this is where AQS and all of our data systems and information transfer tools are housed. The division definitely has community/state/local/tribal partnership feel to it. This is the division that will work most closely with you on IT, information, outreach and communications issues as well as community-based programs.

So as we move forward with technology, it is encouraging that OAQPS has recognized the value of data and information and has placed an emphasis on that in its new organization.

So, in closing. I applaud you for your efforts, for in many cases, being the unsung heroes of your air quality management program… for working hard day in and day out to provide the foundation for your programs. I also applaud you for being here this week and for taking the opportunity to learn about new technologies and for embracing those technologies as we move towards the future.



Continue to embrace technology… for the best way to predict the future is to invent it.

Thank you.