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## Case Study: Village Green Project

The Village Green Project is an air quality project started by the EPA that seeks to engage communities in air pollution awareness by providing real-time air pollution data. The pilot project took off in June 2013 in Durham, North Carolina and has made way for other community-based air monitoring initiatives. The name Village Green Project came about "from a history when village greens were the heart of a town where citizens came together."



The Village Green Project's park bench made from recycled milk jugs.

In the Village Green Project, a park bench was constructed from materials made from recycled milk jugs. Various instruments that measure ozone, particulate matter, and weather conditions by the minute are hosted below the park bench. The 2B Tech Model 106-L Ozone Monitor, encased in a water-proof steel box, is used to measure ozone. The entire monitoring system is operated by a battery charged by two solar panels, which promotes sustainability.



The Model 106-L is located in the upper left hand corner of the steel box on the right side of the bench.

The data are uploaded to the Village Green Project's website, where the public can view current conditions or measurements for specific dates and times. You can learn more about the Village Green Project and check out data [here](#).

### Featured Product: Model 106-L Ozone Monitor is now a Federal Equivalent Method (FEM)

The Model 106 series was designed as an "ozone monitor on a board" in which nearly all of the components are mounted directly to the printed circuit board, thereby eliminating nearly all wiring connectors, increasing reliability and reducing manufacturing cost. The 106 series is available as three models spanning ozone concentration ranging from low ppb levels to 20 wt%. The Model 106-L is designed for concentrations in the range 0-100 ppm, with precision and accuracy similar to our Model 202 Ozone Monitor but at lower cost. The Model 106-L has been used for five years now as the ozone monitor in our Global Ozone ("GO3") Project packages deployed at more than 100 schools around the world. We are pleased to announce that upon publication in the [Federal Register](#) on November 4, 2014, the Model 106-L and Model OEM-106-L became officially designated by the EPA as a Federal Equivalent Method (FEM). The Model OEM-106-L is identical to the 106-L with the exception that it has no instrument case. It is ideal for those who want to incorporate the ozone monitor into their own instrument package.



Model 106-L Ozone Monitor



Model OEM-106-L Ozone Monitor

#### Features:

- Measurement based on UV absorption
- Low power consumption, can be battery operated
- Internal data logger with real time clock
- On-board microprocessor with interactive menus
- USB and RS-232 output of time, date, O<sub>3</sub> concentration, internal temperature and pressure
- Analog output (0-2.5V and 4-20 mA) of ozone concentration in user selected units
- Internal 2-level relay for control purposes
- Long-life pump

For more detailed information on the Models 106-L and OEM-106-L, see [Model-106 L Brochure](#).

## Air Pollution News: Air Pollution Kills More People than AIDS, Diabetes, and Road Injuries Combined

A recent article published by the *Sydney Morning Herald* noted that 7 million people were killed by air pollution in 2012, totaling more deaths than AIDS, road injuries, and diabetes combined. Nearly an eighth of deaths worldwide result from contaminated air; thus, this is "the world's largest environmental health risk" at present. Nearly

70% of the deaths due to air pollution in 2012 occurred in low-to-middle income individuals in Asian nations.



Smog in Beijing vs. Low Air Pollution Day.

Photo Source: [Mihai Andrei @ ZME Science](#)

Women and children in developing countries are the groups most affected by contaminated air, as both groups spend significant time indoors breathing in soot and smoke from wood cook stoves, coal furnaces, and indoor fires. Health effects of such exposure include cardiovascular disease, respiratory disease, birth defects, and impaired cognitive functions in young children and infants. Poor air quality is most harmful to young children and infants, the elderly, and individuals with existing health problems.

The article mentions that health problems and premature deaths from air pollution cost China nearly \$300 billion (US) per year. As China continues to urbanize, the article notes it is crucial to incorporate air quality improvements into urban planning. Wasteful property development and ghost towns are already prevalent throughout China; Chinese city development must be reformed to decrease unnecessary urban sprawl and deteriorating air quality.

The full article is available here [here](#).

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## Monitoring Tip: Wireless Transmission from 2B Tech Instruments



2B Technologies now offers a wireless solution for connecting to your instrument to a computer. By simply attaching a small bluetooth device directly to the serial port on your 2B Tech instrument and another to your computer, the user can read output data wirelessly from up to 100 meters. This low cost option removes the need for messy wires and can be setup in minutes on virtually any PC. With the 2B Data Display software, Tera Term, or hyperterminal, the user can view real time data or change settings as if using a serial cable. Please see our [Tech Note](#) or contact us for more details: [sales@twobtech.com](mailto:sales@twobtech.com)