



Wilson's Creek - WBID 2375
Bacteria data by U.S. Geological Survey and
Christian County Health Dept.

Org	Site	Location	Yr	Mo	Dy	E. coli
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	4	30	401
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	5	7	401
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	5	8	4838.4
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	5	10	208
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	5	14	201.4
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	5	23	238.2
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	5	29	401
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	6	4	1732.9
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	6	11	81.6
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	6	18	201.6
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	6	25	159.7
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	7	2	184.2
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	7	9	160.7
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	7	16	707
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	7	23	137.4
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	9	4	83
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2001	10	2	69.7
Annual Log Mean						
Annual Geometric Mean						
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	4	1	172
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	4	9	438
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	4	29	401
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	5	6	1300
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	5	20	2500
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	5	28	2420
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	5	30	1986
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	6	4	579
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	6	12	12032
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	6	19	308
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	7	1	401
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	7	8	613
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	7	16	435
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	7	25	411
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	7	31	248
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	8	12	98
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	8	19	435
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2002	8	26	186
Annual Log Mean						
Annual Geometric Mean						
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	4	20	401
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	5	4	165
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	5	11	56
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	5	17	165
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	5	24	53
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	6	1	130
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	6	8	130
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	6	14	200
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	6	17	2416
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	6	21	109
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	7	7	98
Org	Site	Location	Yr	Mo	Dy	E. coli
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	7	12	44
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	7	19	135

CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	7	26	579
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	7	28	179
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	8	2	197
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	8	10	200
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	8	12	236
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	8	16	81
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	8	17	41
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	8	24	128
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	8	30	200
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	8	31	151
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	9	7	72
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	9	13	155
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	9	21	119
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	9	27	68
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2004	10	6	64
Annual Log Mean						
Annual Geometric Mean						
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2005	4	19	129
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2005	5	17	38
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2005	6	2	153
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2005	6	21	4106
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2005	6	23	52
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2005	6	28	120
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2005	7	5	55
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2005	9	8	178
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2005	10	6	1417
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2005	10	12	76
Annual Log Mean						
Annual Geometric Mean						
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	4	26	192
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	5	3	114
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	5	15	113
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	5	22	637
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	5	24	219
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	5	30	2420
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	5	31	435
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	6	5	23
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	6	12	142
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	6	21	153
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	6	26	156
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	7	5	344
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	8	3	172
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	8	9	756
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	8	14	75
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	8	21	9
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	9	5	78
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2006	10	10	109
Annual Log Mean						
Annual Geometric Mean						
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	4	3	49
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	5	3	488
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	5	7	91
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	5	22	51.2
Org	Site	Location	Yr	Mo	Dy	E. coli
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	5	29	60.2
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	6	5	579.4
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	6	7	82
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	6	18	195.6

CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	6	25		157.6
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	7	9		17
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	7	16		326
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	7	23		16
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	7	31		291
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	8	13		78
CCHD	2375/1.0	Wilson Cr. @ Wilson Rd.	2007	9	5		81
Annual Log Mean							
Annual Geometric Mean							

The Wilson Road location lies about five miles downstream of a one mile losing stream segment of Wilson's Creek. Wilson Creek is designated as a Class B WBCR stream. The non-losing portion of the stream, including the Wilson Road has an E. coli standard of 206 colonies/100 ml. This standard is for the geometric (log) mean. Since there are no annual exceedences of the geometric mean for the last four years of data, this stream is judged to be **unimpaired** by E. coli bacteria.

Org	Site	Site Name	Yr	Mo	Dy	Ecoli
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2001	1	17	15
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2001	3	7	180
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2001	5	3	56
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2001	7	24	580
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2001	9	12	700
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2001	11	7	20
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2002	1	23	34
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2002	3	20	81
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2002	5	28	130
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2002	6	19	1
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2002	7	22	220
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2002	9	10	360
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2002	11	19	1020
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2003	1	28	18
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2003	3	18	77
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2003	5	20	240
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2003	7	28	44
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2003	9	16	520
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2003	10	15	292
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2003	11	24	400
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2003	12	15	3500
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2004	1	12	7
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2004	2	10	2
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2004	3	16	42
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2004	4	12	3
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2004	5	11	2
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2004	6	17	1
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2004	7	22	71
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2004	11	16	12
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2005	1	19	4200
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2005	2	8	613
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2005	3	29	4
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2005	4	11	1800
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2005	5	24	18
Org	Site	Site Name	Yr	Mo	Dy	Ecoli
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2005	6	14	8
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2005	7	26	18
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2005	8	30	65
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2005	9	20	1
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2006	10	11	90
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2006	10	12	22

USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2006	11	6	33
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2006	12	5	13
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2006	12	5	14
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2007	1	5	17
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2007	2	22	2
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2007	3	19	9
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2007	4	11	86
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2007	5	16	75
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2007	6	14	3200
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2007	7	25	21
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2007	8	8	160
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2007	9	17	28
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2007	10	30	13
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2007	11	26	140
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2007	12	12	84
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2008	1	15	16
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2008	2	26	25
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2008	3	25	460
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2008	4	9	46
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2008	5	29	100
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2008	6	10	84
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2008	7	16	96
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2008	8	20	110
USGS	2375/6.7	Wilson Cr. 0.5 mi.bl. SW WWTP	2008	9	4	3200

The USGS monitoring site 0.5 miles downstream of the Springfield SW WWTP is in the middle of a one mile losing stream segment of Wilson Creek. The E. coli standard for losing streams is 126/100 ml not to be exceeded at any time and applies for the entire year. While the Listing Methodology does not specifically address how to assess the "not to be exceeded" bacterial standard, the "not to be exceeded" dissolved oxygen, pH and temperature standards are evaluated using the ten percent rule. Using this procedure 20 of the 64 E. coli measurements on Wilson Creek 0.5 miles downstream of the Springfield SW WWTP exceed the 126 criterion. Since this frequency exceeds ten percent, the portion of Wilson Creek from the SW WWTP and extending downstream for one mile is judged to be **impaired** due to E. coli bacteria.

The Springfield SW WWTP permit requires monitoring for fecal coliform rather than E. coli. DMR data for the Southwest WWTP shows over the last two years that only one of 22 reported values exceeds 126 counts/ 100 ml. Since concentrations of E. coli and fecal coliform are roughly equal, the Southwest WWTP does not appear to be a significant source of bacteria to the creek.

Missouri Department of Natural Resources, Water Pollution Control Branch, www.dnr.mo.gov, 573 751-1300
9/3/2010 jf

Log E. coli
5.99
5.99
8.48
5.34
5.31
5.47
5.99
7.46
4.40
5.31
5.07
5.22
5.08
6.56
4.92
4.42
4.24
5.60
271.44
5.15
6.08
5.99
7.17
7.82
7.79
7.59
6.36
9.40
5.73
5.99
6.42
6.08
6.02
5.51
4.58
6.08
5.23
6.39
595.05
5.99
5.11
4.03
5.11
3.97
4.87
4.87
5.30
7.79
4.69
4.58
Log E. coli
3.78
4.91

6.36
5.19
5.28
5.30
5.46
4.39
3.71
4.85
5.30
5.02
4.28
5.04
4.78
4.22
4.16
4.94
139.86
4.86
3.64
5.03
8.32
3.95
4.79
4.01
5.18
7.26
4.33
5.14
170.08
5.26
4.74
4.73
6.46
5.39
7.79
6.08
3.14
4.96
5.03
5.05
5.84
5.15
6.63
4.32
2.20
4.36
4.69
5.10
163.88
3.89
6.19
4.51
3.94
Log E. coli
4.10
6.36
4.41
5.28

5.06
2.83
5.79
2.77
5.67
4.36
4.39
4.64
103.19