

# Search Test

February 18, 2015

## 1 Load Data

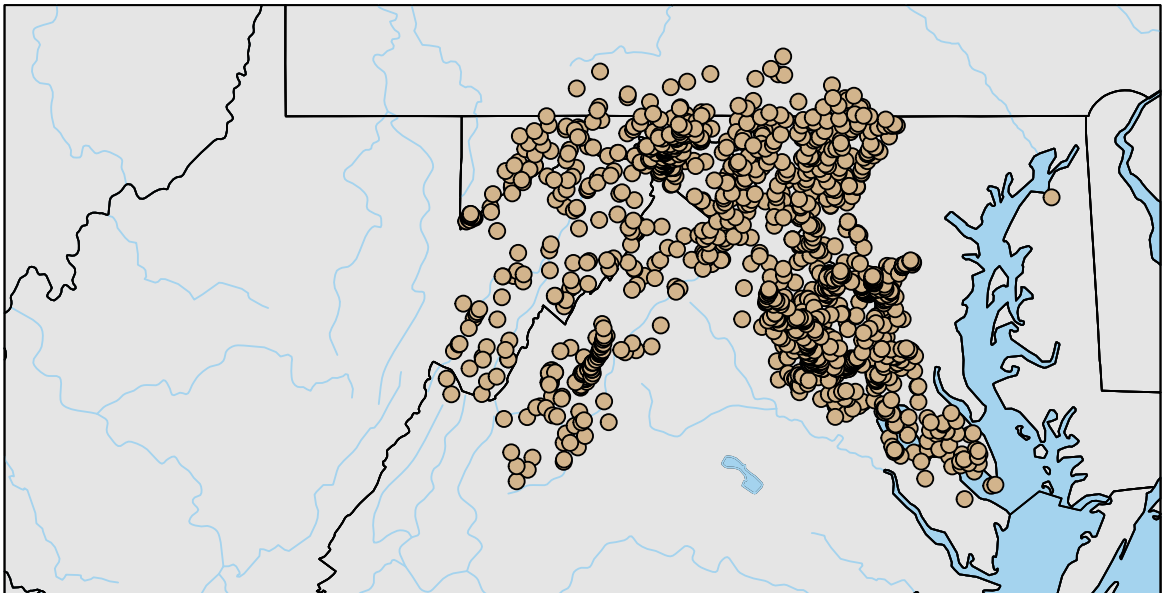
The following code is used to pull raw data from the Water Quality Portal <http://www.waterqualitydata.us/>. The user is responsible for choosing a parameter and huc.

```
library(dataRetrieval)
library(dplyr)
library(USGSHydroTools)

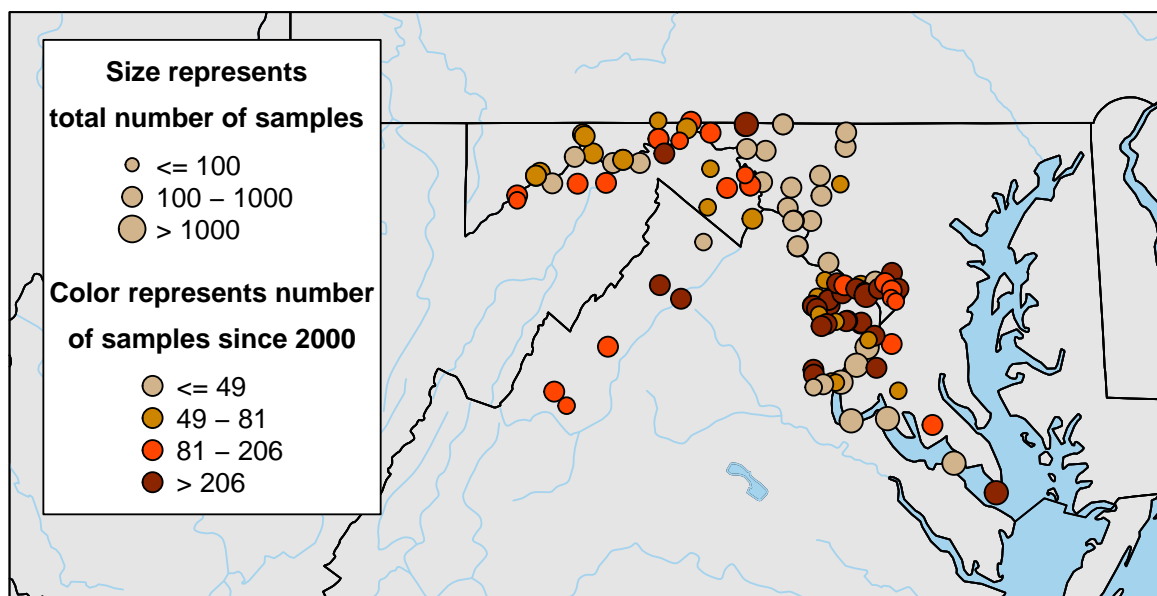
data <- readWQPdata(huc="0207*", characteristicName="Phosphorus")
#data <- readWQPdata(huc="0410*", characteristicName="Phosphorus")
sites <- whatWQPsites(huc="0207*", characteristicName="Phosphorus")
#sites <- whatWQPsites(huc="0410*", characteristicName="Phosphorus")

data_bySite <- group_by(data, MonitoringLocationIdentifier)
summarize <- summarise(data_bySite,
  Count = n(),
  CountAfter2000 = sum(ActivityStartDateTime >
    as.POSIXct("2000-01-01 00:00:00"), na.rm = TRUE),
  MinDate = min(ActivityStartDateTime, na.rm = TRUE),
  MaxDate = max(ActivityStartDateTime, na.rm = TRUE)) %.%
  arrange(desc(Count)) %.%
  filter(Count >= 50) %.%
  filter(CountAfter2000 >= 10)
```

## All sites measuring Phosphorous



**Figure 1.** Map of all sites



**Figure 2.** Map of sites with at least 50 samples and 10 since 2000

	MonitoringLocationIdentifier	Count	CountAfter2000	MinDate	MaxDate
1	MDDNR-LE2.2	1887	21	1984-08-06	2007-10-01
2	MDDNR-TF2.4	1710	17	1986-01-06	2007-10-02
3	MDDNR-RET2.2	1678	17	1984-07-19	2007-10-02
4	MDDNR-RET2.4	1602	13	1986-01-06	2007-10-05
5	MDDNR-LE2.3	1599	497	1984-07-11	2013-12-10
6	USGS-01646580	1393	664	1973-02-05	2015-01-08
7	MDDNR-TF2.3	1392	12	1984-07-19	2000-04-24
8	MDDNR-TF2.2	1302	12	1986-01-06	2000-04-24
9	USGS-01614500	1287	447	1973-09-12	2004-09-20
10	USGS-01645762	906	906	2008-04-24	2014-12-09
11	USGS-01646305	902	902	2008-04-24	2014-12-09
12	USGS-01658000	888	888	2000-10-24	2015-01-13
13	USGS-01645704	851	851	2008-04-24	2014-12-09
14	USGS-01656903	832	832	2008-04-24	2014-12-09
15	USGS-01648010	498	496	1999-06-25	2014-12-18
16	USGS-01634000	471	293	1976-08-31	2014-12-17
17	USGS-01631000	469	295	1994-06-08	2014-12-17
18	USGS-01658500	458	345	1994-08-23	2014-12-11
19	USGS-01649500	432	421	1969-10-23	2014-12-03
20	USGS-01649190	425	425	2007-07-23	2015-01-07
21	MDDNR-NBP0689	354	82	1986-01-09	2004-02-11
22	MDDNR-NBP0534	352	78	1986-01-09	2004-02-10
23	MDDNR-SAV0000	337	71	1986-01-09	2004-02-10
24	MDDNR-TOW0030	329	60	1986-02-06	2004-02-12
25	MDDNR-POT1830	324	49	1986-01-30	2004-02-12
26	MDDNR-SEN0008	324	49	1986-01-08	2004-02-11
27	MDDNR-BPC0035	323	49	1986-01-27	2004-02-12
28	MDDNR-CAC0031	323	49	1986-01-28	2004-02-12
29	MDDNR-MON0155	323	49	1986-01-27	2004-02-12
30	MDDNR-MON0269	323	49	1986-01-28	2004-02-12
31	MDDNR-POT1471	323	49	1986-01-08	2004-02-12
32	MDDNR-ANT0044	322	48	1986-01-30	2004-02-12
33	MDDNR-POT1595	322	49	1986-01-08	2004-02-12
34	MDDNR-CAC0148	321	48	1986-01-28	2004-02-12
35	MDDNR-GEO0009	321	50	1986-01-09	2004-02-10
36	MDDNR-MON0020	321	48	1986-01-08	2004-02-12
37	MDDNR-MON0528	321	49	1986-01-28	2004-02-12
38	MDDNR-NBP0103	321	50	1986-01-10	2004-02-12
39	MDDNR-ANT0203	320	49	1986-01-30	2004-02-10
40	MDDNR-NBP0326	320	49	1986-01-08	2004-02-12
41	MDDNR-POT2386	320	50	1986-01-30	2004-02-10
42	MDDNR-ANA0082	319	49	1986-01-07	2004-02-11
43	MDDNR-CON0005	319	49	1986-02-19	2004-02-10
44	MDDNR-WIL0013	319	62	1986-01-09	2004-02-12
45	USGS-01618000	319	88	1979-03-29	2002-08-05
46	MDDNR-CON0180	318	49	1986-01-29	2004-02-10
47	MDDNR-POT1596	317	48	1986-01-08	2004-02-12
48	MDDNR-POT1184	316	48	1986-01-07	2004-02-11
49	MDDNR-ANT0366	314	49	1986-01-29	2004-02-10
50	MDDNR-CJB0005	314	52	1986-01-07	2004-02-11
51	MDDNR-NBP0023	314	49	1986-01-10	2004-02-12
52	MDDNR-RCM0111	314	49	1986-02-04	2004-02-11
53	MDDNR-BDK0000	312	56	1986-01-09	2004-02-12
54	MDDNR-POT1472	312	49	1986-02-03	2004-02-12
55	MDDNR-TF2.1	312	15	1986-01-08	2004-02-12