

# Air Quality Data Files

The U.S. Department of State air quality files contain PM<sub>2.5</sub> or ozone data in concentration units from each post, as reported on the [www.stateair.net](http://www.stateair.net) website. Please note that these data have not been fully validated or quality assured and are considered preliminary. This fact sheet explains and provides examples of the file name structure and file contents.

Users of the U.S. Department of State air quality data files must abide by the data use conditions outlined in the [Data Use Statement](#)<sup>1</sup>. Please send any questions about the data to [BeijingUSEmbassyESTH@state.gov](mailto:BeijingUSEmbassyESTH@state.gov).

## File Names

Files include hourly data with the following file name structure: *Site\_Year\_DurationParameter\_createdYYYYMMDD.csv*. Definitions and examples of the terms making up the file names can be found in **Table 1**. Filename examples include *Beijing\_2013\_HourlyPM2.5\_created20140101.csv* and *Beijing\_2014\_8HrAvgDailyMaxOzone\_created20141128.csv*.

## File Contents

All files contain the following column headers: Site, Parameter, Date (LST), Year, Month, Day, Hour, Value, Unit, Duration, QC Name. Definitions and examples of column headers can be found in **Table 1**.

**Table 1.** Definitions and examples of terms.

Term	Definition	Example(s)
Site	City or post where the measurements were taken.	Beijing, Shenyang
Parameter	The air quality pollutant measured; either fine particles (particulate matter less than 2.5 micrometers in diameter – PM <sub>2.5</sub> ) or ground-level ozone (O <sub>3</sub> ).	PM <sub>2.5</sub> , O <sub>3</sub>
Date (LST)	The date and hour of the measurement in local standard time (e.g., BJT – Beijing Time <sup>a</sup> ). All data are reported in begin-time. <sup>b</sup> The date-time format follows YYYY-MM-DD HH:mm, where 00:00 is midnight, 14:00 is 2:00 p.m., etc.	2013-05-01 00:00, 2013-05-20 07:00, 2013-05-20 23:00
Year	4 digit year that corresponds to YYYY in Date	2013
Month	1 or 2 digit month (1 to 12) that corresponds to MM in Date	5, 12
Day	1 or 2 digit day (1 to 31) that corresponds to DD in Date	1, 31
Hour	1 or 2 digit hour (0 to 23) that corresponds to HH in Date	0, 18
Value	The measurement in concentration. Missing values are listed as -999.	49, 450, -999
Unit	Parameter concentration units, either micrograms per cubic meter (µg/m <sup>3</sup> ) for PM <sub>2.5</sub> or parts per billion (ppb) for ozone.	µg/m <sup>3</sup> , ppb
Duration	The averaging period of the data reported; either 1-hour (1 Hr) for PM <sub>2.5</sub> or ozone, 24 hours (24 Hrs) for daily PM <sub>2.5</sub> , or 8-hr begin-time average-daily max <sup>c</sup> for ozone.	1 Hr, 24 Hrs, 8 Hr begin time Avg- Daily Max
QC Name	The quality control status of the data; either valid or missing (unavailable). Invalid data are not included in these files.	Valid, Missing

<sup>a</sup> Beijing Time (BJT) is 8 hours ahead of Coordinated Universal Time (UTC+8).

<sup>b</sup> Examples include (1) an hourly measurement taken from 2013/05/07 03:00 through 03:59 is reported as 2013/05/07 03:00, and (2) daily data covering 2013/05/10 00:00 through 2013/05/10 23:59 are reported as 2013/05/10 00:00.

<sup>c</sup> The 8-hr begin-time average-daily max ozone is the daily maximum of all 24 rolling 8-hr average ozone concentrations measured from 00:00 to 23:00, each reported in begin-time. One value is reported per day.

## Monitor Locations

The air quality data are measured at the U.S. Embassy in Beijing and at the Consulates in Chengdu, Guangzhou, Shanghai, and Shenyang. The geographic coordinates for the locations of the Embassy and Consulates can be found in **Table 2**.

**Table 2.** Embassy and Consulate geographic coordinates.

Site Location	Latitude and Longitude Degrees
Beijing <sup>a</sup>	39.95, 116.47
Chengdu	30.63, 104.07
Guangzhou <sup>b</sup>	23.12, 113.32
Shanghai	31.21, 121.44
Shenyang	41.78, 123.42

<sup>a</sup> Prior to February 16, 2009, the Beijing air quality monitor was located at No. 3 Xiu Shui Bei Jie, Chaoyang District, Beijing (39.31, 116.44). Beginning on February 16, 2009, at 23:00 BJT, the air monitor began operating at No. 55 An Jia Lou Rd., Chaoyang District, Beijing.

<sup>b</sup> Prior to July 8, 2013, the Guangzhou air quality monitor was located at No. 1 Shamian Street South, Guangzhou, Guangdong (23.11, 113.25). Beginning on July 8, 2013 at 15:00 BJT, the air monitor began operating at 43 Huajiu Rd., Zhujiang New Town, Guangzhou, Guangdong.

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<sup>1</sup> [www.stateair.net/web/assets/USDOS\\_AQDataUseStatement.pdf](http://www.stateair.net/web/assets/USDOS_AQDataUseStatement.pdf)