

2008 PROJECT UPDATE #1



March thru August-2008

- ◆ March - August Project Overview
- ◆ Results Thus Far
- ◆ Reimbursement Requests
- ◆ Data Documentation
- ◆ Sampling
- ◆ New Program Administrators

◆ PROJECT OVERVIEW ◆

A new grant was procured for 2008-2009. The new two year project continues to monitor bacteria using the coliscan easygel method. In addition, the program has expanded in the areas of Lake Index Monitoring, Baseline Monitoring, and "Other" monitoring. The SD Canoe/Kayak Association has joined our program with volunteers sampling Split Rock Creek, the Big Sioux River and Grass Lake.

Active Citizen Monitoring Sites:

78 active sites :

- Big Sioux River - 2
- Brant Lake - 17
- Grass Lake - 19
- Lake Andes - 3
- Lake Cochrane - 3
- Lake Herman - 6
- Lake Kampeska - 3
- Lake Madison - 6
- Lake Pocasse - 1
- McCook Lake - 14
- Park Creek - 1
- Long Lake - 1
- Round Lake - 1
- Split Rock Creek - 1

Volunteers:

- 36 Active Volunteers (2 backups)
 - 22 Bacteria Monitors
 - 8 Baseline Monitors
 - 4 Lake Index Monitors
- 6 Legacy Monitors
 - 6 Lake Index Monitors

Other Projects Assisted by DWW:

- Lake Andes – Charles Mix County
- McCook Lake – Union County
- Legacy Monitors

◆ RESULTS THUS FAR ◆

Secchi depth and *E. coli* results are shown in the table on page 2. The results include all the samples that have been submitted by volunteers since March and through the end of August, 2008. If more than one sample was collected at a site in the same month, the data reflects the average (i.e. Secchi depth is usually measured three times during a single sample). Lab and field blanks are not included. All blank samples showed no detection of *E. coli*.

The winner for the greatest Secchi depth readings goes to Lake Cochrane, where readings ranged from 8.5 feet to 29 feet. This is not uncommon for this lake! The poorest Secchi depth readings came from Grass Lake, where readings ranged from 0.16 feet to 0.49 feet. The following chart shows the average Secchi depths for each lake and stream:

Average Secchi Depth (in feet) By Month						
	March	April	May	June	July	August
Big Sioux River	-----	-----	-----	0.49	-----	-----
Brant Lake	-----	-----	-----	3.15	2.61	3.14
Grass Lake	-----	-----	-----	-----	0.26	-----
Lake Andes	-----	-----	-----	-----	-----	1.21
Lake Cochrane	-----	-----	>26.00	18.00	8.84	-----
Lake Herman	1.8	2.03	1.98	1.99	2.15	0.72
Lake Kampeska	-----	-----	-----	3.12	1.89	2.84
Lake Madison	-----	1.72	2.94	1.12	1.9	3.05
Lake Pocasse	-----	-----	4.27	-----	1.38	-----
Park Creek	-----	-----	-----	1.18	0.75	-----
Long Lake	-----	0.29	1.57	0.95	1.02	0.25
Round Lake	-----	-----	2.26	1.31	0.98	-----
Split Rock Creek	-----	-----	-----	0.56	.046	.056

River and stream sampling sites showed far greater exceedences in *E. coli* than samples taken from lake monitoring sites. In fact, 80 percent of the river and stream samples exceeded the EPA recommendation for intense swimming (≤ 235 cfu/100mL). A total of 10 samples were taken from sites located at Big Sioux River, Park Creek, and Split Rock Creek. Stream and river *E. coli* samples ranged from 173 cfu/100mL at the Big Sioux River Site 101-48-4A (monitored by Preston) to 2,267 cfu/100 mL at the Park Creek Site 102-52-21A (monitored by Snyder). Samples exceeding the EPA recommendation are in RED on the table.

A total of 103 *E. coli* samples were recorded from 6 of the 11 lakes. The lakes with *E. coli* samples included Brant Lake, Lake Cochrane, Lake Herman, Lake Kampeska, Grass Lake, and Lake Andes. There were zero exceedences of the EPA recommended criteria for intense swimming – meaning ALL lake *E. coli* samples fell below the ≤ 235 cfu/100mL. Samples of *E. coli* ranged from no detection (zero) at all lakes except Lake Andes, to 133 cfu/100mL at Lake Herman. In fact, 49 percent of all lake samples were “no detects” or ZERO for *E. coli*.

NOTE:
The Bacteria Monitoring Project is interpreting lab results using EPA-recommended standards for *E. coli* concentration. Recommendations are based on the intensity of swimming use:

- ◆ Intense (designated beach)- ≤ 235 cfu/100mL
- ◆ Moderate- ≤ 298 cfu/100mL
- ◆ Light- ≤ 410 cfu/100mL
- ◆ Infrequent- ≤ 576 cfu/100mL

South Dakota Recreational Standards are based on Fecal Coliform Bacteria, NOT *E. coli*
(South Dakota recreational water standards apply May 1 through September 30)

March Thru September 2008 Results

Lake	Monitoring Site	Monitor Name	Secchi Disk (depths in ft)					E. Coli Bacteria (cfu/100mL)							
			March	April	May	June	July	Aug	March	April	May	June	July	Aug	
Big Sioux River															
Big Sioux Rive	101-48-4A	Preston				0.49						173	327		
Big Sioux Rive	104-49-32A	Mitzel				0.49						173	1317		
Brant Lake															
Brant Lake	4302AAA	Phalen				2.43	2.62	3.94				53	2	40	
Brant Lake	4302BBB	Landry/Phalen				2.69	2.66	2.95				20	2	13	
Brant Lake	4302CCC	Landry/Phalen				3.15	2.79	2.43				7	0	13	
Brant Lake	4302DDD	Bauer/Landry/Phalen				3.25	3.05	3.28				4	0	0	
Brant Lake	4302EEE	Bauer/Landry/Phalen				4.23	3.61	2.62				4	4	0	
Brant Lake	4302FFF	Gillespie				3.90	2.46	2.95				14	11	0	
Brant Lake	4302GGG	Gillespie				4.10	3.18	2.95				10	7	7	
Brant Lake	4302HHH	Gillespie				3.61	2.10	2.30				4	4	0	
Brant Lake	4302III	Gillespie				4.53	3.31	4.00				7	4	0	
Brant Lake	4302JJJ					4.00	3.15	3.28				0	14	0	
Brant Lake	4302KKK					2.53	3.77	3.28				0	0	0	
Brant Lake	4302LLL					3.28	2.92	2.62				110	0	0	
Brant Lake	4302MMM					3.25	1.80	2.30				0	0	7	
Brant Lake	4302NNN	Bauer/Landry/Phalen				1.28	1.94	2.62				7	7	0	
Brant Lake	4302OOO	Bauer/Landry/Phalen				2.40	2.00	3.61				0	0	0	
Brant Lake	4302PPP	Bauer/Landry/Phalen				2.26	1.44	4.27				4	4	0	
Brant Lake	4302QQQ	Phalen				2.66	1.48	3.94				14	0	13	
Lake Cochrane															
Lake Cochran	2305AA	Dorhaut						9.12					0		
Lake Cochran	2305BB	Dorhaut						8.53					0		
Lake Cochran	2305CC	Dorhaut					>26.00	18.00	29.06				20		
Lake Herman															
Lake Herman	4306AAA	Stoneback	1.80	1.84	2.13	1.57	2.40				0	0	0	133	0
Lake Herman	4306BBB	Stoneback		2.00	2.23	1.97	>3.28				0	0	0	0	33
Lake Herman	4306CCC	Heidelberger		2.30	2.62	2.95	2.62	1.31			0	6		0	
Lake Herman	4306DDD	Heidelberger		1.80	1.41	1.64	1.64	0.66			9	11		0	
Lake Herman	4306EEE	Stoneback		2.20	2.76	>3.28	2.46				0	0	44	17	
Lake Herman	4306FFF	Dimick & Heidelberger			0.70	0.50	0.50	0.20				0	22	11	
Lake Kampeska															
Lake Kampeska	9508AAA	Roby				2.95	2.13	2.30					0	0	
Lake Kampeska	9508BBB	Sherman				3.28	1.64	3.28					20	20	
Lake Kampeska	9508CCC	Wisswal						2.95						0	
Long Lake															
Long Lake	4308AAA	DeSchepper		0.29	1.57	0.95	1.02	0.25							
Lake Madison															
Lake Madison	4309BBB	Snyder		2.10	3.77		1.31								
Lake Madison	4309CC	Graham & Dumke			>3.51	5.64									
Lake Madison	4309CCC	Graham			2.76	2.62	2.89	2.99							
Lake Madison	4309DDD	Hill			2.10	1.12		3.12							
Lake Madison	4309EEE	Robbins		1.97	2.69	2.59	1.71								
Lake Madison	4309FFF	Robbins		1.08	2.82	0.66	1.71								
Lake Pocasse															
Lake Pocasse	1608AA	Haan			4.27		1.38								
Round Lake															
Round Lake	4312AA	Todd			2.26	1.31	0.98								
Grass Lake															
Grass Lake	9109AA	Hoffman					0.20							0	
Grass Lake	9109AAA	Heath					0.49							7	
Grass Lake	9109BB	Hoffman					0.20							0	
Grass Lake	9109BBB	Marvin					0.16							13	
Grass Lake	9109CC	Heath					0.49							0	
Grass Lake	9109CCC	Marvin					0.20							120	
Grass Lake	9109DDD	Larry Braaten												0	
Grass Lake	9109EEE	Hoffman					0.16							0	
Grass Lake	9109FFF	Hoffman												13	
Grass Lake	9109GGG	Hoffman												0	
Grass Lake	9109HHH	Hoffman					0.20							13	
Grass Lake	9109III	Hoffman					0.20							7	
Grass Lake	9109JJJ	Lewis					0.16							7	
Grass Lake	9109KKK	Lewis					0.16							0	
Grass Lake	9109LLL	Preston					0.43							0	
Grass Lake	9109MMM	Preston					0.33							0	
Grass Lake	9109NNN	Bucklin												7	
Grass Lake	9109OOO	Bucklin												0	
Grass Lake	9109PPP	Dahlmeier					0.26							7	
Lake Andes															
Lake Andes	1708AAA	Chytka & Conn						1.15						33	
Lake Andes	1708BBB	Evans, Ceulmier & Evans						1.15						7	
Lake Andes	1708CCC	Deumier, Svatas & Ronfeldt						1.35						127	
Park Creek															
Park Creek	102-52-21A	Snyder				1.18	0.75						311	2267	
Split Rock Creek															
Split Rock Cre	103-47-17A	Finck & Fromm				0.56	0.46	0.56				1000	260	473	300

💧 REIMBURSEMENT REQUESTS 💧

Please submit the Reimbursement Request Form, *with receipts*, if you would like to be paid for mileage, postage, or other expenses related to the project. The form was included in the training packet you received. Send the form and receipts to the Dakota Water Watch administrators **by November 15**. Please call if you need a form.

💧 DATA DOCUMENTATION 💧

Please, please, pretty please....make sure you are filling in your data sheets completely. We know that some of it can become tedious at times, but it is so important to have complete information. Completeness makes the program administrators' jobs so much easier, especially with the many volunteers and many monitoring site locations. The data you collect is very important. For example, the data the volunteers collected on Lake Campbell last year is being used to help determine the status of the lake in lake assessment currently being conducted by the East Dakota Water Development District as part of an evaluation for the State and the Environmental Protection Agency. The data is very useful as long as the information is complete and accurate. Thank you for the great job you all have done so far. We have plans to streamline the datasheets and the amount of paperwork for the 2009 sampling season.

💧 SAMPLING 💧

Sampling continues through the end of October. If you were provided a sampling schedule, check it to see how many more samples you should take. If you were not provided a sampling schedule for this year, please sample once in September and once in October. For those of you sampling for bacteria, if a rain event occurs, be sure to grab a sample immediately following the event. The grant provides for sampling through the end of 2009. We hope that all of you will continue to sample for the Dakota Water Watch Program.



SD Canoe/Kayak Association Monitoring Grass Lake

💧 NEW PROGRAM ADMINSTRATORS! 💧

Dakota Water Watch administration changed hands on September 5, 2008. Deb Springman and Jeremy Hinke are looking forward to working with everyone. Deb has been working with the District for 7 ½ years and Jeremy recently moved to Brookings from Wisconsin. We are here to assist you and answer any questions you may have. You can contact either of us at the address, phone, & email listed below.

**Dakota Water Watch
Personnel Contact Information**
Deb Springman OR Jeremy Hinke
East Dakota Water Development District
132B Airport Drive
Brookings, SD 57006
(605) 688-6741 edwdd3@brookings.net

If you would like us to provide an overview of this year's monitoring at your lake association meeting/group meeting sometime this winter we would be happy to do that – just let us know so we can add it to our calendar.

Thank You for Volunteering !