



A Description of the SJRWI Database

05/28/2009



Overview

- There are totally 16 tables, which can be classified into two logical groups: 8 data tables and 8 code tables
- Data tables: there are five major categories
 - Bacteria (1 table)
 - Field Data (2 table)
 - Nutrient (1 table)
 - Pesticide (2 tables)
 - Water Quality Meter (2 tables)

Overview (cont'd)

- Code tables: provide auxiliary information to describe environmental variables qualitatively
 - *Cloud Cover* (6 records)
 - *Collector* (8 records)
 - *Detection Limits* (1 record)
 - *Equipment Detection Limits History* (16 records)
 - *Exception Codes* (5 records)
 - *MPN* (52 records)
 - *Turbidity* (7 records)
 - *Wind* (7 records)




Overview (cont'd)

- The database also provides a graphical user interface to let users input/output and query data easily.

Screenshot of the GUI

SJRWI Data Extraction

Start Date:  mm/dd/yy

End Date: mm/dd/yy

Pesticide extraction:

Bacteria extraction:

Nutrient extraction:

Water Quality Meter extraction:

Field data extraction:

GUI – query results

Date	WeekNo	100	101	102	103	104	106
4/1/2008	14	0.03	0.03	0.03	0.03	0.06	0.03
4/8/2008	15	0.03	0.03	0.03	0.03	0.03	0.03
4/15/2008	16	0.03	0.03	0.03	0.03	0.03	0.03
4/22/2008	17	0.03	0.03	0.03	0.03	0.03	0.06
4/29/2008	18	0.03	0.03	0.03	0.03	0.03	0.07
5/6/2008	19	0.03	0.03	0.03	0.03	0.03	0.03
5/13/2008	20	0.06	0.03	0.05	0.09	0.09	0.06

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An example of a code table

Cloud_cover

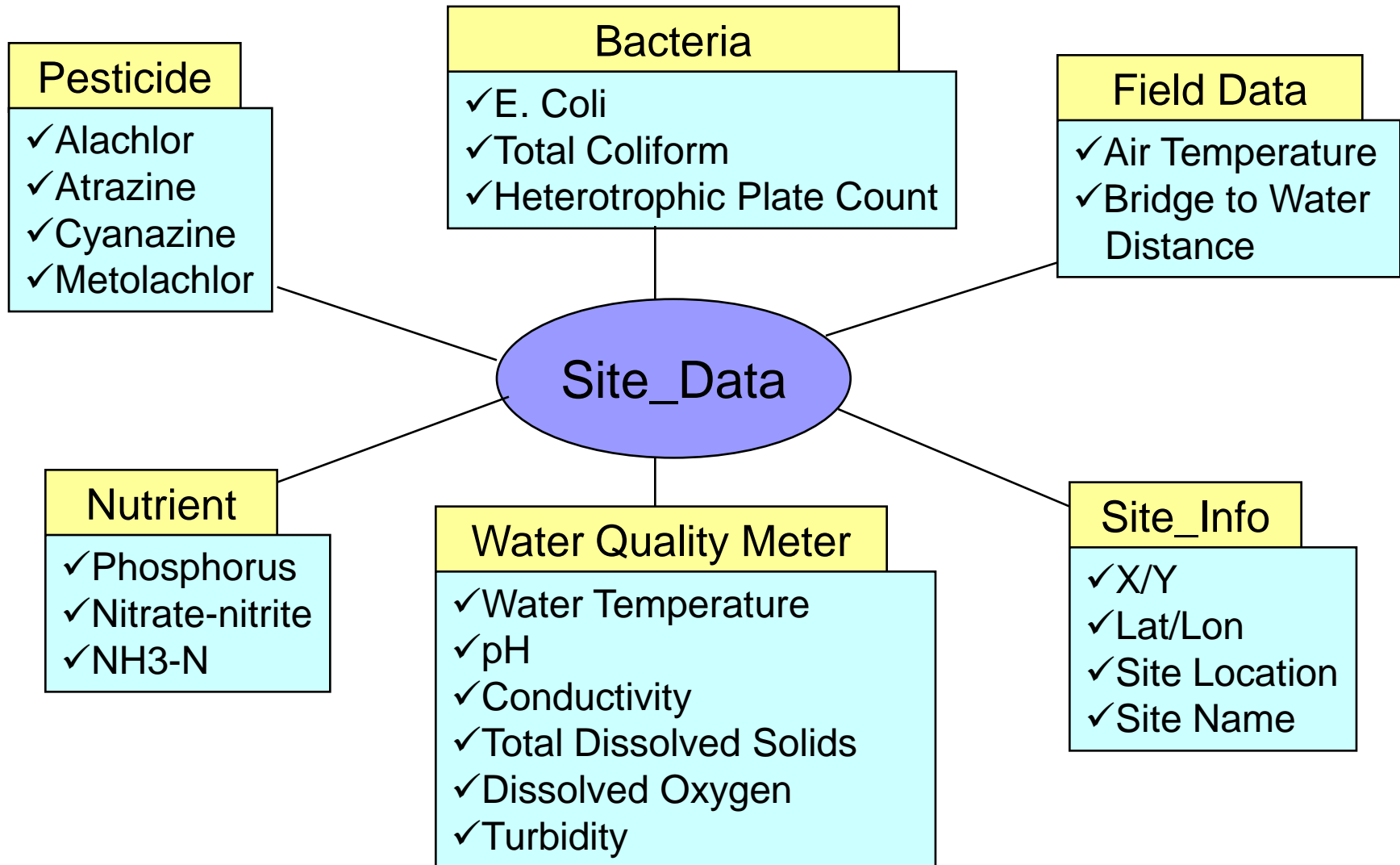
Cloud_cover	Cloud_cover_description
1	Sunny
2	Partly cloudy
3	Cloudy
7	Sample not possible
8	Sample not scheduled to be taken
9	Missing data ~ data should have been collected



Data Tables

- Each record in data tables is associated with a record in the *Site_Data* table, which records field information such as time, temperature, wind, cloud cover and so on.
- The *Site_Info* table is an table which records geographical information of each site and also link all the records in *Site_Data* table associated with some specific site number.

Relationship among data tables



Data tables -- sizes

- *Bacteria_entry_form* (7607 records)
- *Nutrient* (1944 records)
- *Pesticide_composite_info* (1978 records)
- *Pesticide_entry_form* (7102 records)
- *Site_Data* (8925 records)
- *Site_Info* (51 records)
- *Water_Quality_Meter_Data* (8827 records)
- *WQMport* (72 records)

An example of a data table

	Site number ▾	Date ↕	Sample_no ▾	Cyanazine ▾	CyanazineE: ▾	Atrazine ▾	AtrazineExc: ▾	Alachlor ▾	AlachlorExc: ▾	Metolachl
+	101	4/16/1996	101041696	0.00		0.80		0.00		
+	106	4/16/1996	106041696	0.00		0.81		0.00		
+	105	4/16/1996	105041696	0.00		0.85		0.00		
+	123	4/16/1996	123041696	0.00		0.05		0.27		
+	107	4/16/1996	107041696	0.00		0.97		0.00		
+	104	4/16/1996	104041696	0.00		0.80		0.00		
+	103	4/16/1996	103041696	0.00		0.83		0.00		
+	122	4/16/1996	122041696	0.01		0.16		0.19		
+	121	4/16/1996	121041696	0.07		0.16		0.15		
+	102	4/16/1996	102041696	0.00		0.82		0.00		
+	100	4/16/1996	100041696	0.00		0.00		0.00		
+	124	4/17/1996	124041796	0.15		0.20		0.26		
+	125	4/17/1996	125041796	0.08		0.24		0.09		
+	127	4/17/1996	127041796	0.00		0.26		0.29		
+	128	4/17/1996	128041796	0.00		0.07		0.29		
+	126	4/17/1996	126041796	0.00		0.09		0.04		
+	100	4/25/1996	100042596		9		9	0.00		
+	122	4/25/1996	122042596	0.08		0.21		0.75		
+	121	4/25/1996	121042596	0.07		0.19		0.45		
+	100	5/1/1996	100050196	0.03		0.37		0.35		
+	122	5/1/1996	122050196	0.06		0.30		0.59		
+	121	5/1/1996	121050196	0.07		0.27		0.50		
+	126	5/4/1996	126050496	0.00		0.15		0.00		
+	124	5/4/1996	124050496	0.07		0.30		0.59		
+	107	5/4/1996	107050496	0.07		0.49		0.40		
+	101	5/4/1996	101050496	0.03		0.22		0.35		
+	125	5/4/1996	125050496	0.10		0.34		0.25		

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An example of a data table (cont'd)

Site number	Date	Sample_no	Cyanazine	CyanazineE	Atrazine	AtrazineExc	Alachlor	AlachlorExc	Metolachlor
101	4/16/1996	101041696	0.00		0.80		0.00		
101	4/16/1996	13:05	April	Tuesday	WeekNbr: 16	Collector	Cloud_cover: 3	Wind: 3	AirTemp
associated record in Site_Data table									
106	4/16/1996	106041696	0.00		0.81		0.00		
105	4/16/1996	105041696	0.00		0.80		0.00		
123	4/16/1996	123041696	0.00		0.05		0.27		
107	4/16/1996	107041696	0.00		0.97		0.00		
104	4/16/1996	104041696	0.00		0.80		0.00		
103	4/16/1996	103041696	0.00		0.83		0.00		
122	4/16/1996	122041696	0.01		0.16		0.19		
121	4/16/1996	121041696	0.07		0.16		0.15		
102	4/16/1996	102041696	0.00		0.82		0.00		
100	4/16/1996	100041696	0.00		0.00		0.00		
124	4/17/1996	124041796	0.15		0.20		0.26		
125	4/17/1996	125041796	0.08		0.24		0.09		
127	4/17/1996	127041796	0.00		0.26		0.29		
128	4/17/1996	128041796	0.00		0.07		0.29		
126	4/17/1996	126041796	0.00		0.09		0.04		
100	4/25/1996	100042596			9		9	0.00	
122	4/25/1996	122042596	0.08		0.21		0.75		
121	4/25/1996	121042596	0.07		0.19		0.45		
100	5/1/1996	100050196	0.03		0.37		0.35		
122	5/1/1996	122050196	0.06		0.30		0.59		
121	5/1/1996	121050196	0.07		0.27		0.50		
126	5/4/1996	126050496	0.00		0.15		0.00		
124	5/4/1996	124050496	0.07		0.20		0.59		

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