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12/16/08

Susan Graham
DNR
3911 Fish Hatchery Road
Fitchburg, WI 53711

Subject: Final Details Requested for Final Reimbursement of LPL-1108-07 (End date Dec, 2008)

Dear Sue

This is in response to your email dated December 9, 2008 regarding clarification of some of the deliverables for our LPL – 1108-07. I will provide you justification and information for each of those below, including both a hard copy and an electronic copy of a CD. I assume this should provide you the details you needed to complete this grant process.

1) Pre-Project Presentation/Meeting. The Columbia County LWCD presented the award notice and overview of recently awarded LPL-1108-07 Park Lake Monitoring Grant to the Park Lake Management District, Village of Pardeeville and the general public at the regular meet of the PLMD Board on October 11, 2006. The meeting began at 6pm.

2) Project Summary, yes the CWSE Report I submitted with the initial reimbursement request is the final report of the H20 sampling work done in 2007.

3) On March 24, 2008 we held an open house meeting in Pardeeville. This meeting provided us the venue to provide a public open house presentation to the general public. This presentation included an overview and summary of the first year of water testing and the results. I have enclosed a copy of the power point from that meeting that highlights this discussion.

4) Completion of phase #1 will prepare us for a more complex review and data set evaluation moving through phase #2 and phase #3.

5) This water monitoring grant was applied for an approved as part of a long term monitoring program that we have laid out in cooperation with CWSE at UWSP. As outlined in our recently submitted Lake Management Plan for Park Lake, the completion of a multi-year water monitoring program along with this first year (this grant), our existing 2008 grant and our long term TMDL grant, we will then be able

to take this scientific data and re-evaluate elements in our PLMD Lake Management Plan and make necessary changes in focus or content.

6) DO, PH, Conductivity and Temp were all gathered as part of our rating curve development that my staff collected throughout this grant cycle, the information is critical for further interpretation of water sampling data. That information is on the enclosed spreadsheet.

I assume this should address your questions and needs. If you have any further questions please let me know.

Thanks

Kurt R. Calkins
Director of Land and Water Conservation
Columbia County

2007

HWY 22 Data

Date	Temp (f)	PH	ECT	DO
23-Apr	59.3	8.7	440	11.02
7-May	60.2	8.9	450	10.35
14-May	66.9	8.8	460	8.8
23-May	67.7	9	430	8.74
7-Jun	69.2	8.4	440	5.85
15-Jun	75	8.2	490	3.78
3-Jul	72	8.5	470	4.95
19-Jul	69.7	8.1	480	3.62
12-Sep	65	8.1	500	5.57
27-Sep	63.6	8.1	500	5.5
2-Oct	65.1	8.7	470	7.45

2007

HWY 33 Data

Date	Temp (f)	PH	ECT	DO
23-Apr	61.2	8.1	600	9.45
7-May	54.7	8.4	620	10.66
14-May	57.8	8.5	640	10.2
23-May	68.7	8.3	640	82.7
7-Jun	62.4	8.1	610	7.41
15-Jun	77	8.6	630	11.55
3-Jul	65.4	8.5	630	10.66
19-Jul	67.1	8.2	660	6.27
12-Sep	55.4	8.1	600	7.35
27-Sep	58.4	8.3	630	7.66
2-Oct	62.7	8.3	490	8.3

2007

2007 HWY E DATA

Date	Temp (f)	PH	ECT	DO
23-Apr	63.5	8.2	620	11.99
7-May	60.6	8.5	640	12.65
14-May	65.8	8.4	630	10.84
23-May	66.1	8.4	630	8.4
7-Jun	68.3	8.8	640	7.63
15-Jun	84.5	8.4	670	7.81
3-Jul	72.8	8.3	660	7.78
19-Jul	72.8	8.3	690	8.5
12-Sep	56.2	8.3	736	8.3
27-Sep	59	8.2	680	8.6
2-Oct	64.7	7.9	490	6.65
11-Jan	41.1	8.5	680	12.7

2007

Larson Road Data

Date	Temp (f)	PH	ECT	DO
23-Apr	58.4	8.2	580	11.44
7-May	56.2	8.5	610	12.45
14-May	60.5	8.3	630	9.95
23-May	61	8.3	640	9.12
7-Jun	61.3	8.2	620	7.9
15-Jun	69.1	8.4	660	8.4
3-Jul	63.3	8.3	660	8.14
19-Jul	63.3	8.4	680	7.7
12-Sep	52.9	8.1	630	8.25
27-Sep	55.5	8.4	640	8.75
2-Oct	61.5	8	500	7.55

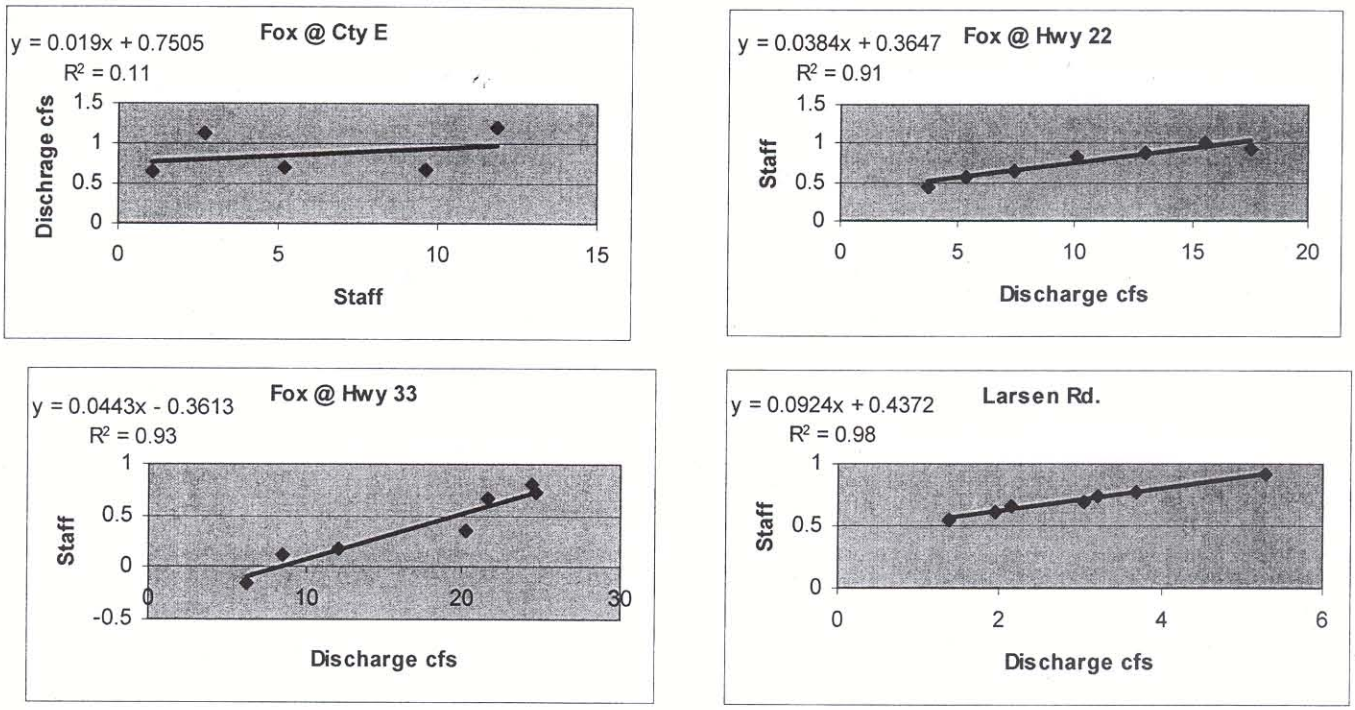
Park Lake Tributary Water Quality Monitoring Data

Sample Date	Site	Staff Gauge (ft)	Sample Type	SRP (µg/L)	TP (µg/L)	SRP:TP	NH_4^+ (mg/L)	$NO_2^- + NO_3^-$ (mg/L)	Inorg N (mg/L)	TKN (mg/L)	TN (mg/L)	Org N (mg/L)	TSS (mg/L)	Cl- (mg/L)
3/13/2007	Cty E 1E			777	947	0.82	1.55	1.27	2.82	3.9	5.17	2.35	7	3.9
6/7/2007	Cty E 1E	1.12		77	132	0.58	0.17	2.28	2.45	1.19	3.47	1.02	10	11.4
7/27/2007	Cty E 1E	1.66	Event	122	332	0.37	0.18	1.25	1.43	2.1	3.35	1.92	45	16.6
8/30/2007	Cty E 1E			148	282	0.52	0.1	1.48	1.58	2.12	3.6	2.02	31	15.4
10/1/2007	Cty E 1E	2.08	Event	89	170	0.52	<.01	2.32	2.33	1.38	3.7	1.37	22	9.1
3/13/2007	Hwy 22			20	72	0.28	0.42	2.99	3.41	0.94	3.93	0.52	3	14.8
6/7/2007	Hwy 22			11	129	0.09	0.08	0.2	0.28	1.66	1.86	1.58	22	14.5
7/27/2007	Hwy 22		Event	99	247	0.40	0.37	0.81	1.18	2.3	3.11	1.93	28	15.4
8/30/2007	Hwy 22			17	90	0.19	0.28	0.65	0.93	1.54	2.19	1.26	45	14.6
10/1/2007	Hwy 22		Event	60	201	0.30	<.01	1.11	1.12	1.61	2.72	1.6	26	9.9
3/13/2007	Hwy 33			310	458	0.68	0.77	1.52	2.29	2.5	4.02	1.73	20	4.2
6/7/2007	Hwy 33	0.72		107	185	0.58	0.18	4.09	4.27	1.43	5.52	1.25	21	13.2
7/27/2007	Hwy 33		Event	92	386	0.24	<.01	3.93	3.94	2.6	6.53	2.59	142	14.6
8/30/2007	Hwy 33			119	168	0.71	0.05	2.09	2.14	1.42	3.51	1.37	8	15
10/1/2007	Hwy 33		Event	53	113	0.47	<.01	2.82	2.83	1.13	3.95	1.12	14	10.1
6/7/2007	Larson Rd	0.78		53	157	0.34	0.06	3.27	3.33	1.09	4.36	1.03	50	11.7
10/1/2007	Larson Rd	1.28	Event	65	114	0.57	<.01	3.67	3.68	1.07	4.74	1.06	22	8
3/13/2007	Larson Rd 1L			344	441	0.78	0.59	1.37	1.96	2	3.37	1.41	5	3
7/27/2007	Larson Rd 1L	0.78	Event	89	247	0.36	0.04	4.55	4.59	1.6	6.15	1.56	75	18.5
8/30/2007	Larson Rd. 2-L			54	67	0.81	0.04	3.62	3.66	0.7	4.32	0.66	4	15

Park Lake Water Quality Data - 2007

The Columbia County Land Conservation Department collected five rounds of samples from 4 sites in the Park Lake Watershed. Samples were collected once in March, June, July, August, and October. In addition the sampling sites were instrumented with pressure transducers and staff gages. Rating curves are being developed by the LCD for this instrumentation (Figure 1). These rating curves will continue to be developed into 2008. Pressure transducers were recently removed and those data have not been evaluated.

Figure 1. Initial rating curves for 4 monitoring sites in the Park Lake Watershed.



Water quality measures were spotty with a minimal number of samples, so discussion about these data and yields/loads can not be estimated at this time. In the samples collected above Park Lake, TP concentrations ranged from 67 to 947 µg/L with a median of 185 µg/L. Below the outflow the TP range was 72-209 µg/L with a median concentration of 129 µg/L. SRP was a significant form of phosphorus at the sites above Park Lake with an average SRP:TP of 0.56, but was much less of a fraction (0.25) below Park Lake. TSS was elevated during some of the sampling periods, particularly at Larson Rd and Hwy 33. NO_2+NO_3-N is elevated in all samples collected upstream of Park Lake (Figure 2).