A Big Earth Data Platform for Three Poles

**Monitoring dataset of Gansu water quality automatic station (2012-2014)**

1、Description

This data is from the central station of environmental monitoring in gansu province. The data includes three observation elements that are disclosed on the network, namely PH, permanganate index and ammonia nitrogen.  
The data format is a text file. The first column is the city name, the second column is PH, the third column is permanganate index, the fourth column is ammonia nitrogen, and the fifth column is the observation date.  
The data include 6 sections of gushuizi, niubei village, wufo temple, shichuan bridge, xincheng bridge and bikou.  
Gansu section of the Yellow River: xincheng bridge (lanzhou upstream section), shichuan bridge (lanzhou - baiyin junction section), wufo temple (gansu-ningxia junction section), niubei village (gansu-shaanxi junction section).Bailong river wudu section :(section of gushuizi village).  
Lanzhou city bridge automatic water quality monitoring station is located in xigu district, lanzhou city, gansu province.Point coordinates 103 degrees 35 minutes 02 seconds east longitude, 36 degrees 07 minutes 20 seconds north latitude.Yellow River system (Yellow River main stream), state - controlled provincial boundary section.By lanzhou city environmental monitoring station custody.It's 35 kilometers away.Built in March 2001.  
PH: the index that characterizes the acidity and alkalinity of water. When the pH value is 7, it is neutral, less than 7 is acidic, and greater than 7 is alkaline.The pH value of natural surface water is generally between 6 and 9. When algae grow in the water, they absorb carbon dioxide due to photosynthesis, resulting in an increase in surface pH value.  
Permanganate index (CODMn) : the amount consumed when treating surface water samples with potassium permanganate as the oxidant, expressed as mg/L of oxygen.Under these conditions, reductive inorganic substances (ferrous salts, sulphides, etc.) and organic pollutants in water can consume potassium permanganate, which is often used as a comprehensive indicator of the degree of surface water pollution by organic pollutants.Also known as the chemical oxygen demand potassium permanganate method, as distinct from the chemical oxygen demand (COD) of the potassium dichromate method, which is often used to monitor wastewater discharge.  
Ammonia nitrogen (nh3-n) : ammonia nitrogen exists in water in the form of dissolved ammonia (also known as free ammonia, NH3) and ammonium salt (NH4+). The ratio of the two depends on the pH value and water temperature of the water, and the content of ammonia nitrogen is expressed by the amount of N element.The main sources of ammonia nitrogen in the water are domestic sewage and some industrial wastewater (such as coking and ammonia synthesis industry) and surface runoff (mainly refers to the fertilizer used in farmland entering rivers, lakes, etc.).   
This data will be updated automatically and continuously according to the data source.

2、Keywords

Theme：Water trace elements,Surface Water,Nitrogen compounds,Water Quality/Water Chemistry,Dissolved solids,Runoff  
Discipline：Terrestrial Surface  
Places：Gushuizi, Shichuanqiao, Bikou, Xinduqiao, Wufosi, Gansu Province, Niubeicun  
Time：2012-2014

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：0.02MB

4.Data format：文本

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：42.0 | - |
| west：92.0 | - | east：109.0 |
| - | south：32.0 | - |

5、Time frame:2013-01-16 08:00:00+00:00--2015-01-20 17:00:00+00:00

6、Reference method

References to data:

Gansu environmental monitoring center station. Monitoring dataset of Gansu water quality automatic station (2012-2014). A Big Earth Data Platform for Three Poles, doi:10.3972/westdc.998.2013.db2013

References to articles:

7、Supporting project information

8、Data resource provider

name: Gansu environmental monitoring center station  
unit: Gansu province environmental monitoring center station  
email: none