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Air monitoring began with methods that employed laboratory analysis for each analyte. The samples were made of 24 hour averages and in order to preserve resources, were collected only once in six days. It took months for the data to be made available and over a year before they were published for distribution to the public.

Electronic monitoring methods were introduced and real-time data became available years after the Clean Air Act was written. The data were still published after a year's delay of quality assurance reviews and required the dedication of resources to write a formal report including the monitoring results. From the end of the 1970's, the monitoring network has been converting from laboratory methods to electronic measurement methods which can provide data instantaneously for the criteria pollutants defined by the US Environmental Protection Agency: carbon monoxide, lead, nitrogen dioxide, ozone, sulfur dioxide and particulate matter 10 microns and smaller, (PM10).

The EPA recently promulgated an ambient air quality standard for fine particles, particulate matter 2.5 microns and smaller (PM2.5). The only method approved for regulatory monitoring this pollutant is laboratory based. So, while the demand for more and fasted data access is growing from the public, the regulations still operate under an old paradigm. (This standard is under legal dispute, as of September 2001).

The fine particle standard is not the only laboratory dependent monitoring that is of interest. Most toxics monitoring requires laboratory analysis to obtain results. Tragically, this delay may be the weakness in providing useful information. Much attention is now focusing on emergency response. Under such conditions, speed of data dispatch is the difference between useful and historical data. Urgency in providing quick and accurate information has never been greater.

With the explosive growth in the Internet, Florida's monitoring data have been migrating to the public more quickly. First in 1998, electronic versions of quality assured documents were released to the web. Later that year, the Florida Department of Environmental Protection (FDEP) issued its first statewide ozone advisory. It created much interest and more importantly, concern. Reporters were trying to cover the story and understand the circumstances which led to this unprecedented action, while school administrators, nursing home operators, children's daycare providers and many citizens wanted the latest ozone concentrations. The data were available in real-time, but agencies had never been comfortable providing data with quality assurance to the public. The FDEP launched its first web site containing unverified data.

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It has been replaced with an automated system to post real-time raw ozone data. It is available at: http://dep.state.fl.us/air/ozonenet.htm. The public's appetite for these data is grand and growing.

The point has been reached that enough information is available to the public that they can see, as soon as the regulators can, where problems exist. The public would prefer problems be dispatched as quickly as data. Unfortunately, solving problems is no quicker now than in the past. Investigations take time and resources. Interestingly, partnerships are formed much more easily when information is quickly accessible. These partnerships facilitate shared resources and better plans for solutions.

Providing data is little service if it is not understood. Great effort is expended to put the data in context. With environmental data, the context is often to explain what effect the pollutant concentrations may have on human health. The obvious conclusion is that know to what levels of pollution one has been exposed is hindsight and is not protection. The challenge is then to provide a forecast. An air quality forecast, like a weather forecast is limited by the tools of the meteorological forecast, but additionally by the uncertainty of manmade and natural emissions to the air and chemical processes that create secondary air pollution.

The environmental regulatory community is trying to meet the demand for forecasts. The first steps have been to forecast the broad category of pollution levels as defined by the US EPA's Air Quality Index: good, moderate, unhealthy for sensitive groups, unhealthy, etc., for the pollutant with the highest health impact for each day. As challenging as this task is, it has already been described as inadequate. In this case, members of the medical community, who are trying to protect their patients, want better, more precise forecasts. It is encouraging to learn that the National Weather Service (NWS) is planning on creating a national air quality forecast product. The NWS has well equipped for such a task with much experience and the infrastructure to distribute it as well.

That infrastructure is probably the largest deficiency in the distribution of environmental data. There is much data and they are not centrally located. Increasingly, the public requests one-stop shopping, but researchers would prefer that as well. One of the latest issues in air quality is regional haze. It is the first major emphasis for regulation that is not aimed at protecting human health, but to improve visibility.

The nation's five planning organizations find they have the same desire, to have all the data that are necessary for evaluation of regional haze in one place and have them available quickly. Unfortunately, there is no one place for all the data to be stored, though the idea is appealing to the planners. And, since the data on which visibility will be determined are laboratory based, they are not available quickly. As regulators face, not only the requests of the public, but find themselves in the same boat, one can only hope for changes for the better.