

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Application				Manure Applied Nutrients (lbs/acre)		UW Crop Nutrient Recs (lbs/acre)		Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)		Excess N Amount (Lbs/Acre)	Compr	
						Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	N	P2O5	N	P2O5	N			P2O5
N56	4	cover crop	grain cover crop			Post Digester Liquid	3/ 4- 1- 9	10000	Unincorporated	32	11							
							32/ - 0- 0	30	Incorporated	106	0							
N57	4	Potatoes, late harvest, to small grain cover crop	Corn silage to small grain cover crop			Post Digester Liquid	3/ 4- 1- 9	10000	Unincorporated	32	11							
							32/ - 0- 0	45	Incorporated	160	0							
N58	4	Peas to Snapbean to small grain cover	Potatoes, late harvest, to small grain cover crop			Post Digester Solids	5/ 7- 4- 2	10	Incorporated	67	44							
							32/ - 0- 0	45	Incorporated	160	0							
							0/ - 0- 60	500	Incorporated	0	0							
							5/ - 18- 10	5	Incorporated	3	10							
N59	4	Potatoes, late harvest, to small grain cover crop	Corn silage to small grain cover crop			Post Digester Solids	5/ 7- 4- 2	15	Unincorporated	76	67							
							0/ - 0- 60	350	Unincorporated	0	0							
							5/ - 18- 10	3	Incorporated	2	6							
							32/ - 0- 0	28	Incorporated	99	0							

Sweet

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Application				Manure Applied Nutrients (lbs/acre)		UW Crop Nutrient Recs (lbs/acre)		Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)		Excess N Amount (Lbs/Acre)	Compr		
						Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)		N	P2O5	N	P2O5			N	P2O5
										N	P2O5								
N60	4	corn to Late Summer Direct Seeded Legume Forage	Alfalfa			Post Digester Solids	5/ 7- 4- 2	5	Incorporated	34	22	-1	0	-1	-1	0			
							0/ - 0- 60	200	Incorporated	0	0								
N61	4	Potatoes, late harvest, to small grain cover crop	Corn silage to small grain cover crop			Post Digester Solids	5/ 7- 4- 2	15	Unincorporated	76	67	-1	0	-1	-1	0			
							0/ - 0- 60	450	Unincorporated	0	0								
							32/ - 0- 0	30	Incorporated	106	0								
							5/ - 18- 10	3	Incorporated	2	6								
N62	4	Alfalfa	Alfalfa (1st cut) to Corn silage			Post Digester Solids	5/ 7- 4- 2	13	Unincorporated	66	58	-1	0	-1	-1	0			
							0/ - 0- 60	375	Unincorporated	0	0								
							32/ - 0- 0	20	Incorporated	71	0								
N63	4	Sweet corn to Late Summer Direct Seeded Legume Forage	Alfalfa			Post Digester Solids	5/ 7- 4- 2	15	Incorporated	101	67	-1	0	-1	-1	0			
							0/ - 0- 22	100	Incorporated	0	0								
RDO 01E	3	Potatoes, late harvest, to small grain cover crop	Corn silage to small grain cover crop			Post Digester Solids	5/ 7- 4- 2	15	Unincorporated	76	67	-1	0	-1	-1	0			
							0/ - 0- 60	350	Unincorporated	0	0								
							5/ - 18- 10	3	Incorporated	2	6								
							16/ - 0- 6	60	Incorporated	106	0								

Potatoes,

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	Manure Applied Nutrients (lbs/acre)		UW Crop Nutrient Recs (lbs/acre)		Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)		Excess N Amount (Lbs/Acre)	Comr
											N	P2O5	N	P2O5	N	P2O5		
RDO 01W	2	Alfalfa (1st cut) to Corn grain	late harvest, to small grain cover crop			Post Digestor Solids	5/ 7- 4- 2	10	Incorporated			-1	0	-1	-1	0		
							0/ - 0- 60	400	Incorporated	67	44	0	0					
							32/ - 0- 0	35	Incorporated	124	0							
							5/ - 18- 10	5	Incorporated	3	10							
RDO 02N	3	Alfalfa	Alfalfa			Post Digestor Solids	5/ 7- 4- 2	10	Incorporated			-1	0	-1	-1	0		
										67	44							
RDO 02S	1	Alfalfa	Potatoes, late harvest, to small grain cover crop			Post Digestor Solids	5/ 7- 4- 2	10	Incorporated			250	60	256	57	0		
							32/ - 0- 0	38	Incorporated	67	44	135	0					
							0/ - 0- 60	500	Incorporated	0	0							
							5/ - 18- 10	5	Incorporated	3	10							
RDO 03	1	Alfalfa	Potatoes, late harvest, to small grain cover crop			Post Digestor Solids	5/ 7- 4- 2	10	Incorporated			-1	0	-1	-1	0		
							0/ - 0- 60	500	Incorporated	0	0							
							9/ - 28- 4	10	Subsurface	10	32							
							5/ - 18- 10	5	Subsurface	3	10							
							32/ - 0- 0	55	Incorporated	195	0							
RDO 04N	1	Alfalfa	Alfalfa (1st cut) to Corn silage			Post Digestor Solids	32/ - 0- 0	35	Incorporated			-1	0	-1	-1	0		
							0/ - 0- 60	180	Unincorporated	124	0	0	0					
							5/ - 18- 10	3	Subsurface	2	6							
RDO 04S	1	Snap Beans early plant to small grain cover	Potatoes, late harvest, to small grain cover								-1	0	-1	-1	0			

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	Manure Applied Nutrients (lbs/acre)		UW Crop Nutrient Recs (lbs/acre)		Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)		Excess N Amount (Lbs/Acre)	Comm
											N	P2O5	N	P2O5	N	P2O5		
		crop	crop			Post Digestor Liquid	3/4-1-9	10000	Incorporated		43	11						
							32/-0-0	40	Incorporated		142	0						
							0/-0-60	400	Incorporated		0	0						
							5/-18-10	5	Incorporated		3	10						
							32/-0-0	15	Incorporated		53	0						
RDO 06E	4	Potatoes, late harvest, to small grain cover crop	Snap Beans late plant to small grain cover crop			Post Digestor Liquid	3/4-1-9	5000	Incorporated		22	6	-1	0	-1	-1	0	
							32/-0-0	10	Incorporated		35	0						
RDO 06W	4	Snapbean to small grain cover	Potatoes, late harvest, to small grain cover crop			Post Digestor Liquid	3/4-1-9	10000	Incorporated		43	11	-1	0	-1	-1	0	
							0/-0-60	380	Incorporated		0	0						
							5/-18-10	5	Subsurface		3	10						
							32/-0-0	50	Incorporated		177	0						
RDO 07E	3	Corn silage to small grain cover crop	Snap Beans early plant to small grain cover crop			Post Digestor Liquid	3/4-1-9	5000	Incorporated		22	6	-1	0	-1	-1	0	
RDO 07W	4	Potatoes, late harvest, to small grain cover crop	Corn silage to small grain cover crop			Post Digestor Liquid	3/4-1-9	10000	Unincorporated		32	11	-1	0	-1	-1	0	
						Post Digestor Liquid	3/4-1-9	10000	Unincorporated		32	11						
							32/-0-0	40	Incorporated		142	0						
		Corn silage to small	Peas to Snapbean															

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	Manure Applied Nutrients (lbs/acre)		UW Crop Nutrient Recs (lbs/acre)		Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)		Excess N Amount (Lbs/Acre)	Comm	
											N	P2O5	N	P2O5	N	P2O5			
RDO 08	4	grain cover crop	to small grain cover			Post Digester Liquid	3/4-1-9	5000	Incorporated		22	6	-1	0	-1	-1	0		
											22	6							
											35	0							
RDO 09E	4	Corn silage to small grain cover crop	Peas to Snapbean to small grain cover			Post Digester Liquid	3/4-1-9	5000	Incorporated		22	6	-1	0	-1	-1	0		
											26	7							
											18	0							
RDO 09W	3	Snapbean to small grain cover	Potatoes, late harvest, to small grain cover crop				0/-0-60	85	Incorporated		0	0							
											16/-0-6	0	Unincorporated	0	0				
											5/-18-10	5	Subsurface	3	10				
											9/-28-4	10	Subsurface	10	32				
											32/-0-0	60	Incorporated	213	0				
RDO 10	4	Potatoes, late harvest, to small grain cover crop	Corn silage to small grain cover crop			Post Digester Liquid	3/4-1-9	10000	Incorporated		43	11	-1	0	-1	-1	0		
											26	7							
											142	0							
RDO 11N	4	Potatoes, late harvest, to small grain cover crop	Corn silage to small grain cover crop			Post Digester Liquid	3/4-1-9	10000	Incorporated		43	11	-1	0	-1	-1	0		
											43	11							
											124	0							

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											N	P2O5	N	P2O5	N	P2O5		
RDO 11S	3	Sweet Corn early plant (before May 20) with small grain cover crop	Snap Beans early plant to small grain cover crop			Post Digestor Liquid	3/4-1-9	5000	Incorporated		22	6	-1	0	-1	-1	0	
RDO 12N	4	Potatoes, late harvest, to small grain cover crop	Corn silage to small grain cover crop			Post Digestor Liquid	3/4-1-9	10000	Unincorporated		32	11	-1	0	-1	-1	0	
RDO 13E	4	Potatoes, late harvest, to small grain cover crop	Sweet Corn early plant (before May 20) with small grain cover crop			Post Digestor Liquid	3/4-1-9	10000	Incorporated		43	11	-1	0	-1	-1	0	
RDO 13W	4	Corn silage to small grain cover crop	Snap Beans early plant to small grain cover crop			Post Digestor Liquid	3/4-1-9	6000	Incorporated		26	7	-1	0	-1	-1	0	
		Potatoes, Peas to late Snapbean harvest,																

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	Manure Applied Nutrients (lbs/acre)		UW Crop Nutrient Res (lbs/acre)		Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)		Excess N Amount (Lbs/Acre)	Comm
											N	P2O5	N	P2O5	N	P2O5		
RDO 14	4	to small grain cover	to small grain cover crop			Post Digester Liquid	3/ 4- 1- 9	10000	Incorporated			-1	0	-1	-1	0		
							0/ - 0- 60	400	Incorporated	43	11	0	0					
							32/ - 0- 0	55	Incorporated	195	0							
							5/ - 18- 10	5	Subsurface	3	10							
RDO 15	4	Sweet Corn middle plant (May 20 - June 10) with small grain cover crop	Snap Beans early plant to small grain cover crop			Post Digester Liquid	3/ 4- 1- 9	5000	Incorporated			-1	0	-1	-1	0		
										22	6							
RDO 16	4	Snap beans to Late-Direct Seeded Legume Forage	Alfalfa			Post Digester Liquid	3/ 4- 1- 9	5000	Incorporated			-1	0	-1	-1	0		
										22	6							
RDO 17E	4	Potatoes, late harvest, to small grain cover crop	Alfalfa			Post Digester Liquid	3/ 4- 1- 9	5000	Incorporated			-1	0	-1	-1	0		
										22	6							
RDO 17W	4	Potatoes, late harvest, to small grain cover crop	Corn silage to small grain cover crop			Post Digester Liquid	3/ 4- 1- 9	5000	Incorporated			-1	0	-1	-1	0		
										22	6							
										43	11							
							5/ - 18- 10	3	Subsurface	2	6							
			32/ - 0- 0	40	Incorporated	142	0											
		Potatoes, late	Corn															

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	Manure Applied Nutrients (lbs/acre)		UW Crop Nutrient Recs (lbs/acre)		Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)		Excess N Amount (Lbs/Acre)	Comm	
											N	P2O5	N	P2O5	N	P2O5			
RDO 20	4	grain cover crop	to small grain cover crop			Post Digester Solids	5/ 7- 4- 2	10	Incorporated					-1	0	-1	-1	0	
							0/ - 0- 60	500	Incorporated	67	44	0	0						
							0/ - 0- 60	5	Subsurface	0	0								
							32/ - 0- 0	50	Incorporated	177	0								
RDO 21N	4	Peas to Snapbean to small grain cover	Potatoes, late harvest, to small grain cover crop			Post Digester Solids	5/ 7- 4- 2	10	Incorporated					-1	0	-1	-1	0	
							32/ - 0- 0	20	Incorporated	67	44	71	0						
							0/ - 0- 60	500	Incorporated	0	0								
							32/ - 0- 0	28	Incorporated	99	0								
RDO 21S	4	Peas to Snapbean to small grain cover	Potatoes, late harvest, to small grain cover crop			Post Digester Solids	5/ 7- 4- 2	10	Incorporated					-1	0	-1	-1	0	
							32/ - 0- 0	48	Incorporated	67	44	170	0						
							0/ - 0- 60	500	Incorporated	0	0								
							5/ - 18- 10	5	Subsurface	3	10								
RDO 22	4	Sweet Corn late plant (June 10 or Later) with small grain cover crop	Potatoes, late harvest, to small grain cover crop			Post Digester Solids	5/ 7- 4- 2	10	Incorporated					-1	0	-1	-1	0	
							32/ - 0- 0	20	Incorporated	67	44	71	0						
							0/ - 0- 60	450	Incorporated	0	0								
							32/ - 0- 0	25	Incorporated	89	0								

Snap-Plus Field Data and 590 Assessment Plan

Snap-Plus version 1.132.8

Reported for Central Sands Dairy LLC

Printed 1/28/2012

Plan Completion/Update Date: Missing

Prepared by FRASE CROP CONSULTING

Prepared for

Central Sands Dairy LLC

Field data: 6894.0 total acres reported.

Field Name	Field Group (sub farm)	FSA Tract #	FSA Field #	Acres	County	Soil Series & Map Symbol	Field Slope (%)	Field Slope Length (ft)	Below Field Slope To Water (%)	Distance To Water (ft)	N and Field Restrictions	Contour / Filters	Rotation	Tillage	Report Period	Field "T" t/ac	Rot Avg Soil Loss t/ac	Rot Avg PI	Soil Test P ppm	Rot P2O5 Bal lb/ac	P2O5 Bal Target lb/ac
CASINO N		8798	6896	110.0	WI-Juneau	Plainfield (PFB)	4	300	2.1 - 6	301 - 1000	P	no / no			2011 - 2015	5	0.2	NA	104	NA	NA
CASINO S		8798	6896	79.0	WI-Juneau	Plainfield (PFB)	3	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.2	NA	171	NA	NA
N01		8991	7373	60.0	WI-Wood	Plainfield (PfA)	2	600	2.1 - 6	301 - 1000	P	no / no			2011 - 2013	5	0.0	NA	241	NA	NA
N02		8991	7373	60.0	WI-Wood	Plainfield (PfA)	2	200	0 - 2	301 - 1000	P	no / no			2011 - 2012	5	0.0	NA	232	NA	NA
N03		7056	7373	65.0	WI-Wood	Plainfield (PfA)	1	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.1	NA	167	NA	NA
N04		7056	7373	65.0	WI-Wood	Plainfield (PfA)	1	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.1	NA	199	NA	NA
N05		7056	7373	65.0	WI-Wood	Plainfield (PfA)	1	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.0	NA	182	NA	NA
N06		7057	7373	65.0	WI-Wood	Plainfield (PfA)	1	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.0	NA	156	NA	NA
N07		7057	7373	65.0	WI-Wood	Plainfield (PfA)	1	200	0 - 2	0 - 300	P	no / no			2011 - 2013	5	0.1	NA	172	NA	NA
N08		9601	7373	75.0	WI-Wood	Friendship (FrA)	2	151	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.3	NA	109	NA	NA
N09		9601	7373	75.0	WI-Wood	Plainfield (PfA)	1	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.0	NA	129	NA	NA
N10		7058	7373	85.0	WI-Wood	Plainfield (PfA)	1	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.1	NA	176	NA	NA
N11		7059	7373	85.0	WI-Wood	Plainfield (PfA)	1	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.1	NA	202	NA	NA
N12		3562	7373	65.0	WI-Wood	Plainfield (PfA)	1	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.1	NA	170	NA	NA
N13		3562	7373	65.0	WI-Wood	Plainfield (PfA)	1	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.1	NA	196	NA	NA
N14		7058	7373	65.0	WI-Wood	Plainfield (PfA)	1	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.1	NA	185	NA	NA
N15		7058	7373	65.0	WI-Wood	Plainfield (PfA)	1	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.1	NA	204	NA	NA
N16		4312	7373	65.0	WI-Juneau	Friendship (FrB)	4	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.0	NA	178	NA	NA
N17		4312	7373	65.0	WI-Wood	Plainfield (PfA)	1	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.0	NA	197	NA	NA
N18		7411	7351	100.0	WI-Juneau	Plainfield (PFB)	4	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.1	NA	149	NA	NA
N19		9604	7373	65.0	WI-Juneau	Plainfield (PFB)	4	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.2	NA	194	NA	NA
N20		9604	7373	65.0	WI-Juneau	Plainfield (PFB)	4	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.2	NA	210	NA	NA
N21		9604	7373	65.0	WI-Juneau	Plainfield (PFB)	3	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.2	NA	206	NA	NA
N22		9604	7373	65.0	WI-Juneau	Plainfield (PFB)	3	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.2	NA	157	NA	NA
N23		9603	7373	60.0	WI-Juneau	Plainfield (PFB)	3	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.2	NA	126	NA	NA
N24		9603	7373	60.0	WI-Juneau	Plainfield (PFB)	3	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.2	NA	158	NA	NA
N25		9603	7373	60.0	WI-Juneau	Plainfield (PFB)	3	200	0 - 2	301 - 1000	P	no / no			2011 - 2013	5	0.1	NA	162	NA	NA

Field Name	Field Group (sub farm)	FSA Tract #	FSA Field #	Acres	County	Soil Series & Map Symbol	Field Slope (%)	Field Slope Length (ft)	Below Field Slope To Water (%)	Distance To Water (ft)	N and Field Restrictions	Field Contour / Filters	Rotation	Tillage	Report Period	Field "T" t/ac	Rot Avg Soil Loss t/ac	Rot Avg PI	Soil Test P ppm	Rot P2O5 Bal lb/ac	P2O5 Bal Target lb/ac
N26		9603	7373	60.0	WI-Juneau	Plainfield (PFB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	156	NA	NA
N27		8454	7373	75.0	WI-Juneau	Friendship (FrB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	165	NA	NA
N28		8454	7373	75.0	WI-Juneau	Friendship (FrB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	179	NA	NA
N29		4314	7373	75.0	WI-Juneau	Plainfield (PFB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	124	NA	NA
N30		4314	7373	75.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	146	NA	NA
N31		9604	7373	75.0	WI-Juneau	Plainfield (PFB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	139	NA	NA
N32		9604	7373	75.0	WI-Juneau	Plainfield (PFB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	175	NA	NA
N33		9603	7373	60.0	WI-Juneau	Plainfield (PFB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	169	NA	NA
N34		9603	7373	60.0	WI-Juneau	Plainfield (PFB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.0	NA	158	NA	NA
N35		9603	7373	60.0	WI-Juneau	Plainfield (PFB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	149	NA	NA
N36		9603	7373	60.0	WI-Juneau	Plainfield (PFB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	171	NA	NA
N37		4314	7373	75.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	145	NA	NA
N38		4314	7373	75.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	125	NA	NA
N39		9604	7373	75.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	136	NA	NA
N40		9604	7373	75.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.0	NA	139	NA	NA
N41		4319	7373	70.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	171	NA	NA
N42		9604	7373	70.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	0-300	P	no/no			2011-2013	5	0.2	NA	69	NA	NA
N43		9604	7373	75.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	164	NA	NA
N44		9604	7373	75.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	199	NA	NA
N45		9605	7373	45.0	WI-Juneau	Meehan (MnA)	1	25	0-2	0-300	WP	no/no			2011-2013	5	0.0	NA	120	NA	NA
N46		9605	7373	65.0	WI-Juneau	Meehan (MnA)	1	25	0-2	0-300	WP	no/no			2011-2013	5	0.0	NA	118	NA	NA
N47		9605	7373	75.0	WI-Juneau	Meehan (MnA)	1	100	0-2	0-300	WP	no/no			2011-2013	5	0.0	NA	131	NA	NA
N48		9605	7373	75.0	WI-Juneau	Meehan (MnA)	1	25	0-2	0-300	WP	no/no			2011-2013	5	0.1	NA	128	NA	NA
N49		4316	7373	60.0	WI-Juneau	Meehan (MnA)	1	200	0-2	0-300	WP	no/no			2011-2013	5	0.0	NA	143	NA	NA
N50		4316	7373	60.0	WI-Juneau	Friendship (FrB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.0	NA	160	NA	NA
N51		7606	7373	75.0	WI-Juneau	Plainfield (PFB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	163	NA	NA
N52		7606	7373	75.0	WI-Juneau	Plainfield (PFB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	154	NA	NA
N53		9604	7373	75.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	144	NA	NA
N54		7606	7373	75.0	WI-Juneau	Plainfield (PFB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	141	NA	NA
N55		9604	7373	65.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	160	NA	NA
N56		9604	7373	65.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	154	NA	NA
N57		7605	7373	75.0	WI-Juneau	Friendship (FrB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	128	NA	NA

Field Name	Field Group (sub farm)	FSA Tract #	FSA Field #	Acres	County	Soil Series & Map Symbol	Field Slope (%)	Field Slope Length (ft)	Below Field Slope To Water (%)	Distance To Water (ft)	N and Field Restrictions	Contour / Filters	Rotation	Tillage	Report Period	Field "T" t/ac	Rot Avg Soil Loss t/ac	Rot Avg PI	Soil Test P ppm	Rot P205 Bal lb/ac	P205 Bal Target lb/ac
N58		7605	7373	75.0	WI-Juneau	Friendship (FrB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	151	NA	NA
N59		4310	7373	75.0	WI-Juneau	Friendship (FrB)	4	200	0-2	0-300	P	no/no			2011-2013	5	0.2	NA	137	NA	NA
N60		4310	7373	75.0	WI-Juneau	Friendship (FrB)	4	200	0-2	0-300	P	no/no			2011-2013	5	0.0	NA	121	NA	NA
N61		4311	7373	100.0	WI-Juneau	Friendship (FrB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	125	NA	NA
N62		7603	7373	75.0	WI-Juneau	Friendship (FrB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	122	NA	NA
N63		7603	7373	75.0	WI-Juneau	Friendship (FrB)	4	200	0-2	0-300	P	no/no			2011-2013	5	0.0	NA	128	NA	NA
RDO 01E		8451	6896	67.0	WI-Wood	Plainfield (PfA)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	127	NA	NA
RDO 01W		8451	6896	66.0	WI-Wood	Friendship (FrA)	2	151	0-2	301-1000	P	no/no			2011-2013	5	0.4	NA	143	NA	NA
RDO 02N		8451	6896	54.0	WI-Wood	Plainfield (PfA)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.0	NA	124	NA	NA
RDO 02S		8451	6896	54.0	WI-Wood	Plainfield (PfA)	1	200	0-2	301-1000	P	no/no	POI+cv-SCm+cv-[SB-SB]+cv	CP/NTcvt-NT/NTcvt-Fcult/Dcvt	2011-2013	5	0.0	0	130	-74	0
RDO 03		8449	6896	142.0	WI-Wood	Plainfield (PfA)	1	200	0-2	301-1000	P	no/no			2011-2013	5	0.0	NA	115	NA	NA
RDO 04N		8450	7351	66.0	WI-Wood	Plainfield (PfA)	1	200	0-2	301-1000	P	no/no			2011-2012	5	0.1	NA	163	NA	NA
RDO 04S		8450	7351	67.0	WI-Wood	Plainfield (PfA)	1	200	0-2	301-1000	P	no/no			2011-2012	5	0.0	NA	149	NA	NA
RDO 06E		8453	6896	67.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	149	NA	NA
RDO 06W		8453	6896	66.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	144	NA	NA
RDO 07E		8453	6896	66.0	WI-Juneau	Plainfield (PFB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	149	NA	NA
RDO 07W		8453	6896	67.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	142	NA	NA
RDO 08		8453	6896	70.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	140	NA	NA
RDO 09E		8458	6896	66.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2012	5	0.2	NA	137	NA	NA
RDO 09W		8458	6896	66.0	WI-Juneau	Plainfield (PFB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	110	NA	NA
RDO 10		8458	6896	68.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	181	NA	NA
RDO 11N		8452	7351	66.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2012	5	0.1	NA	177	NA	NA
RDO 11S		8452	7351	67.0	WI-Juneau	Plainfield (PFB)	3	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	164	NA	NA
RDO 12N		8452	7373	67.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	136	NA	NA
RDO 13E		8452	7373	67.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	1543	NA	NA
RDO 13W		8452	7373	66.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.1	NA	162	NA	NA
RDO 14		8459	6896	36.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	131	NA	NA
RDO 15		8459	6896	65.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	141	NA	NA
RDO 16		8460	7373	69.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.0	NA	146	NA	NA
RDO 17E		8459	6896	80.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2012	5	0.0	NA	146	NA	NA
RDO 17W		8459	6896	80.0	WI-Juneau	Plainfield (PFB)	4	200	0-2	301-1000	P	no/no			2011-2013	5	0.2	NA	170	NA	NA
RDO					WI-	Friendship				301-					2011-						

Field Name	Field Group (sub farm)	FSA Tract #	FSA Field #	Acres	County	Soil Series & Map Symbol	Field Slope (%)	Field Slope Length (ft)	Below Field Slope To Water (%)	Distance To Water (ft)	N and Field Restrictions	Contour / Filters	Rotation	Tillage	Report Period	Field "T" t/ac	Rot Avg Soil Loss t/ac	Rot Avg PI	Soil Test P ppm	Rot P2O5 Bal lb/ac	P2O5 Bal Target lb/ac
18N		8454	7373	67.0	Juneau	(FrB)	4	200	0-2	1000	P	no / no			2013	5	0.2	NA	117	NA	NA
RDO 18S		8454	7373	67.0	Wi-Juneau	Friendship (FrB)	4	200	0-2	301-1000	P	no / no			2011-2013	5	0.1	NA	116	NA	NA
RDO 19E		8454	7373	67.0	Wi-Juneau	Friendship (FrB)	4	200	0-2	301-1000	P	no / no			2011-2013	5	0.1	NA	146	NA	NA
RDO 19S		8454	7373	25.0	Wi-Juneau	Friendship (FrB)	4	200	0-2	301-1000	P	no / no			2011-2012	5	0.0	NA	83	NA	NA
RDO 19W		8454	7373	67.0	Wi-Juneau	Friendship (FrB)	4	200	0-2	301-1000	P	no / no			2011-2013	5	0.2	NA	126	NA	NA
RDO 20		8461	6896	36.0	Wi-Juneau	Friendship (FrB)	4	200	0-2	301-1000	P	no / no			2011-2013	5	0.1	NA	124	NA	NA
RDO 21N		8455	6896	67.0	Wi-Juneau	Friendship (FrB)	4	200	0-2	301-1000	P	no / no			2011-2013	5	0.1	NA	134	NA	NA
RDO 21S		8455	6896	66.0	Wi-Juneau	Friendship (FrB)	4	200	0-2	301-1000	P	no / no			2011-2013	5	0.2	NA	130	NA	NA
RDO 22		8456	6896	133.0	Wi-Juneau	Friendship (FrB)	4	200	0-2	301-1000	P	no / no			2011-2013	5	0.2	NA	137	NA	NA

Crop Abbreviations

Abbreviation	Crop
[F-Cg]	Alfalfa (1st cut) to Corn grain
[F-Csl]	Alfalfa (1st cut) to Corn silage
[PE-Fs]	Peas to Late-Direct Seeded Legume Forage
[PE-SB]	Peas to Snapbean
[PE-SB]+cvr	Peas to Snapbean to small grain cover
[SB-Fs]	Snap beans to Late-Direct Seeded Legume Forage
[SB-SB]	Snapbean to Snapbean
[SB-SB]+cvr	Snapbean to Snapbean to small grain cover
[SC-Fs]	Sweet corn to Late Summer Direct Seeded Legume Forage
A	Alfalfa
Cg	Corn grain
Csl+cvr	Corn silage to small grain cover crop
POe+cvr	Potatoes, early harvest, to small grain cover crop
POl+cvr	Potatoes, late harvest, to small grain cover crop
SBe30	Snap Beans early plant, 30 inch row
SBe30+cvr	Snap Beans early plant to small grain cover crop
SBl30+cvr	Snap Beans late plant to small grain cover crop
SCe+cvr	Sweet Corn early plant (before May 20) with small grain cover crop
SCl+cvr	Sweet Corn late plant (June 10 or Later) with small grain cover crop
SCm	Sweet Corn middle plant (May 20 - June 10)
SCm+cvr	Sweet Corn middle plant (May 20 - June 10) with small grain cover crop

Tillage Abbreviations

Abbreviation	Tillage
CP/Dcvr	Chisel Plow, cover crop disked
CP/NTcvr	Chisel Plow, cover crop no till
FCD/NTcvr	Fall Chisel, disked, cover crop no till
Fcult/Dcvr	Field Cultivation, cover crop disked
Fcult/NTcvr	Field Cultivation, cover crop no till
None	None
NT	No Till
NT/Dcvr	No Till, cover crop disked
NT/NTcvr	No Till, cover crop no till
SCD	Spring Chisel, disked
SCD/NTcvr	Spring Chisel, disked, cover crop no till
SFC	Spring Cultivation
SFC/NTcvr	Spring Cultivation, cover crop no till

Restriction Legend

Code	Description of Code
P	High permeability N restricted soils
R	N restricted soils with less than 20 inches to bedrock
W	N restricted soils with less than 12 inches to apparent water table
	This map unit may have any of the N restrictive features, however an on-site investigation is needed to identify which restrictions may actually be present.
S	Field in SWQMA.
D	Drinking water well within 50 feet of field.
C	Conduit to groundwater within 200 feet upslope of field.
L	Local winter spreading restriction.

DAIRYLAND LABORATORIES, INC.
 Arcadia, WI 54612
 Telephone 608-323-2123

MANURE ANALYSIS REPORT

009652

SAMPLE NUMBER	
ACCT # 1311	
DATE RECEIVED	DATE PROCESSED
2/ 1/2011	2/ 1/2011

SUBMITTED BY:

Fraser Crop Consultin
 Jeff Fraser
 E10305 CTH HH
 Osseo , WI 54758

GROWER:

CENTRAL SANDS DAIRY

ANALYSIS RESULTS

SAMPLE ID
 SAMPLE NAME: slope screen
 MATERIAL: Dairy
 STORAGE SYSTEM: Liquid

ACTUAL ANALYSIS

MOISTURE:	97.42%
SOLIDS:	2.58%
NITROGEN:	0.18%
PHOSPHORUS:	0.03%
POTASSIUM:	0.16%

Total Nutrients

Estimated 1st year Available Nutrients

Value of Equivalent Commercial Fertilizer

	lbs/1000 gal	Estimated 1st year Available Nutrients		Value of Equivalent Commercial Fertilizer	
		Injected or Incorporated Within 3 days	Surface/Not Incorporated Within 3 days	Injected or Incorporated	Surface/Not Incorporated
NITROGEN	14.94	5.98	4.48	\$2.98	\$2.24
PHOSPHATE	5.70	3.42	3.42	\$2.39	\$2.39
POTASH	15.94	12.75	12.75	\$5.09	\$5.09
TOTAL VALUE				\$10.46	\$9.72

COMMENTS

Application of manure on the same field for 2 consecutive years increases availability of N, P, K, and S by 10%, and for 3 or more consecutive years by 15%. Availability of N changes depending on application technique. Injection or incorporation within 3 days of application results in higher N availability.

Value based on commercial fertilizer costs as of 9/20/2010.

N (Urea)	0.50/lb
P2O5 (Triple Superphosphate)	0.70/lb
K2O (Potash)	0.40/lb
S (Elemental Sulfur)	0.80/lb

DAIRYLAND LABORATORIES, INC.

Arcadia, WI 54612
Telephone 608-323-2123

MANURE ANALYSIS REPORT

009654

SAMPLE NUMBER	
ACCT # 1311	
DATE RECEIVED	DATE PROCESSED
2/ 1/2011	2/ 1/2011

SUBMITTED BY:
Frase Crop Consultin
Jeff Frase
E10305 CTH HH
Osseo , WI 54758

GROWER:
CENTRAL SANDS DAIRY

ANALYSIS RESULTS

SAMPLE ID
SAMPLE NAME: ?
MATERIAL: Dairy
STORAGE SYSTEM: Solid

ACTUAL ANALYSIS
MOISTURE: 88.56%
SOLIDS: 11.44%
NITROGEN: 0.30%
PHOSPHORUS: 0.07%
POTASSIUM: 0.18%

Total Nutrients	Estimated 1st year Available Nutrients		Value of Equivalent Commercial Fertilizer	
	Injected or Incorporated Within 3 days	Surface/Not Incorporated Within 3 days	Injected or Incorporated	Surface/Not Incorporated
lbs/ton	lbs/ton		\$/ton	
NITROGEN 6.00	2.40	1.80	\$1.20	\$0.90
PHOSPHATE 3.20	1.92	1.92	\$1.34	\$1.34
POTASH 4.40	3.52	3.52	\$1.40	\$1.40
	TOTAL VALUE		\$3.94	\$3.64

COMMENTS

Application of manure on the same field for 2 consecutive years increases availability of N, P, K, and S by 10%, and for 3 or more consecutive years by 15%.
Availability of N changes depending on application technique. Injection or incorporation within 3 days of application results in higher N availability.
Value based on commercial fertilizer costs as of 9/20/2010.
N (Urea) 0.50/lb
P2O5 (Triple Superphosphate) 0.70/lb
K2O (Potash) 0.40/lb
S (Elemental Sulfur) 0.80/lb

2011

QUARTERLY MONITORING REPORT FORM

For WPDES Permitted CAFO Operations

WDNR – West Central Region

Date: 12/30/11 Monitoring Quarter (circle one): Jan-Mar Apr-June July-Sept Oct-Dec

Facility Name: Central Sands Dairy

Name of person performing inspection: Adam Inan

Quarterly reporting forms should be completed at the end of each quarter and kept onsite until submitted to the Department on an annual basis as part of the Annual Report for a WPDES permitted CAFO (keep copies for your records). This information is due by the compliance date in the WPDES permit – typically January 31st of each year. This reporting form can be used for the quarterly monitoring requirements of your WPDES permit; you may also use your own quarterly monitoring form if you choose.

Per NR 243.19 WI Adm. Code, At minimum, quarterly report summaries shall include:
1) Identified permit violations including all discharges of manure or process wastewater to surface waters, overflows of liquid manure or process wastewater storage and containment structures, and number of missed inspections; Dates, times and approximate volume of discharges; Corrective actions taken.
2) A summary of the condition of runoff control systems and storage and containment structures; summary of recorded levels of materials in liquid storage and containment structures, including exceedances of the maximum operating level and margin of safety level..
3) Other information requested by the department in writing or in the permit.

Summary of permit violations, spills, discharges etc. (Attach additional sheets if necessary): _____

Manure Storage Condition

Note: All manure storages listed in your permit need to be inspected.

- Is fencing installed around all storages? NO YES
- Are there any rodent holes or erosion problems in berm walls? NO YES
- Are there any signs of leakage or seepage problems? NO YES
- Are transfer lines and/or overflow channels & berms functioning? NO YES
- Is vegetation on outside berm walls mowed regularly? NO YES
- Are there any large cracks visible in concrete? NO YES
- Are storage level markers missing or in need of repair? NO YES

Comments or explanation to answers above (identify which storage you are referring to): _____

Feed Storage Area Condition

Is there dead vegetation around perimeter of feed storage area?	<u>NO</u>	YES
Are there cracks in bunker walls or floor?	<u>NO</u>	YES
Are there any signs of leachate seepage along sidewalls or floor?	<u>NO</u>	YES
Are good housekeeping practices in place (sweeping waste feed)?	NO	<u>YES</u>
Is plastic being properly disposed of (recycled, dumpster)?	NO	<u>YES</u>

Comments or explanation to answers above: _____

Feed Storage Runoff Controls (circle those relevant to your system)

Are designed runoff controls in place for the feed storage area?*	NO	<u>YES</u>
Is leachate collection sump and pump functioning properly?	NO	<u>YES</u>
Does vegetated treatment area (VTA) have erosion problems?	N/A NO	YES
Is VTA adequately vegetated and mowed regularly?	N/A NO	YES
Are sedimentation collection areas and spreader stone areas cleaned out regularly?	NO	<u>YES</u>

Comments or explanation to answers above: _____

*If runoff controls are currently not in place please check your permit compliance schedule to see if you are overdue on submittal of evaluation or plans for runoff controls. If you are overdue on any compliance dates listed in your permit you should contact your Agricultural Specialist immediately.

Outdoor Feedlot Area(s) Condition

All outdoor areas need to be inspected regularly. N/A

Are feedlots scraped on a regular basis?	NO	YES
Are there any signs of erosion in or adjacent to feedlot area?	NO	YES
Are runoff control systems being maintained and cleaned regularly?	NO	YES
Are clean water diversions functioning (gutters, ditch diversions)?	NO	YES
Is there a vegetated buffer area between lots and concentrated flow paths?	NO	YES

Comments or explanation to answers above: _____

From: [REDACTED]
Sent: Saturday, September 01, 2012 1:08 PM
To: Anderson, Russell A - DNR; Baumann, Dan G - DNR
Subject: Fw: Announcement

----- Original Message -----

From: [REDACTED]
To: [REDACTED]
Cc: [REDACTED]
Sent: Saturday, September 01, 2012 12:10 PM
Subject: Announcement

> [REDACTED]
> I wasn't sure if this should go to Mystique, or to you.
>
> The Central Wisconsin Nature Foundation a not for profit instutution, has
> joined the opposition to the Saratoga CAFO. I have attached a copy of
> their letter to the DNR.
>
> Our concern, as always, is for the health and safety of our environment,
> and preserving nature for future generations to enjoy.
>
> Two creeks empty into the Lake Petenwell flowage very close to Twin Lakes
> Nature Preserve, in the Town of Rome. Adding ANY nutrients to the water
> could cause irreversible damage to the ecosystem of the park and its
> wetlands.
>
> In addition, taking out 6,000 acres of tree in Saratoga will leave
> innumerable wild creatures without their natural habitat. And, taking out
> trees along the creeks, will eliminate cooling shade and heat up the
> water, disturbing aquatic species.
>
> In order to inform the public of the possible consequences of siting a
> CAFO so close to people and parks, the CWNF will be sponsoring a series of
> informative videos and speakers at McMillian Library. We will announce a
> scheule soon.
>
> In the meantime, the CWNF is asking for donations to help. All of your
> donations are tax deductible, and you will be helping save the environment
> for future generations to enjoy.
>
> Donations can be made in person at Nekoosa Port Edwards banks, or send
> them to Central Wisconsin Nature Foundation, 361 Yeoman Ct. Nekoosa, WI
> 54457.
>
> This is your couuminty, help us keep it as natural as possible.
>
> [REDACTED]

The Central Wisconsin Nature Foundation humbly requests that the DNR do a complete Endangered Species Inventory for the entire area of the proposed project. The forest is home to a plethora of wildlife, and may contain nests of endangered species.

We have submitted the plot numbers and GIS coordinates of every piece of property for the proposed CAFO and surrounding agricultural fields, to the National Heritage Foundation.

Using the knowledge we have of endangered species in Adams County, along with their information, we are concerned there may be nesting areas for:

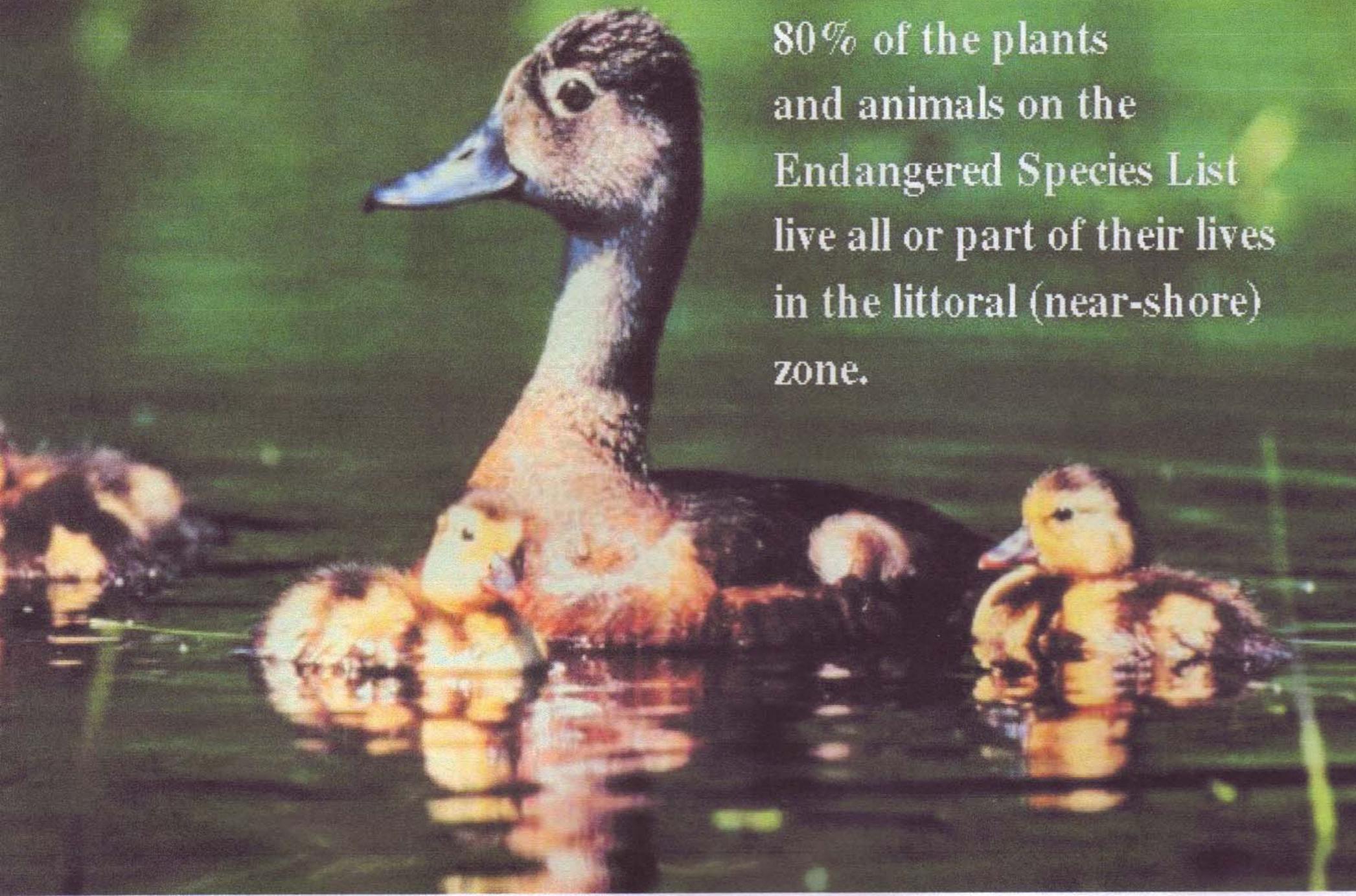
**Karner Blue Butterfly
Slender Glass Lizard
Kirkland's Warbler
Regal Fritillary butterfly
Red shouldered hawk
Blandings turtle
Bald Eagle**

**Barn Owl
Greater Prairie Chicken
Persius Dusky Wing Butterfly
Dusted Skipper Butterfly
Sand Snaketail Dragonfly
Wood Turtle**

And many other protected wildlife. It would be a travesty if this project were to go ahead without making sure we do not disturb the endangered species living within.

The water's edge

80% of the plants and animals on the Endangered Species List live all or part of their lives in the littoral (near-shore) zone.



From: Kardash, Lesa H - DNR
Sent: Thursday, August 30, 2012 2:22 PM
To: Paloski, Rori A - DNR; Crain, Erin E - DNR
Cc: Anderson, Russell A - DNR; Baumann, Dan G - DNR
Subject: Golden Sands Dairy project - Endangered Resources comments

Erin and Rori,

This is in regards to the public comment period for the Golden Sands Dairy EIR process.

I received a call from a [REDACTED] on Rangeline Road in the Town of Saratoga this afternoon regarding the proposed Golden Sands Dairy project. Her phone number is [REDACTED]. She wanted to inform me of the presence of several wildlife species within her neighborhood and was concerned about the impacts of the proposed project on these species.

She described to me a hawk that she has been observing recently on her property on Rangeline Road, which sounds like it may be a Red-shouldered hawk. She also mentioned that she has observed what she believes to be Regal Fritillary butterflies on fire lanes within the Plum Creek Timberlands property off of Rangeline Road.

 *Lesa Kardash*

Wildlife Biologist
Wisconsin Department of Natural Resources
473 Griffith Avenue
Wisconsin Rapids, WI 54494
(☎) **phone:** (715) 421-7813
(☎) **fax:** (715) 421-7830
(✉) **e-mail:** Lesa.Kardash@wisconsin.gov

From: [REDACTED]
Sent: Thursday, August 30, 2012 6:54 PM
To: Anderson, Russell A - DNR
Cc: Baumann, Dan G - DNR
Subject: Re: Soil Susceptibility and Sustainability part 3

This full article is very interesting...found under search of Protecting groundwater in Wisconsin through comprehensive

wi.water.usgs.gov/gwcomp/find

susceptibility of groundwater contaminants - map

it shows us the most susceptible area in the whole state. also says wood county has an ordinance about livestock wastes.

another question Dan you suggested the quality of water Mr. Wyosocki is liable for why not the quantity. No one has had their wells go DRY>>>now it is a real possibility>>> TIMES HOW MANY HOMES IN SARATOGA. I truly think before he is allowed to build the DNR MUST require him to supply municipal good quality water to the township before he supplies his fields and cows. My reason is that I am highly allergic to antibiotics. If they occur in my drinking water, I will probably die. My first reaction required injections directly into my abdomen. I was lucky, I was in the hospital when the reaction occurred. I am told the next reaction will be much worse. Also, touring the dairy in Armenia for 2-1/2 hours, required me to have 2 days of inhaler treatments in order to breath. That is why I am fighting so hard to stop this. We have many health challenged people living in Saratoga. They moved here from other townships. We have truly let them down. thanks [REDACTED]

From: [REDACTED]
Sent: Monday, August 27, 2012 8:01 PM
To: Anderson, Russell A - DNR; Baumann, Dan G - DNR
Subject: Soil Susceptibility and Sustainability part 3

Dan, Russ this is the 3rd article to the soil susceptibility sustainability packets. Article is protecting ground water in Wisconsin through comprehensive planning. <http://wi.water.usgs.gov/gwcomp/find/woodsusceptibility.htm/>
 this article explains groundwater contamination depends on contaminate release, type of contaminants, and sensitivity of the area to contamination. 70% to 97% rely on ground water. P2 of the 8 shows our area of Wisconsin as the MOST SUSCEPTIBLE in the whole state of WISCONSIN. [REDACTED]

******NOTE: Article not found at link listed above.******

From: [REDACTED]
Sent: Friday, August 31, 2012 9:13 AM
To: Anderson, Russell A - DNR; Baumann, Dan G - DNR
Cc: Stu
Subject: High-cap wells and Golden Sands Dairy

I agree with this position that WDNR needs to broaden high-cap well evaluation and approval.

[REDACTED]

<http://www.wisconsinrapidstribune.com/article/20120831/WRT01/308310158/Rome-leaders-oppose-dairy-wells?odyssey=tab|topnews|text|FRONTPAGE>

Updated: Rome leaders oppose DNR process for high-capacity wells

Sep. 19

wisconsinrapidstribune.com

Updated with clarification that the town opposes the high-capacity well process but has not taken a stand on specific wells.

ROME — Because of a concern about local water levels, Town Board members are taking a stand against the Wisconsin Department of Natural Resources' process for approving high-capacity wells.

Rome has lost \$164 million in equalized value in the past three years and will lose an estimated \$120 million in assessed value this year, according to a letter written to a DNR official and signed by Town Board members.

“Some of this loss may be attributable to water quality and quantity in our lakes,” the letter states.

In the letter, approved by the Town Board last week, town officials express concern that the DNR's high-capacity well permit process is flawed. The DNR issues high-capacity well permits on each well's merit without regarding proximity to existing wells, according to the letter.

In June, the Town Board discussed the 4,000-cow, 6,500-acre Golden Sands Dairy the Wysocki Family of Companies proposed building in Saratoga. Plans for the dairy include a total of 5,300 animals. The company applied for 49 high-capacity wells — 47 to irrigate crops and two for the dairy. At that time, board members decided it wasn't appropriate to take a stand on a proposal in another community.

There wasn't enough information then to make an informed decision, said Lori Djumadi, Town Board member. Board members wanted more details, so member Rick Bakovka began to study the issue.

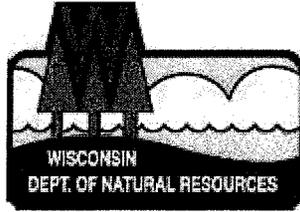
Bakovka, the author of the town's letter, said he is not against high-capacity wells and does not blame them for all the town's water problems, but he thinks they are contributing.

“The (application) process is flawed; it needs some adjustment,” Bakovka said.

Bakovka said he has historical data that shows 60 percent of the water in the Rome lakes used to come from surface water. Now, almost none does.

“If left unchecked, the lakes will lose their ability to maintain their water level,” Bakovka said.

There are more than 80 high-capacity wells in the nearby town of Leola, at least 52 in Colburn and hundreds more further east at the head of the Fourteen Mile Creek watershed, Bakovka said in the letter. The DNR should take those wells into account when considering approval of the permits for the dairy, he said.



Saratoga Town Hall Public Listening Session

Issues Identification Comment Form

For the Proposed

Golden Sands Dairy

August 23, 2012 Meeting

Public information gathering for the Environmental Impact Statement (EIS). Please clearly state the issue(s) you feel should be addressed by WI Department of Natural Resources in the EIS:

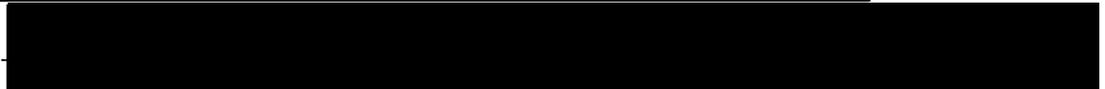
- ① Air Quality
- ② water table level
- ③ quality of water
- ④ The land where the farm will be located is recreation land close to many private residents. Why didn't they expand the farm in Juneau county.

Completion of this form and inclusion of personal information is voluntary. We will use your contact information to seek clarification of your comments, if necessary. All comments subject to Wisconsin's Open Records Law.

Name:



Contact Information:



From: Kafka, Terence - DNR
Sent: Monday, August 27, 2012 1:08 PM
To: Anderson, Russell A - DNR; Hershfield, Marc J - DNR
Cc: Kafka, Terence - DNR
Subject: RE: GSD Public Comments

Russ and Marc,

The majority of individuals I spoke to during the EIR completed comment sheets. I noted two comments, which stood out among all others:

The first notable comment received from a Saratoga resident during the EIR session related to a concern about a closed town dump in the immediate vicinity of a GSD cropfield – which would have a high capacity well. The resident believed the dump was closed more than 20 years ago. Since this was new information and town dumps in that era were subject to receipt of an array of materials, I thought it important to pass on to you. The resident believed the dump was located on South Hollywood Road. The comment was related to having concerns about the potential effects of locating a high capacity well near a closed town dump.

The second notable comment was related to concerns about clear cutting, stump removal and then cultivating within the gas / oil pipeline easement (Enbridge?) that runs through many of the currently forested tracks. The local resident wanted to know if the facility needed to take precautions for any of the activities within the immediate vicinity of the pipeline.

From: Wheat, Gretchen S - DNR
Sent: Thursday, August 30, 2012 10:16 AM
To: Dix, Deb S - DNR; Anderson, Russell A - DNR
Cc: Kafka, Terence - DNR
Subject: RE: Animal Mortalities On Site Disposal

Questions from the public about animal mortalities and the proposed Golden Sands Dairy (GSD) include:

- Can the CAFO WPDES Permit prohibit on-site carcass disposal (for routine mortalities, or emergency)?
- Would lack of an appropriate on-site burial site prevent siting of this CAFO?
- How long can routine carcasses be stored at the CAFO site, prior to being moved off-site?

From: [REDACTED]
Sent: Thursday, August 30, 2012 9:45 PM
To: Anderson, Russell A - DNR
Subject: Proposed CAFO in Saratoga

Mr. Anderson

Attached are some questions/concerns I have about the proposed CAFO in the township of Saratoga (see attachments).

Thank you for your time and attention to this matter.

[REDACTED]

Concerns regarding the proposed CAFO

- approx. 6000 acres removed from Managed Forest Crop land that is used by the public for recreational purposes, (hunting, fishing, trapping, hiking, cross country skiing, snowmobiling, snowshoeing, horseback riding, etc)
- 47 or more high capacity wells which according the University of Wisconsin hydrologist will decrease ground water (currently area ground water is estimated to be at 14-24 feet below the ground surface.
- millions of gallons of liquid manure solids applied to crop lands
- reduction of stream flow in the Seven Mile and Ten Mile Creeks
- contamination of ground and surface water with nitrates, phosphates, pesticides, herbicides, pathogens, and antibiotics
- increased soil erosion
- air pollution
- negative impact on wildlife, fish, and endangered species in the area
- health risks including respiratory illnesses for people who live and work in the area
- lower property values as land will now be classified agricultural
- increased property taxes
- need for additional road repair

-negative effects of ground water run-off on lakes, streams, creeks and rivers in the area

-animal cruelty (cows are crammed into warehouses, fed mainly corn based diets, given extremely high dosages of antibiotics to fend off disease and milked 3 times per day, often leaving them with inflamed utters)

-air pollution and stench from anaerobic reactions

Additional questions sent to the DNR on the CAFO

Is the DNR going to impose a standard on the odors emitted by the CAFO?

Is the CAFO going to be able to spread manure on snow or frozen ground thus affecting the ground water?

What methods are the DNR going to enact to collect and track public complaints if the CAFO proposal goes through?

Is there going to be water and air quality testing in the residential areas surrounded by the CAFO?

From: [REDACTED]
Sent: Sunday, September 02, 2012 8:36 AM
To: Baumann, Dan G - DNR
Cc: Craig, Andrew D - DNR; terrence.kafka@wisconsin.gov; Wheat, Gretchen S - DNR;
larry.lynn@wisconsin.gov; Anderson, Russell A - DNR
Subject: Concerns - Golden Sands Dairy CAFO

As a resident and close neighbor to the proposed Golden Sands Dairy I would like to have the members of the Environmental Impact Team consider my concerns.

1. Drinking Water: I would like to have our families well guaranteed or made hole if there is an impact on our well. The impact could be chemical contamination caused by the farming process, water quality, and amount of water. We have been informed that there is a Supreme Court ruling that high capacity wells are required to ensure the water quality and availability is maintained. We would like this to be included in the permit process for the approval of the well permits. Residents should not be required to go to court to ensure the availability of quality water is present in their location for all time. The Wisconsin DNR is our protector to ensure this takes place for everyone as we do not own the water.

2. Recreation: Currently the land is forest crop land and we enjoy the recreation that comes from the forest crop laws. We can hunt, fish, snowmobile, use ATV trails, and hike this land. The Wisconsin DNR owns land adjacent to this land where wildlife is abundant. Is there consideration to where the wildlife will go if the CAFO and the high capacity wells are permitted? What will the Wisconsin DNR's position be if a class A Trout Stream is ruined because of a permit that they issued? What will be the impact be on hunting and fishing licenses?

3. Wildlife: The Ruffed Grouse, White Tail Deer, and Wild Turkeys the Wisconsin DNR maintains will have 6,000 acres less to survive on. What will become of them? The Ruffed Grouse used to be abundant in this area. They are almost extinct here now. There will no longer be food available for the Ruffed Grouse to exist. The habitat for the wildlife must be considered for the permit process.

4. Endangered Species: Is the Wisconsin DNR considering endangered species for the area involved?

From: [REDACTED]
Sent: Sunday, September 02, 2012 11:30 AM
To: russel.anderson@wisconsin.gov
Subject: Saratoga FACTORY concerns

On concerns for the proposed dairy FACTORY in Saratoga...

I am concerned about the recreation in OUR area, the things we have all come to love. We have the precious water which we can NEVER replace. Water is life. We need it to drink, bathe, and water OUR minute gardens.

There are the trout streams, which fishermen treasure, especially those from the south, where they don't have to drive as far as "up north".

There are the lakes in Rome. People have spent their fortunes on their homes, or even second homes, to get away from it all. When there are many high cap wells across from them, and their wells have gone dry, or are polluted and the lakes are full of algae, chemicals, pesticides and smells, you are going to have many more people upset, along with the Saratoga people! Many will move to Minnesota, if they are not thinking of that already!

I am also concerned about the wildlife. Many, many acres will be destroyed by this for habitat. Where will the animals go? For example, we have whip-or-will birds that we enjoy hearing in the evenings. Thirty-four years ago, the population of them was quite high. Now we only hear a few. Their habitat is dwindling just with housing development. There is the deer population. What about the deer hunting that Wisconsin is always promoting? Now just add the destroying of 11,000 acres...not to mention all the other species.

The smells concern me as well. The folks who live by the existing CAFO s were deceived. Telling them there would be no odor was a lie. The smells are so bad, that you can't open windows and people vomit from it. If it is anything like the stock yards in Nebraska you can smell them for MILES before actually getting there and it is PUTRID!!!What about the fly population? Flies carry diseases. Wouldn't that be another health hazard from this dairy FACTORY?

After doing research on CAFO s, I am amazed that the DNR would even consider letting the possibility of this happening to a recreational area. There are too many people and water resources affected in the area, compared to a place that was already farm land. Isn't that the job of the DNR, to PROTECT the resources? This would be devastating to the area as a whole.

"DISCOVER WISCONSIN" wouldn't be very proud to have these CAFO s advertised in their promotions, especially when they are trying to "sell" a certain area. They would be deceiving. So much for tourism.

I hope you do everything right in your research to protect us from this beast that wants to move in and destroy our lives by destroying our resources.NO one should have that right to do so. Thank you.

Sincerely,

[REDACTED]



From: [REDACTED]
Sent: Monday, September 03, 2012 3:00 PM
To: Anderson, Russell A - DNR
Cc: Baumann, Dan G - DNR; [REDACTED]
Subject: EIS Considerations

Hello Russ,

Here are a few topics I would like the DNR to consider during the EIS processes. I am considering this email a documented of record.

1. The spreading program discusses no spreading with 24hrs of a rain event greater than 2", I would like to see this at 1".
2. I would like a containment area (concrete with barriers) for the manure stacking that is equal to the potential exposure, the containment area should be lined with a rubber barrier and or something comparable.
3. The liquid manure lagoons – a containment area (concrete with barriers – separate from the fields and lagoons) equal to or greater than the possible storage of this area. If there was a major event, the liquid would then be contained in an area that would be lined similar to above. This would prevent the spill from going into the soil. Similar to above ground gasoline containers.
4. The liquid manure lagoon would have a bladder to prevent leaking, either rubber or something similar. Cement cracks and breaks, there needs to be something more.
5. Setback from where the area irrigated and or sprayed (via irrigators, crop dusters or other vehicles) equal to 300 feet from property lines or land easements. My drive way is a land easement through PC 34 & PC 37. I should not have to drive though this or have my kids near this. My kids walk up and down the driveway to school each day.
6. Woods barrier on the property lines equal to 100 feet or greater. This would offer a minimal barrier to the crop fields. This would reduce the dust, spraying, and other things from impacting my residence.
7. Minimal 3 day notice prior to any spraying of the fields with anything except water (nothing added to the water).
8. The high capacity wells should not be located within 300 feet of any private well, the plans discuss 100 feet, this is not enough.
9. Frozen liquid manure should not be allowed to be spread on to the fields. No exceptions.
10. Do not allow an "emergency" 5 day per monthly spraying of liquid manure. They should have other plans in place to handle their "emergency's". My water should not be contaminated to help them out.
11. The proposed dairy should be required to have a water treatment area similar to the city of Wisconsin Rapids, their volume of waste will be substantially more than the city. If the city needs it, then the dairy should as well.

I am including Dan on this email, again I would like these added to the review of the EIS and look forward to hearing the responses to these items.



From: [REDACTED]
Sent: Saturday, September 01, 2012 10:34 PM
To: Provost, Scott M - DNR
Subject: Fwd: Wysocki CAFO and Saratoga Residents Water Rights

Hello Scott,

As promised, I have reworked the numbers now that I have done more research and have better data. The situation is even worse than what I first calculated. Please replace my earlier submission with this study.

[REDACTED]

----- Original Message -----

Subject: Wysocki CAFO and Saratoga Residents Water Rights
Date: Sat, 01 Sep 2012 22:24:05 -0500
From: [REDACTED]
Reply-To: [REDACTED]
Organization: [REDACTED]
To: editor@wisconsinrapidstribune.com
CC: [REDACTED]

The Wysocki organization is planning on purchasing a reported 8,000 forested acres in Saratoga, clearing most of the forest and replacing it with 6,400 acres of irrigated cropland in conjunction with a large CAFO. The Wysocki organization has filed 10 high capacity well applications with the Wisconsin DNR for a total of 49 high capacity wells, two of which will be located just east of County Trunk U in Portage County. The remaining 47 wells will be located in Saratoga. According to the applications, 47 of these wells will draw on average 720,000 gallons/day for 7 months of the year. Two wells will be devoted to the CAFO dairy and draw considerably less water, 137,000 and 144,000 gallons/day for 12 months/year. The average yearly consumption of water is calculated to be 7,344,325,000 gallons.

The average rainfall in southern Wood county is approximately 31 inches and the high end of the recharge rate (the amount of water that actually returns to the water table) is 12 inches/year. (W.G. Batten, Hydrogeology of Wood County, Wisconsin, U.S. Geological Survey, 1989). What this translates to is that the 8,000 acres that Wysocki plans on purchasing will return 2,606,811,429 net gallons/year to the water table

or reservoir. So they are only "supplying" 35% of their water needs. The rest of the water, a total of 4,737,53,571 gallons/year will come from the rest of us in the watershed.

There are approximately 32,778 acres in Saratoga so the Wysocki organization will end up owning and irrigating about 1/4 of the total land area of Saratoga. There are approximately 5,102 people in the town and approximately 2,011 households. Almost everyone has their own well and many of them, such as mine, are shallow well sandpoints. We will all have water problems in the not too distant future. In addition the 7 Mile, 10 mile, and 14 Mile creeks will be adversely affected if this enterprise is allowed to proceed.

Why should we, the residents of Saratoga and neighboring communities in the watershed, be forced to subsidize the Wysocki CAFO with our water, a precious resource that we all treasure?



WATER USE CALCULATIONS
Wysocki CAFO in Saratoga, WI, Wood County with two wells in Portage County

49 Number of Wells Applied for
 10 Applications for the 49 Wells

Application	Well Number	Maximum Flow Rate, gpr	Average Flow Rate, Gallons/day	Maximum Flow Rate, Gallons/Day	Months/year Used	Average Gallons/Year
Application 1	PC1	1,000	720,000	1,440,000	7	154,080,000
	PC2	1,000	720,000	1,440,000	7	154,080,000
	PC3	1,000	720,000	1,440,000	7	154,080,000
	PC5	1,000	720,000	1,440,000	7	154,080,000
	PC6	1,000	720,000	1,440,000	7	154,080,000
	PC7	1,000	720,000	1,440,000	7	154,080,000
	PC4,12	1,000	720,000	1,440,000	7	154,080,000
	PC8	1,000	720,000	1,440,000	7	154,080,000
	PC15	1,000	720,000	1,440,000	7	154,080,000
	PC16,22	1,000	720,000	1,440,000	7	154,080,000
	PC21	1,000	720,000	1,440,000	7	154,080,000
	PC38	1,000	720,000	1,440,000	7	154,080,000
	PC9,13	1,000	720,000	1,440,000	7	154,080,000
	PC10	1,000	720,000	1,440,000	7	154,080,000
	PC17,18	1,000	720,000	1,440,000	7	154,080,000
	PC23	1,000	720,000	1,440,000	7	154,080,000
	PC11,19,20	1,000	720,000	1,440,000	7	154,080,000
	PC24	1,000	720,000	1,440,000	7	154,080,000
	PC25	1,000	720,000	1,440,000	7	154,080,000
	PC26	1,000	720,000	1,440,000	7	154,080,000
Application 2	PC33	1,000	720,000	1,440,000	7	154,080,000
	PC34,35	1,000	720,000	1,440,000	7	154,080,000
	PC37	1,000	720,000	1,440,000	7	154,080,000
Application 3	PC55	1,000	720,000	1,440,000	7	154,080,000
	PC56	1,000	720,000	1,440,000	7	154,080,000
	PC41,44	1,000	720,000	1,440,000	7	154,080,000
	PC42,45	1,000	720,000	1,440,000	7	154,080,000
Application 4	PC27	1,000	720,000	1,440,000	7	154,080,000
	PC28	1,000	720,000	1,440,000	7	154,080,000
Application 5	PC30	1,000	720,000	1,440,000	7	154,080,000
	PC31	1,000	720,000	1,440,000	7	154,080,000
Application 6	PC46	1,000	720,000	1,440,000	7	154,080,000
	PC48	1,000	720,000	1,440,000	7	154,080,000
	PC51	1,000	720,000	1,440,000	7	154,080,000
	PC53	1,000	720,000	1,440,000	7	154,080,000
	PC54	1,000	720,000	1,440,000	7	154,080,000
	PC58,64	1,000	720,000	1,440,000	7	154,080,000
	PC59	1,000	720,000	1,440,000	7	154,080,000
	PC67	1,000	720,000	1,440,000	7	154,080,000
	PC68	1,000	720,000	1,440,000	7	154,080,000
	PC69,70	1,000	720,000	1,440,000	7	154,080,000
Application 7	PC55	1,000	720,000	1,440,000	7	154,080,000
	PC56	1,000	720,000	1,440,000	7	154,080,000
	PC60	1,000	720,000	1,440,000	7	154,080,000
	PC61	1,000	720,000	1,440,000	7	154,080,000
Application 8	D1	275	137,000	396,000	12	50,005,000
	PC31	200	144,000	288,000	12	52,560,000
Application 9	PC72	1,000	720,000	1,440,000	7	154,080,000
Application 10	PC71	1,000	720,000	1,440,000	7	154,080,000
Total Gallons/year						7,344,325,000

1000 gallons/minute capacity/well
 31 Average precipitation/year in this area, inches
 8000 Acres
 6400 Acres Cropland
 12 Maximum recharge rate for southern Wood County and Surrounds

6.02173E+11 net cubic inches of water/year falling on the 8000 acres
 2,606,811,429 net gallons/year falling on the 8000 acres

35 Percentage of water the Golden Sands Dairy would be receiving on its 8000 acres due to precipitation vs estimated usage of water

Another way of looking at it:

number of gallons per year that we, the neighbors of the proposed Wysocki CAFO would be contributing to the Wysocki

From: [REDACTED]
Sent: Monday, August 13, 2012 9:30 AM
To: Baumann, Dan G - DNR
Subject: FYI

Dan,

I have a lady in the Adams County Health and Human Services dept. who is finding areas in southern Adams that are atrazine prohibited because of the high concentration of the chemical in the soil of corn fields. She has seen an increase in atrazine related diseases in people living in those areas.

I have asked her to write a letter to you detailing her findings. It seems to indicate that prolonged exposure to pesticides sprayed on corn and potatoes may have a negative cumulative effect on people. With families being so close to the proposed fields, this could be a serious threat to their health.

[REDACTED]

From: [REDACTED]
Sent: Tuesday, September 04, 2012 1:50 PM
To: Baumann, Dan G - DNR
Subject: CAFO

Dan,

After reviewing Golden Sands well permit applications, I found discrepancies on applications 9 and 10. Where use is indicated, Bob Nauta put Dairy, not irrigation. These are the 2 wells at the eastern edge of the project in Portage County.

I called Mr. Nauta, and he indicated that both applications contained a mistake. So I contacted Mr. Lynch and asked him to request that Mr. Wysocki be made to resubmit those two applications with the corrected information.

My concern was, were these an indicator of a second CAFO site.

I also sent Russ Anderson a letter stating we find a catastrophic mortality pit on site a serious threat to our water supply.

And, I voiced a concern for the gallons of diseased milk generated from sick cows. Mr. Wysocki does not address how he will dispose of the thousands of gallons of milk from diseased cows. We do not feel it acceptable or ethical to feed it to calves, or pour it out on the ground. I feel Mr. Wysocki needs to resubmit his WPEDES permit application, and address this issue.

Thanks,

[REDACTED]

From: [REDACTED]
To: [REDACTED]
Sent: Friday, August 10, 2012 4:49 PM
Subject: Water Quality Fact Sheet 10.4.06.doc

[REDACTED]

CAFOs and Water Quality

A Compilation of Facts from: Concentrating on Clean Water: The Challenge of Concentrated Animal Feeding Operations by Carol J. Hodne, Ph.D.

Full report: http://www.iowapolicyproject.org/2005_reports_press_releases/050406-cafo-fullx.pdf

- As Cooperband and Good (2002, p. 5075) observed, “Intensively managed livestock production systems have exacerbated conditions where manure use in crop production is more akin to waste disposal than beneficial fertilization.” (Hodne, 2005, p. 6)
- ...the processes used in siting CAFOs inadequately consider water quality issues at regional and watershed levels (Jackson, Keeney, & Gilbert, 2000). (Hodne, 2005, p. 7)
- Contract producers compared to independent producers, have narrower options for manure management and other practices that affect water quality (e.g., Morrison, 1998). (Hodne, 2005, p. 4)

Manure Application / Runoff

- Manure runoff to surface waters is increased by manure application to: flood plains; steep land slopes; and soil that is frozen, snow covered, saturated, or of low porosity (Mulla, et al., 1999). (Hodne, 2005, p. 13)
- Manure application near waterways, natural drainage paths and surface waters increases runoff (Crane, et al., 1983; U.S. E.P.A., 1998). (Hodne, 2005, p. 13)
- The Centers for Disease Control and Prevention (CDCP, 1998) studied lagoon, surface water and ground water samples from farm sites in Iowa counties with high densities of swine CAFOs. ...The results generally suggested the possibility that pollutants and pathogens can move through the soil and away from the point of higher pollution (i.e., lagoons) and by overland flow from the area of manure application. (Hodne, 2005, p. 18)
- Water contamination may increase with poorly planned CAFO siting that ignores issues such as regional and watershed water quality, sandy soils, shallow groundwater and flood plains (Jackson, et al., 2000). (Hodne, 2005, p. 14)

Manure Lagoon Seepage

- Earthen manure storage lagoons (that are soil lined or clay lined) allow seepage of wastewater, creating a source of potential groundwater contamination (Ham & DeSutter, 2000). (Hodne, 2005, p. 11)
- With or without liners, lagoons are at risk for seepage due to freezing and thawing, burrowing animals, roots, and cracking from drying walls following pumpout (Jackson, 1998). (Hodne, 2005, p. 12)

Water Pollutants Emitted by Factory Farms

- The main components of CAFO manure that may cause water pollution are nutrients, (i.e. nitrogen, phosphorous, and potassium), ammonia, pathogens, (e.g., bacteria), feed additives (e.g. antibiotics, hormones), salts and trace elements, organic matter, and solids (U.S. EPA, 1998). (Hodne, 2005, p. 7)

Antibiotics

- Antibiotics are used in CAFO animals to treat disease, prevent the spread of disease, promote growth and enhance feed efficiency (Cole, Hill, Humenik, & Sobsey, 1999; McEwan & Fedorka-Cray, 2002). ...Depending on the source, 40 percent (Nawaz, et al., 2002) to 70 percent (Mellon, et al., 2000) of antibiotics used in the United States are fed to livestock to promote growth, treat disease and minimize the risks of confinement (e.g., stress from crowding). (Hodne, 2005, p. 8.)
- Of antibiotics given to CAFO livestock, 25-75 percent pass unchanged into manure waste and may contaminate soil and water through transmission through surface water and ground water (Chee-Sanford, Aminov, Krapac, Garrigues, & Mackie, 2001). (Hodne, 2005, p. 18)

- The use of antibiotics, including subtherapeutic use as growth promoters, in CAFOs has been associated with the selection and spread of antibiotic resistance among populations of bacteria in animals. Resistant organisms may spread through infected carrier animals, feed, wildlife, or clothing. (Addis, et al., 1999; Cole, et al., 1999; McEwan & Fedorka-Cray, 2002). (*Hodne, 2005, p. 19*)
- Methods of transmission of antibiotic resistance to humans include direct contact, animal manure and contaminated food (Gorbach, 2001; McEwan & Fedorka-Cray, 2002). (*Hodne, 2005, p. 19*)

Hormones

- Synthetic estrogen and testosterone, which are used in livestock feed to stimulate growth, increase feed efficiency and increase productivity, end up in animal manure (Mulla, et al., 1999). (*Hodne, 2005, p. 8.*)
- Estrogen and Testosterone are typically transferred to surface waters by runoff and leaching, respectively (Shore, Correll, & Chakraborty, 1995). (*Hodne, 2005, p. 19*)

Nutrients

- The application of manure at a nitrogen-based agronomic rate leads to significant overapplication of P [Phosphorus], relative to crop needs (Cooperband & Good, 2002; Sims, 1995). (*Hodne, 2005, p. 13*)
- High nutrient concentrations have been found in Iowa surface water in river basins with denser concentrations of CAFOs. (*Hodne, 2005, p. 14*)

Pathogens

- Pathogens are microorganisms (e.g., bacteria, viruses, parasites) that can cause disease. Animal waste may carry infectious organisms including those that cause food-borne illness in humans, such as *Campylobacter*, *Escherichia coli* (*E.coli*) and *Salmonella*. Animal manure can carry protozoa, including *Cryptosporidium parvum* and *Giardia* species. (Addis, et al., 1999; Mulla, et al., 1999; U.S. EPA, 2001). (*Hodne, 2005, p. 8.*)
- The settling of fecal coliform to sediments represents a latent human health threat. This is because natural or human disturbances may cause the contaminated sediments to become resuspended (i.e., released into the water again), thereby, becoming a source of contaminated water for humans (Burkholder, et al., 1997). (*Hodne, 2005, p. 10*)

Salts and Trace Elements

- Undigested feed that passes through animals contains sodium and potassium. Trace elements in manure include those that are often added to feed as growth stimulants and biocides – arsenic, copper, selenium and zinc. (*Hodne, 2005, p. 8*)
- Salts and trace elements from discharges from feedlots and land-applied manure, especially when applied excessively and repeatedly, can accumulate, as they persist in the environment, and can ultimately harm soil quality and plant growth. (*Hodne, 2005, p. 20*)
- Increased salts and trace elements may cause environmental imbalances in fresh waters and on agricultural lands, harming birds and reducing yields. (*Hodne, 2005, p. 20*)
- The Iowa CDCP (1998) study found trace metals and common ions in water affected by large-scale swine CAFOs, especially in earthen manure lagoons, but also in drainage ditches and wells, tile line inlets and outlets, and an adjacent river. (*Hodne, 2005, p. 20*)
- Excessive amounts of copper and zinc have been found in creek sediment and wetlands, in association with cattle CAFO and swine CAFOs, respectively (U.S.EPA, 2001). (*Hodne, 2005, p. 20*)

All information included in this factsheet was obtained from:

Hodne, Carol J. [Concentrating on Clean Water: The Challenge of Concentrated Animal Feeding Operations](http://www.iowapolicyproject.org/2005_reports_press_releases/050406-cafo-fullx.pdf). The Iowa Policy Project. 2005. Full report: http://www.iowapolicyproject.org/2005_reports_press_releases/050406-cafo-fullx.pdf

From: [REDACTED]
To: [REDACTED]
Sent: Monday, August 13, 2012 8:57 PM
Subject: Fwd: USDA AG RESEARCH Dairies 2011

Date: Thu, 24 May 2012 13:19:11 -0500
To: [REDACTED]
From: [REDACTED]
Subject: USDA AG RESEARCH Dairies 2011

http://www.ars.usda.gov/research/publications/publications.htm?seq_no_115=250400&pf=1

USDA AG RESEARCH

Research Project: [ASSESSING NUTRIENT LOSSES, EMISSIONS, AND PATHOGEN TRANSPORT FROM MANURE APPLICATION AND ANIMAL PRODUCTION SITES IN THE WESTERN U.S.](#)

Location: [NWISRL, Kimberly, Idaho](#)

Title: Ambient Endotoxin Concentrations and Assessment of Offsite Transport at Open-Lot and Open-Freestall Dairies.

Authors

[Dungan, Robert](#)
 [Leytem, April](#)

Submitted to: Journal of Environmental Quality

Publication Type: Peer Reviewed Journal

Publication Acceptance Date: August 17, 2010

Publication Date: February 28, 2011

Citation: Dungan, R.S., Leytem, A.B. 2011. Ambient Endotoxin Concentrations and Assessment of Offsite Transport at Open-Lot and Open-Freestall Dairies.. Journal of Environmental Quality. 40(2):462-467.

Interpretive Summary: Endotoxins are derived from bacteria and are a potential respiratory health risk if inhaled. Acute exposures can cause lung dysfunction and flue-like symptoms. In this study we monitored airborne endotoxin concentrations at the downwind edge of a 10,000 milking cow open-lot and open freestall dairy over an 8-hour period to assess daily fluctuations. Compared to background environments, the downwind concentrations were statistically higher and increased with wind speed, animal activity, and lot management practices. A model was then used to predicted ground-level endotoxin concentrations up to 2,000 m from the dairies. Predicted endotoxin concentrations decreased with distance and reached background levels within 500 to 2,000 m depending on source concentration and climatic conditions. Individuals in the downwind environment will have a lower risk of exposure to airborne endotoxin as distance from the production facilities is increased.

Technical Abstract: Endotoxins are derived from gram-negative bacteria and are a potent inducer of inflammatory reactions in the respiratory tract when inhaled. To assess daily fluctuations of airborne endotoxin and their potential for transport from dairies, endotoxin concentrations were monitored over an 8-h period at upwind (background) and downwind (5 m from edge of dairy) locations on three separate days at two dairies. The dairies consisted of an open-lot or an open-freestall production system, both of which were stocked with 10,000 milking cows. Upwind concentrations were stable throughout the sampling period, averaging between 1.2 and 36.8 endotoxin units (EU) m⁻³, whereas downwind concentration averages ranged from 179 to 989 EU-m⁻³. **Downwind endotoxin concentrations increased with wind speed, animal activity, and lot management practices, resulting in concentrations up to 136-fold higher than upwind concentrations.** An area-source model was used to predict downwind ground-level endotoxin concentrations at distances up to 2000 m from the production facilities. Predicted concentrations decreased with distance and reached background levels within 500 to 2000 m, depending on the source emission rate and meteorological conditions.



From: [REDACTED]
Sent: Tuesday, September 04, 2012 3:54 PM
To: Anderson, Russell A - DNR; Baumann, Dan G - DNR
Subject: Fw: Water article in WR paper

This math nis interesting .

we also did the math and figured out the amount of water asked for PER YEAR is 5 TIMES the amount of WATER IN NEPCO LAKE

Local article in WR Paper:

Armed with a calculator and the Internet, I found alarming statistics on proposed water usage for a new “Saratoga dairy farm” facility. What I found should make every citizen of southern Wood County and northern Adams County take notice.

To sustain the agricultural portion of land used, 49 high-capacity wells would be needed, pumping 1,000 gallons of water per minute each (according to speakers at informational meetings) or 2,940,000 per hour or 70,560,000 gallons per day. This is 2,116,800,000 in 30 days, or 8,467,200,000 in a 120-day growing season.

If the shape of an acre were 100 feet by 436 feet, that acre would contain 325,853 U.S. gallons of water, so the farm would consume 332,585 acre feet of water in 120 days. This is a volume of water one foot deep by 100 feet wide by 14,207,060 feet long or 100 feet multiplied by 2,691 miles.

To put this into perspective, a four-lane superhighway is approximately 48 feet wide. A four-lane highway the distance from New York City to Los Angeles is 2,776 miles. In other words, the amount of water used would be one foot deep and the size of a superhighway running from New York City to Los Angeles — and back.

Where is the Department of Natural Resource’s environmental impact study for this project? Those guys run around protecting snail darters, spotted owls, Karner blue butterflies — guys so anal they will fine you for possession of an eagle feather.

For the average — yes average — citizen, it is illegal to disturb wetlands in any way, shape or form; yet the DNR is willing to allow a farm project of such monumental magnitude. They are willing to allow the potential irreparable damage of depleting water supplies in streams and recreational lakes, and let’s not forget the slow depletion of underground aquifers.

Aside from a potential lack of drinking water and the environmental fish and aquatic damage, what about the damage to the local economy? Who wants to live by lakes with little, if any, water, reeking of dying fish and decaying vegetation?

Since the DNR obviously prefers to remain passive about the issues they were created to protect, perhaps someone needs to contact a national office of the Environmental Protection Agency. Remember, once the damage is done, there is no turning back.

 lives in Wisconsin Rapids

From: [REDACTED]
Sent: Tuesday, September 04, 2012 10:09 PM
To: Ebersberger, Eric K - DNR
Cc: Bauman, Thomas S - DNR; Baumann, Dan G - DNR; terrence.kafka@wisconsin.gov; Wheat, Gretchen S - DNR; larry.lynch@wisconsin.gov; Anderson, Russell A - DNR
Subject: Golden Sands Dairy approval process

Eric,

A lot of the information contained in the Groundwater Quantity Protection chapter of Wisconsin Administrative Codes on groundwater has been discussed and brought out to the home owners in the area of the proposed Golden Sands Dairy. In these codes the Wisconsin DNR has the right to protect the quantity of the water in a class A Trout stream. There is only one class 1 Trout stream in Wood County. I grew up fishing this stream with my father 50 years ago. I now live within a half mile of this stream. This year much of the stream could be waded with hip boots. That is something that has only happened one other year for me in the 50 years of fishing the Ten Mile Creek. This stream would not be able to support trout with less water in it than there was this year. In Chapter NR 820 it talks about affecting the stream flow in percentages. It does not outline the percentage of trout the stream can support. Under item (d) in the Codes is a small statement, "flow conditions in the stream shall be maintained such that the fish populations and critical habitat are not adversely affected." The last 6 words are the most important, critical habitat are not adversely affected. Habitat includes food supply. I believe the food supply is directly related to the quantity of water and should be included in the DNR's approval process.

Chapter NR 820

GROUNDWATER QUANTITY PROTECTION

All of the following provisions shall apply to proposed high capacity wells that are not included under sub. (3) (a) 1. to 5.

and proposed wells that satisfy the conditions under sub. (3) (a) 1. to 5. but for which the department has determined that the proposed well may have a significant adverse environmental impact on the trout stream, outstanding resource water or exceptional resource water:

(a) The department shall notify the applicant that the proposed high capacity well may have a significant impact on the stream or lake and may require additional information concerning flow characteristics of the affected stream or lake, site-specific geologic and hydrogeologic information and pertinent regional information.

(b) Within 65 business days of receipt of a complete application, the department shall identify additional informational requirements necessary to evaluate the proposed well and may determine that the applicant shall develop and submit an environmental impact report in accordance with s. NR 150.25.

(c) Following receipt of the requested information, the department shall prepare an environmental assessment in accordance with the procedures of s. NR 150.22 and shall develop and publish a news release in accordance with s. NR 150.21.

(d) If the department determines that operation of the proposed high capacity well will not result in significant adverse environmental impact on critical resources within the stream or lake and other uses of the stream or lake, the department shall approve the well and include in any

approval issued using the standards under s. 281.34, Stats., conditions to ensure that operation of the proposed well will not cause significant adverse environmental impact to critical aquatic resources or other existing uses of the stream or lake. The conditions may include but are not limited to conditions as to location, depth of casing, depth of lower drillhole, depth interval of well screen, pumping capacity, pumpage schedule, months of operation, rate of flow, ultimate use and conservation measures. In the case of Class 1, 2 and 3 trout streams and outstanding or exceptional resource waters that contain warm water sport fisheries, flow conditions in the stream shall be maintained such that the fish populations and critical habitat are not adversely affected.

From: [REDACTED]
Sent: Wednesday, September 05, 2012 8:32 AM
To: Anderson, Russell A - DNR
Cc: Baumann, Dan G - DNR; [REDACTED]
Subject: RE: EIS Considerations

Hello Russ,

One other item that came to mind that I would like included in the EIS. If permits are given, I would like to request the Town of Saratoga residents be educated on the “rules of the game” that the proposed dairy need to abide by. As this is adjacent to my property I will be keeping a very close eye on the activates and I would like to clearly know what is acceptable and what isn’t and who to contact. I am assuming I am not the only resident that feels this way.

Best regards,

[REDACTED]

From: [REDACTED]
Sent: Monday, August 27, 2012 12:03 PM
To: Craig, Andrew D - DNR
Subject: Saratoga meeting

Hi Andrew,

This is [REDACTED]. I met you at the Saratoga EIS meeting on Aug 23. Thank you for your time and attention in discussing different permitting issues. You had mentioned to me that you could send me the link of the proposed high capacity well locations west and east of Highway 13 that were in color. Could you also send me the map of where the pivots are proposed to go on their property? I can not seem to find it on the Web Site. Thank you!

Here's a question I forgot to ask you at the meeting: How often are CAFOs in Wisconsin allowed to double in size? I found that in the state of IL CAFOs are allowed to double in size every 2 years without the same scrutiny as starting one from scratch. Is there any stipulation in Wisconsin that states when and under what circumstances a CAFO can expand? I understand that the New Chester CAFO is currently trying to double in size from 6,270 animal units to 12,540 animal units. How long has the current New Chester operation been in existence? How much crop land do they have?

At the beginning of our conversation you said that the proposed CAFO in Saratoga would not be spraying manure. Later you corrected yourself and stated that in 5 years or by 2017 the Wysocki's did in fact plan to spray manure and that this would have to be disclosed now. Also, you mentioned different set backs based on different manure application methods. I'm curious if somewhere in the proposal the Wysocki's have mentioned that they plan to expand and when? How much land do they need for spreading manure generated by 5,000 cows? 1 cow excretes approximately the equivalent of 15 to 20 people. 5,000 cows equates to approximately 100,000 untreated human waste product sprayed or applied everywhere. The reason I ask is because of the amount of land the Wysocki's are purchasing. I'm sure there is a mathematical equation, but the current proposed CAFO in Waushara County (Pine Breeze) is only having 3360 animal units to 3,584 acres where as Wysocki has 5300 cows and 8,000 acres. So adding another barn or two seems possible to me.

Can you confirm this standard? The DNR told a person on my committee that it is acceptable for 500 gallons of manure leakage to occur per acre, per day.

Can you please direct me to the proper location to find the current and past violations that the Wysocki's Golden Sands Dairy has incurred since their birth of 2007? I believe someone stated it would be Bob Rolan in Black River Falls?

Finally, in case we need to contact you, will you be out of the office or on vacation between now and the Sept. 21 deadline?

Thank You very much for your time!
I do appreciate it!

[REDACTED]
Concerned Citizen & Water Quality Committee

From: [REDACTED]
Sent: Wednesday, September 05, 2012 6:02 PM
To: Anderson, Russell A - DNR
Subject: High Capacity Wells Proposed in Saratoga by Golden Sands Dairy LLC

Dear Mr. Anderson,

I am a concerned resident of Rome, WI, where my wife and I own a lakefront home on Lake Arrowhead. We have owned this property for 7 years, and based our decision to purchase it on several factors, but mainly on the quality of the lake and of the quality of the surrounding lakes as well as the quality of the water from our private well. This community is all about recreation, lakes and golf, and if the water quality were to suffer, the reduction in property values from such as project would be devastating, as would be the overall quality of life as people know it in this area! The severe drought we've experienced this summer should serve as a reminder of what can occur when nature decides to shut off the flow of water, even for a few short weeks or months. Lake Arrowhead is down approximately 18" currently, and this is without and "disruption" in the area water table.

I read with fear about the proposed high capacity wells for the proposed Golden Sands dairy in nearby Saratoga. I am in no way a geologist, but what I do understand is that the water table and the aquifers that we draw our water from can be severely changed, reduced and affected by the pressure put on this system by adding high capacity wells, that would draw unusually high amounts of water from these areas, and could affect an area several square miles away from such well placement.

From what I have read, this proposed site is classified as as CAFO operation, needing DNR approval to operate. I also understand that the DNR is preparing an EIS which will evaluate the impact of this project on local communities. I would hope that this information will be evaluated fairly and factually, as the impact of a poor approach or to falsification of the facts would affect far more than the proceeds from the proposed farm; it would affect thousands of people, their livelihoods and their life-long savings spent on recreational housing.

I am certainly not opposed to a good business, backed by a good business plan. However, a good business has to be a champion for its neighbors, and needs to champion not only the best interests of its own business, but of its neighbors as well. This proposed operation needs to undergo close scrutiny before any decisions can be made on whether or not they are granted permission to operate. I would appreciate your comments on this issue, and to keep me informed as to the status of this proposed dairy.

Sincerely,

A black rectangular redaction box covering the signature area.

From: [REDACTED]
Sent: Thursday, September 06, 2012 4:09 PM
To: Anderson, Russell A - DNR
Subject: water levels Lake Arrowhead

Mr. Anderson,

We are property owners on Lake Arrowhead and are very concerned about the decreased water levels in our lake, not only this year but occasionally during other summers too. We strongly urge you to proceed very cautiously in authorizing the addition of wells in our area that may adversely affect our water levels and quality. The data is clear as to why this is necessary and doesn't bear repeating.

Thank you for your attention to this matter.

Sincerely,

[REDACTED]

From: [REDACTED]
Sent: Friday, September 07, 2012 2:03 PM
To: Anderson, Russell A - DNR
Cc: Baumann, Dan G - DNR; [REDACTED]
Subject: Input for Golden Sands Dairy EIS

Mr Anderson,

Below is the content of a letter I sent to you regarding the proposed CAFO in Saratoga. Included in the letter you will find the test data I referred to. I would like this logged as a formal issue to be included in the Environmental Impact Statement.

September 7, 2012

Mr. Russ Anderson
Environmental Review Coordinator
DNR South Central Region
3911 Fish Hatchery Road,
Fitchburg, WI 53711

RE: EIS input for proposed Golden Sands Dairy

Lakes Arrowhead, Camelot and Sherwood are manmade lakes, first developed in the late 60s when the dam on Deer Lodge Lake was expanded and the land was reconfigured to create Lake Sherwood. Lakes Camelot, then Arrowhead followed. The lakes are fed by Spring Branch Creek and 14 mile creek, initially feeding into Lake Camelot, then Sherwood, and then Arrowhead, finally emptying into Lake Petenwell through 14 mile creek.

Water quality had initially been tested annually on Camelot Lake near the upper Camelot Dam. In about 2007, testing was increased to determine the source of algae and weed growth. 8 test sites were identified in Lake Camelot and tests have been conducted ever since, during each of the 5 months per year of the growing season. Tests were coordinated by the TriLakes management district and Reesa Evans of Adams County Land and Water, and testing was performed by UW Stevens Point. When test results began showing higher readings at the two water sources of Spring Branch and 14 mile creeks, tests were expanded further upstream to ditches along Highway D and other areas which feed into 14 mile and Spring Branch watersheds. These higher readings were especially apparent in the early summer growing season where phosphorous readings at the two inputs to the lake were as much as 4 times higher than anywhere else in the lake. The conclusion is that agriculture upstream is a contributor to declining water quality in Lakes Camelot, Sherwood, Arrowhead and eventually Petenwell. Test results are attached.

With an already fragile lake water quality, and with already fluctuating lake water levels, the prospect of 47 wells drawing from the water table in the area of Spring Branch and 14 mile creek could spell disaster for our lakes. Even today, without the 47 Hi Cap wells, we are experiencing a 12" or greater drop in our water level in upper Camelot as a result of drought. How would those wells affect our lake's recovery? Dr George Kraft suggests we can expect a calculable drop in the water table resulting from these proposed wells. Additionally, factual, historical data shows that our lakes are already being polluted by upstream sources. Dr George Kraft also states that we can expect a higher nitrate load as a result of the proposed 6,000 + acre agricultural operation, not to mention pesticide and other residues.

There are about 4,000 properties ringing Lakes Camelot, Sherwood and Arrowhead. The Town of Rome's economy was built upon these lakes and depends upon the health of these lakes to remain vibrant. The Town of Rome provides approximately 26% of the tax revenue of Adams County. A serious decline in Rome's economy has a dramatic effect on Adams County. There should be no question that the well being of the Town of Rome and its residents should be considered above the desires of a large scale farming operation. Who gives a private enterprise the authority to usurp the water and environmental assets from the general public? To quote from the DNR's Public Trust Doctrine:

"Wisconsin's Waters Belong to Everyone

Wisconsin lakes and rivers are public resources, owned in common by all Wisconsin citizens under the state's Public Trust Doctrine. Based on the state constitution, this doctrine has been further defined by case law and statute. It declares that all navigable waters are "common highways and forever free", and held in trust by the Department of Natural Resources". Live up to the doctrine and protect these public resources.

[REDACTED]

CC: Dan Baumann
Town of Rome Supervisors
Gov. Scott Walker

--
[REDACTED]

From: [REDACTED]
Sent: Saturday, September 08, 2012 3:45 PM
To: Anderson, Russell A - DNR
Subject: water

Mr. Anderson,

I would like to take this opportunity to formally oppose to Golden sands dairy project. I can only see bad things happening to our water supply and our water clarity in the lakes. This would greatly deminish our property values and we just can't afford that!

Sincerely, [REDACTED]

[REDACTED]

From: [REDACTED]
Sent: Sunday, September 09, 2012 9:18 PM
To: Anderson, Russell A - DNR
Subject: Golden Sands Dairy

Dear Sirs,

I am writing this to oppose the dairy that is to be put in near Lake Pettenwell. I am worried about the water supply as well as what might be going into the lake.

We have already been struggling with the algae problem and are working hard to remedy that.

Please reconsider putting that dairy farm near us.

Thanks you,
[REDACTED]

From: [REDACTED]
Sent: Saturday, September 08, 2012 2:26 PM
To: Anderson, Russell A - DNR
Subject: Golden Sands Dairy concerns to be included in EIS

Russ,

I have gathered several more questions/concerns from Saratoga residents to be included in the Golden Sands Dairy (GSD) EIS:

- Water tests done recently at the Central Sands Dairy in Armenia show nitrate levels more than double the level considered safe. Since the soil is similar composition to Saratoga, isn't it inevitable that the same thing will happen here as well if the CAFO is permitted?
- Should our water become contaminated from the CAFO and its accompanying cropland requiring Saratoga residents to purchase water purifications systems or drilled wells, who is responsible for paying for these modifications/wells to bring our water back to the quality that it was before the CAFO and cropland was permitted?
- How does the DNR intend on overseeing the guidelines imposed on emissions and waste should the dairy be approved, so as to not have the health, water and air issues that plague most existing CAFOs/cropland?
- How many additional man-hours (if any) does the DNR have budgeted to ensure the GSD does not have a negative impact on our natural resources? Where is that additional money coming from?
- How does the DNR plan on monitoring run-off from GSD CAFO/cropland into the Seven Mile & Ten Mile Creeks?
- Will emissions be monitored? If so, where and how often?
- How many environmental CAFO violations have been issues state-wide? What is being done to prevent similar incidents from happening with GSD?
- If area creeks are depleted, will any action be taken to restore them? Is the DNR responsible for restoration?
- Are there any direct conduits to water from the GSD CAFO or accompanying cropland?
- Since groundwater is not always at the same depth, how can the DNR be sure that some areas of Saratoga will not be affected more than others that have test sites?
- How many DNR staff will be monitoring the GSD project, and how often?
- Ammonia, hydrogen sulfide and particulate emissions may not be under the DNR jurisdiction, but should be considered as a potential problem with the GSD project.
- Is the CAFO on a site source aquifer or are there multiple aquifers?
- Are land applications of waste containing active levels of pharmaceuticals regulated? How often is the water/soil tested for pharmaceutical contamination?
- Is it possible for the DNR to require monitoring be completed by a neutral third-party auditor rather than self-monitoring by the dairy?

- The DNR allowed Rosendale CAFO to dig less than 10% of required test pits to monitor for shallow groundwater. How many test wells will GSD be required to dig? Will they be from many areas encompassing the entirety of the land owned by Wysocki for the GSD/cropland?
- Industrial sources omitting more than 25 tons per year are regulated...does the same apply to the CAFO?
- Rosendale CAFO wants to reduce frequency of groundwater monitoring if it has no violations after 2 years. Isn't this unacceptable? Will this type of lax monitoring be allowed in Saratoga?
- Although town growth is not under the jurisdiction of the DNR, the following should be considered before permitting the GSD: loss of existing businesses that require clean groundwater (such as bars/restaurants/etc.) and recreational businesses that rely on forestland, clean streams and clean air; future growth would be inhibited due to polluted water and air; one company will own over ¼ of the Town of Saratoga's land.
- Will all of the agricultural cropland and all its high capacity wells to the east of County Trunk U (Portage County) be considered cumulatively along with the areas cranberry marshes and the GSD on the water withdrawal and effect on the groundwater level and aquifer level?
- We respectfully ask that the DNR look at the material being collected/compiled by Saratoga residents regarding the GSD. Many of us have spent considerable time to provide facts on impacts of CAFOs and why a CAFO and 49 high capacity wells should not be located in the highly residential area of Saratoga. We implore you to provide us with detailed information on how these impacts would be handled by the DNR should GSD be permitted.

Thank you.



Dear Gretchen,

As per our telephone conversation, I am sending this written request that Wysocki Family Farms be required to alter their WPDES permit application and remove any and all references to catastrophic mortality pits, or animals buried on site. And that Wysocki Family Farms be specifically prohibited from storing, burning, and/or burying diseased dead animals or their ashes on the CAFO site, or in their agricultural fields.

As we discussed, this project is sited in the center of a rural residential community- Saratoga, and adjacent to a residential recreational community-the Town of Rome. The threat to the health and safety of over 10,000 people is simply too great to compromise in any way. Burial of even one or two diseased animals in our sandy soil, so close to our water table, is an unacceptable risk we dare not allow Wysocki Family Farms to take.

This area is home to over 2,000 children, and innumerable retired senior citizens who could be put at a greater risk, should a mistake ever occur.

I have discussed this matter with UWEX, and have been told that, at all times, 10 to 40 cows could be under treatment for all sorts of communicable diseases. And that every CAFO has dead cows. That is not a point we wish to dispute. But it is an issue that needs to be addressed, since Mr. Wysocki has chosen to place his facility in the midst of PEOPLE.

I sincerely request that the DNR require Wysocki Family Farms make other, offsite, arrangements (in writing) to dispose of diseased dead animals.

Thank you for your consideration of this serious matter.

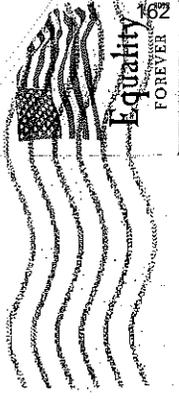
[Redacted signature]

[Redacted address]

RECEIVED

SEP 10 2012

WT/3 - WY/3 - OGL/3



CENTRAL WI PSDF 544
04 SEP 2012 PM 1 T

Gretchen Wheat
WI Dept. of Natural Resources
P.O. Box 7921
101 S. Webster St
Madison, WI 53707-7921

Handwritten signature/initials: WT/3

5370333474

ing this written request that Wysocki Family
it application and remove any and all
imals buried on site. And that Wysocki
storing, burning, and/or burying diseased
or in their agricultural fields.

nter of a rural residential community-
onal community-the Town of Rome. The
people is simply too great to compromise in
animals in our sandy soil, so close to our
ot allow Wysocki Family Farms to take.

innumerable retired senior citizens who
ever occur.

I have been told that, at all times, 10 to 40
communicable diseases. And that every
wish to dispute. But it is an issue that
chosen to place his facility in the midst of

cki Family Farms make other, offsite,
ed dead animals.

us matter.

RECEIVED

SEP 10 2012

WT/3 - WY/3 - OGL/3

From: [REDACTED]
Sent: Saturday, September 08, 2012 1:40 PM
To: Baumann, Dan G - DNR
Cc: Sen.Lassa - LEGIS; Rudig, Matthew - LEGIS
Subject: Proposed CAFO for Saratoga

Hello Dan

My name is [REDACTED]. I live at [REDACTED] in the Saratoga Township.

I am a concerned resident of the township of Saratoga. I am one of many of the residents that is concerned with the water quantity and quality issues that we face with the current proposed CAFO GOLDEN SANDS DAIRY, LLC.

My well number is TC046 which was drilled on 10-20-2005. My sand point well went dry at that time and it had to be drilled deeper at the time by Haupt Well & Pump Co. I believe the sand point was at 14 feet when it went dry. This was at a time when we did not have the current cranberry farmers which now draws on our areas water supply. Adding another 49 Hi Cap wells near by adds to an already stressed water supply. I moved to this area assured that the water was better for my family. Now that is in danger with this proposed CAFO!!

I have many questions about the effects of the proposed operations. WHAT AMOUNTS OF POSSIBLE WATER, AIR AND LAND CONTAMINATION CREATE A RISK? WHAT LEVEL OF RISK IS ACCEPTABLE?!? Saratoga, Wood County and its neighbors need to be protected!

Sincerely,

[REDACTED]



Saratoga Town Hall Public Listening Session

Issues Identification Comment Form

For the Proposed

Golden Sands Dairy

August 23, 2012 Meeting

Public information gathering for the Environmental Impact Statement (EIS). Please clearly state the issue(s) you feel should be addressed by WI Department of Natural Resources in the EIS:

I am very concerned about the cutting of 6000⁺ acres of forest land/woodlands. This is an area that is used for recreational purposes including: hiking, biking, snowmobiling, horseback riding, ATVing, hunting, trapping, fishing, cross country skiing, etc. The cutting will take away tourism for the area.

Trees serve as natural cleansers of water, filtering out pollutants and stabilizing the soil. They also take in carbon dioxide and give off oxygen.

Completion of this form and inclusion of personal information is voluntary. We will use your contact information to seek clarification of your comments, if necessary. All comments subject to Wisconsin's Open Records Law.

Name: [Redacted]

Contact Information: [Redacted]

From: [REDACTED]
Sent: Tuesday, September 11, 2012 11:04 AM
To: Anderson, Russell A - DNR; Baumann, Dan G - DNR
Cc: Governor Scott Walker; Scott Krug; Sen.Lassa - LEGIS; [REDACTED] Gunderson, Scott L - DNR; DNR SECRETARY; [REDACTED] Provost, Scott M - DNR; [REDACTED] McLennan, Robin - DNR; Werner; [REDACTED]
Subject: Concerns about Saratoga's Water Resource - Final Report

To all,

The final report of the Water Resources Committee, Town of Saratoga, is attached via a link. The report is too large to send directly on most email servers, thus a link had to be used. It will take approximately 5 minutes to download, depending upon your internet connection.

A hard copy of this report will also be presented to Russ Anderson and Dan Baumann along with the other committee reports from the Town of Saratoga.

[REDACTED]

I've linked 1 file to this email:

 [CAFO Water Committee Report.pdf](#) (36.0 MB) 
[YouSendIthttp://www.yousendit.com/download/TEhYQ1ZzTkxQb0xLd01UQw](http://www.yousendit.com/download/TEhYQ1ZzTkxQb0xLd01UQw)

To:

Mr. Russ Anderson
Environmental Review Coordinator
DNR South Central Region
3911 Fish Hatchery Road,
Fitchburg, WI 53711

Mr. Dan Baumann
Regional Water Leader West Central Region
Wisconsin Dept. of Natural Resources
PO Box 4001
Eau Claire WI 54702-4001

Subject: Concerns about Saratoga's Water Resource**Introduction**

The Wysocki organization, variously known as Ellis Industries Saratoga, LLC, Wysocki Produce Farm, Inc., Wysocki CAFO and Golden Sands Dairy CAFO (Concentrated Animal Feeding Operation) has proposed to locate an approximately 8,000 acre combination dairy CAFO and irrigated produce farm in Saratoga with a relatively small extension into western Portage County adjacent to County Trunk U. Approximately 6,400 acres will be cleared and irrigated. The area of Saratoga is approximately 32,778 acres of dry land and 1,152 acres of water along the Wisconsin River to the west. Therefore, the proposed Wysocki operation will encompass almost one fourth of the total land area of Saratoga. Currently this land is mostly industrial forest and is the habitat for a healthy population of wild turkeys, white tailed deer, partridge, coyotes, a few prairie chickens, and other species.

A good bit of this land is nearly adjacent to 10 Mile Creek on both sides of the creek. Ten Mile is a viable trout stream enjoyed by many anglers during the fishing season. (A map is included later in this report). The Wysocki organization has submitted ten applications for high capacity wells to the Wisconsin DNR for a total of 49 wells. Forty-seven of those wells are proposed to be located in the town of Saratoga. Of those 47 wells, 45 would be capable of pumping 1000 gpm (gallons/minute) and 2 of them would be consigned to the dairy operation and would pump substantially less volume.

Needless to say a majority of the 5,000 plus residents of Saratoga, as well as our neighbors in the surrounding communities within this Central Sands watershed are quite concerned about this Wysocki proposal. Currently the water supply and water quality available to Saratoga residences and surrounding communities represents some of the best water in Central Wisconsin. In addition, many of the residents of this community enjoy the abundance of wild game and the rural atmosphere afforded by our largely

forested landscape. That is why a number of us chose this area to live in the first place.

Background

The aquifer in southeastern Wood County, commonly referred to as the Central Sands Plain, is the best aquifer in Wood County. This aquifer extends well into Portage County, Waushara, and Adams County as well. The sand and gravel deposits in this area of Wood County are approximately 40- to 100-feet thick. Horizontal hydraulic conductivity of the sand and gravel deposits ranges from about 155 to about 280-feet/day.¹ (Hydraulic conductivity is a scientific measure of the ease of water flow through a porous media. Higher numbers indicate more rapid flow through the media.) By contrast, the hydraulic conductivity of the northern part of Wood County ranges from 0.02 to 2 feet/day.¹ The recharge rate (the rate at which an aquifer is recharged in inches/year from precipitation) for the Central Sands area ranges from about 7 – 12 inches/year. By contrast the central and northern part of the county has a recharge rate of about 1 – 4 inches/year.

These are the hydrogeology factors that make this area particularly enticing to the proposed Wysocki operation. The coarse sand in this area allows for high capacity irrigation pumps to pump water continually at a high rate and the aquifer holds a lot of water. He who has the deepest well, within the sand and gravel layer, and the biggest pump will get the lion's share of the water. Those of us that have shallow sand points may well end up with nothing in a short period of time.

Of course there is a downside to this coarse sand soil in the Central Sands area. Loam topsoil ranges from non-existent to, maybe, 4 inches. Puddles are a rarity after a rainstorm for most of us due to the porosity of the soil. The sandy soil does not hold water well. Most residents that have a yard and/or garden or small farm are forced to irrigate frequently if the rains are meager and they want to maintain their foliage.

It is expected that the Wysocki organization will also be irrigating frequently, probably continuously, during the growing season. They will also be using a lot of fertilizer as this sandy, porous, soil does not hold fertilizer well either. A certain percentage of that excess fertilizer will end up contaminating the aquifer that we all share. Herbicides and pesticides that do not break down quickly will also be contaminating the aquifer.

After the original forests were harvested from Saratoga and surrounding areas, dairy farming was tried. It was never really viable as this era predated the modern high capacity well and irrigation was impractical or impossible. During the dust bowl years of the 1930's many farmers sold out to the paper companies, sometimes for as little as \$1.00/acre. The paper companies such as Nekoosa Edwards Paper Company were quite progressive for the times and started planting sustainable red pine plantations to feed the paper mills. The Central Sands area turned out to be ideal for plantation pine forests. Unfortunately with the downsizing and general decline of the paper industry, the

forestlands were largely sold off to companies such as Plum Creek and now these lands are being sold off again.

South-western Portage County, also part of the Central Sand Plain, has had a high concentration of high capacity irrigation, municipal, and industrial wells starting in about 1960 and increasing to the current time period.³ The Little Plover River, which at an early time was a highly rated trout stream, has undergone a continuous degradation during this time period. At times in recent years the Little Plover has been completely dried up in stretches. Clancy, Kraft, and Mechenich completed an exhaustive scientific study of the slow demise of the Little Plover and concluded that:³

Specifically answering the question, “Is it drought or groundwater pumping causing the recent extreme Little Plover low flow conditions?” all indicators show that pumping is the far larger cause.

In a subsequent and even more exhaustive study on the water resources of the Central Sands Plain, Kraft and Mechenich have concluded that among other things:⁴

The amount of missing water only explainable by pumping amounts to several feet in some lakes high in the groundwater flow system where high capacity wells are prevalent. Far from high densities of high capacity wells and lower in the groundwater flow system the impacts are muted. Impacts on streams may reach half of their average baseflow in headwater locations.

It is easy to see that 10 Mile Creek, 7 Mile Creek, and probably to a lesser extent, 14 Mile Creek will be adversely affected by the 49 high capacity wells if the Wysocki project is allowed to proceed. 10 Mile Creek, which will be blanketed with high capacity wells on both sides, is the most vulnerable.

Analysis

As mentioned in the Introduction, the Wysocki organization is planning on purchasing a reported 8,000-forested acres in Saratoga, clearing most of the forest and replacing it with 6,400 acres of irrigated cropland in conjunction with a large CAFO.

The Wysocki organization has filed 10 high capacity well applications with the Wisconsin DNR for a total of 49 high capacity wells, two of which will be located just east of County Trunk U in Portage County. The remaining 47 wells will be located in Saratoga. According to the applications, 47 of these wells will draw on average 720,000 gallons/day for 7 months of the year. Two wells will be devoted to the CAFO dairy and draw considerably less water, 137,000 and 144,000 gallons/day for 12 months/year. The average yearly consumption of water is calculated to be 7,344,325,000 gallons.

The average rainfall in southern Wood County is approximately 31 inches and the high end of the recharge rate (the amount of water that actually returns to the water table) is 12

inches/year¹. What this translates to is that the 8,000 acres that Wysocki plans on purchasing will return 2,606,811,429 net gallons/year to the water table or reservoir. So they are only "supplying" 35% of their water needs. The rest of the water, a total of 4,737,53,571 gallons/year will come from the rest of us in the watershed.

The Excel spreadsheet supporting this analysis follows. All the well data are from Wysocki's 10 applications to the Wisconsin DNR.

As mentioned in the introduction there are approximately 32,778 acres in Saratoga so the Wysocki organization will end up owning and irrigating about 1/4 of the total land area of Saratoga. There are approximately 5,102 people in the town and approximately 2,011 households. Almost everyone has their own well and many of them, such as mine, are shallow well sand points. We will all have water problems in the not too distant future. In addition the 7 Mile, 10 Mile, and 14 Mile creeks will be adversely affected if this enterprise is allowed to proceed.

Why should we, the residents of Saratoga and neighboring communities in the watershed, be forced to subsidize the Wysocki CAFO with our water, a precious resource that we all treasure?

WATER USE CALCULATIONS						
Wysocki CAFO in Saratoga, WI, Wood County with two wells in Portage County						
49		Number of Wells Applied for				
10		Applications for the 49 Wells				
Well Number	Maximum Flow Rate, gpm	Average Flow Rate, Gallons/day	Maximum Flow Rate, Gallons/Day	Months/year Used	Average Gallons/Year	
Application 1	PC1	1,000	720,000	1,440,000	7	154,080,000
	PC2	1,000	720,000	1,440,000	7	154,080,000
	PC3	1,000	720,000	1,440,000	7	154,080,000
	PC5	1,000	720,000	1,440,000	7	154,080,000
	PC6	1,000	720,000	1,440,000	7	154,080,000
	PC7	1,000	720,000	1,440,000	7	154,080,000
	PC4,12	1,000	720,000	1,440,000	7	154,080,000
	PC8	1,000	720,000	1,440,000	7	154,080,000
	PC15	1,000	720,000	1,440,000	7	154,080,000
	PC16,22	1,000	720,000	1,440,000	7	154,080,000
	PC21	1,000	720,000	1,440,000	7	154,080,000
	PC38	1,000	720,000	1,440,000	7	154,080,000
	PC9,13	1,000	720,000	1,440,000	7	154,080,000
	PC10	1,000	720,000	1,440,000	7	154,080,000
	PC17,18	1,000	720,000	1,440,000	7	154,080,000
	PC23	1,000	720,000	1,440,000	7	154,080,000
	PC11,19,20	1,000	720,000	1,440,000	7	154,080,000
	PC24	1,000	720,000	1,440,000	7	154,080,000
	PC25	1,000	720,000	1,440,000	7	154,080,000
	PC26	1,000	720,000	1,440,000	7	154,080,000
Application 2	PC33	1,000	720,000	1,440,000	7	154,080,000
	PC34,35	1,000	720,000	1,440,000	7	154,080,000
	PC37	1,000	720,000	1,440,000	7	154,080,000
Application 3	PC55	1,000	720,000	1,440,000	7	154,080,000
	PC56	1,000	720,000	1,440,000	7	154,080,000
	PC41,44	1,000	720,000	1,440,000	7	154,080,000
	PC42,45	1,000	720,000	1,440,000	7	154,080,000
Application 4	PC27	1,000	720,000	1,440,000	7	154,080,000
	PC28	1,000	720,000	1,440,000	7	154,080,000
Application 5	PC30	1,000	720,000	1,440,000	7	154,080,000
	PC31	1,000	720,000	1,440,000	7	154,080,000
Application 6	PC46	1,000	720,000	1,440,000	7	154,080,000
	PC48	1,000	720,000	1,440,000	7	154,080,000
	PC51	1,000	720,000	1,440,000	7	154,080,000
	PC53	1,000	720,000	1,440,000	7	154,080,000
	PC54	1,000	720,000	1,440,000	7	154,080,000
	PC58,64	1,000	720,000	1,440,000	7	154,080,000
	PC59	1,000	720,000	1,440,000	7	154,080,000
	PC67	1,000	720,000	1,440,000	7	154,080,000
	PC68	1,000	720,000	1,440,000	7	154,080,000
	PC69,70	1,000	720,000	1,440,000	7	154,080,000
Application 7	PC55	1,000	720,000	1,440,000	7	154,080,000
	PC56	1,000	720,000	1,440,000	7	154,080,000
	PC60	1,000	720,000	1,440,000	7	154,080,000
	PC61	1,000	720,000	1,440,000	7	154,080,000
Application 8	D1	275	137,000	396,000	12	50,005,000
	PC31	200	144,000	288,000	12	52,560,000
Application 9	PC72	1,000	720,000	1,440,000	7	154,080,000
Application 10	PC71	1,000	720,000	1,440,000	7	154,080,000
					Total Gallons/year	7,344,325,000
1000 gallons/minute capacity/well						
31 Average precipitation/year in this area, inches						
8000 Acres						
6400 Acres Cropland						
12 Maximum recharge rate for southern Wood County and Surrounds						
6.02173E+11 net cubic inches of water/year falling on the 8000 acres						
2,606,811,429 net gallons/year falling on the 8000 acres						
35 Percentage of water the Golden Sands Dairy would be receiving on its 8000 acres due to precipitation vs estimated usage of water						
Another way of looking at it:						
4,737,513,571 number of gallons per year that we, the neighbors of the proposed Wysocki CAFO would be contributing to the Wysocki CAFO						

At our request the Wood County Planning & Zoning Office prepared a map with some assistance from the U.S. Geological Survey – Wisconsin Water Science Center.

This map is included below. It is quite clear from this map that:

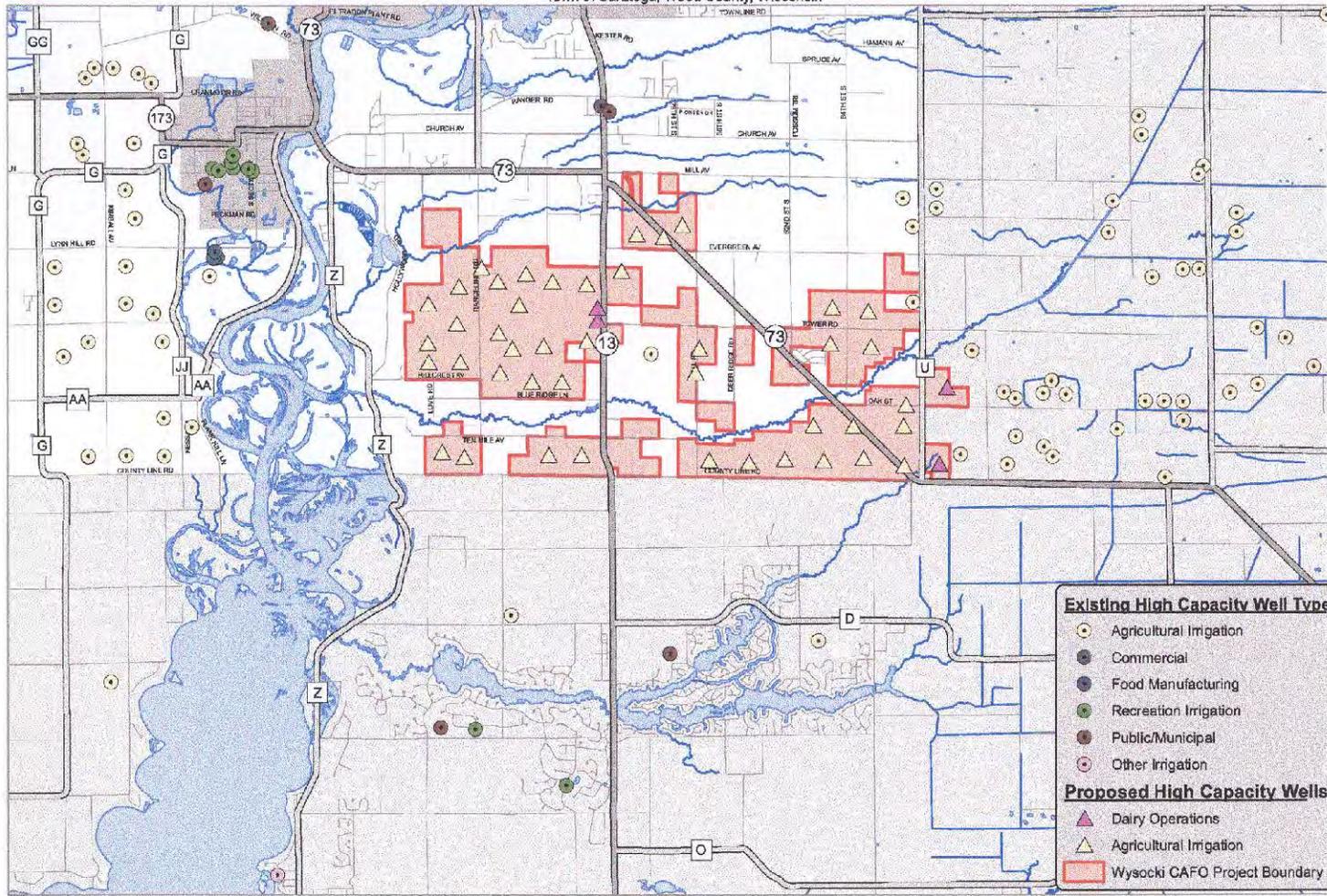
- The Wysocki CAFO project would deprive 10 Mile Creek of a significant amount of the ground water needed to maintain the current flow rate and likewise, but to a lesser extent, 7 Mile Creek. Although further away, the Rome Lakes Region, including 14 Mile Creek and its tributaries may be affected. Spring Branch may be particularly vulnerable.
- As can be seen from the map, there is already a high concentration of high capacity wells in southwestern Portage County. These wells are draining the same Central Sands aquifer that the proposed Wysocki CAFO will affect. A number of these wells in Portage County are owned by the Wysocki organization.
- Anyone who lives in Saratoga and nearby surrounding communities and has a private well, especially a shallow well, has the potential to be adversely affected by the great quantity of water that the Wysocki operation will be pumping from our shared aquifer.

While the authors of this report do not pretend to have a sophisticated mathematical model predictive of exactly what will happen to the water table of Saratoga and the surrounding communities if the Wysocki operation is allowed to move forward, we stand by the data that we have presented as being factual and alarming to all who reside in this watershed.

The impacts of irrigated agriculture on both the quality and quantity of ground water are hardly a mystery in the Central Sands area. The noted hydrologist, George Kraft and associates have studied and written extensively on the subject².

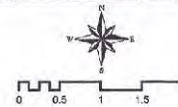
Sandy irrigated areas in humid regions with shallow ground water are particularly prone to agricultural ground water pollution. Though irrigated agriculture in the United States has been historically common in the dry west, irrigation development increased eight-fold over the past 30 years in the humid north-central region, mainly in sandy areas with easily tapped shallow water table aquifers.

Town of Saratoga, Wood County, Wisconsin



Existing High Capacity Well data provided by U.S. Geological Survey - Wisconsin Water Science Center.

There may be other wells not identified.
 Search excludes low-capacity wells (property withdrawal rate is <70 gpm), which are typically potable uses (eg domestic supply wells).



Conclusions, Concerns, and Contingencies

Residents of the 7, 10 and 14 Mile Creek watersheds have accumulated data supporting our concerns of the Wysocki proposal to build a concentrated animal feeding operation and associated irrigated cropland in the Town of Saratoga. We are concerned and well aware of the long-term effects of high capacity well irrigation and contamination, as well as the drawdown of the ground water affecting our families' health and our posterity. We would like to express that we are not against the traditional Wisconsin family farm or farmer: it is the large scale businesses that exploit our natural resources and drive out the small farmer that are the problem.

We as the group that studied the effects of ground water quantity have read and understand the two documents published by the UW Extension entitled "Knowledge Development for Groundwater Withdrawal-Management Around the Little Plover River-Portage County Wisconsin" and "Groundwater Pumping effects on Groundwater Levels, Lake levels and Stream flows in the Wisconsin Central Sands" and are concerned with the detrimental effects of high capacity wells proposed by the Ellis Industries Saratoga, LLC. Enclosed are the study results. This information is public knowledge obtained from many sources including the Internet. The following are points that must be considered.

- Formulas for the high capacity wells output conversion to stream flows. (See Appendix 1)
- The DNR has regulated, stocked, purchased property for public access to the 7 and 10 Mile trout streams and published regulations to the public for the preservation of these category 1,2 and 5 streams. (See Appendix 2)
- Comparisons of high capacity well areas to non-irrigated areas and their affect on stream flows during irrigation seasons. (See Appendix 3)
- We respectfully demand that the DNR include the existing 40 high capacity wells on the watershed be recognized in the environmental impact study noting that the Wysocki family already owns 21 of these wells and also noting that the DNR has no authority to regulate cranberry marsh wells. (See Appendix 4)
- We understand that the southeastern Wood County depth to water average is primarily less than 20 ft. (see Appendix 5)
- Recent Wisconsin Supreme Court decisions warrant increased consideration to high capacity well permitting. (See Appendix 6)
- We respectfully request that the Wisconsin DNR resume stocking of trout in the 10 Mile Creek to ensure the future heritage of the Wisconsin sportsman. (See Appendix 7).

- Appendix 8 illustrates the flow variability that 10 Mile Creek is already experiencing. Some of that variability is due to agricultural practices already in place.
- Appendix 9 is a graph of recent flow rates of 10 Mile Creek and calculations that indicate the severity of the impact on the flow rate if the Wysocki project is permitted.
- Appendix 10 is a copy of Chapter NR 820 GROUNDWATER QUANTITY PROTECTION.

Contingencies

- In the event that the proposed HCW's or any part thereof are approved by the Wisconsin DNR, we respectfully demand that a well head protection plan, including agreed upon test wells, be developed to monitor groundwater levels, nitrate levels etc. Local paper mills already are required to meet this condition.
- We demand that a contingency plan be developed in the event of DNR approval of the proposed HCW's including an escrow account funded by the Wysocki operation to compensate residents of Saratoga to cover the costs of (including, but not limited to) recovering water from dried up wells, providing drinking water to residents with nitrate levels in excess of 10 PPM and cover any costs associated with digging new wells or lowering of residents existing pumps.
- The above-mentioned escrow would also be funded to include losses associated with damage to forest property due to the lower water table and permeability of the soil. A number of Saratoga residents have red pine plantations as well as Christmas tree plantations that are susceptible to a lower water table.

LITERATURE CITED

1. Batten, W.G., Hydrogeology of Wood County, Wisconsin, United States Department of the Interior Geological Survey, Information Circular 60 (1989)
2. Kraft, G.J., Stites, W., and Mechenich, D.J., Impacts of Irrigated Vegetable Agriculture on a Humid North-Central U.S. Sand Plain Aquifer, GROUND WATER, Vol. 37, No. 4, (July-August 1999)
3. Clancy, Katherine, Kraft, George J., and Mechenich, David J., "Knowledge Development for Groundwater Withdrawal Management around the Little Plover River, Portage County Wisconsin." A Report to the Wisconsin Department of Natural Resources in Completion of Project: NMG000000253, (January 14, 2009)
4. Kraft, George J. and Mechenich, David J., "Groundwater Pumping Effects on

Groundwater Levels, Lake Levels, and Streamflows in the Wisconsin Central Sands." A Report to the Wisconsin Department of Natural Resources in Completion of Project: NMI000000247, (March 15, 2010)

Respectfully Submitted by



Water Resources Committee, Town of Saratoga,
And the Committee Members

Appendix 1



FILE COPY

USGS Home
Contact USGS
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National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category: Geographic Area:

News - updated July 2012

**USGS 05401050 TENMILE CREEK NEAR NEKOOSA, WI
PROVISIONAL DATA SUBJECT TO REVISION**

Available data for this site Time-series:

LOCATION.--Lat 44°15'44", long 89°48'38", in NE 1/4 sec.32, T.21 N., R.6 E., Wood County, Hydrologic Unit 07070003, on left bank upstream from bridge on State Highway 13, 5.8 mi southeast of Nekoosa.

DRAINAGE AREA.--73.3 square miles.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1962-63. October 1963 to September 1979, October 1987 to September 1994, February 1998 to current year.

REVISED RECORDS.--WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 967.33 ft above sea level at NAVD of 1988. Prior to May 13, 1964, and June 2, 1988 to May 2, 1989, non-recording gage at present site and datum.

REMARKS.--Approximately 40 mi of drainage ditches and 22 check dams are used to control the water table in the basin. Sprinkler irrigation from ground-water sources affects natural flow of creek.

Operated in Cooperation With:



[Wisconsin Department of Natural Resources](#)

Boating safety tips

This station managed by the USGS Wisconsin Water Science Center - Middleton WI.

Available Parameters	Available Period	Output format	Days (7)	
<input type="checkbox"/> All 2 Available Parameters for this site		<input checked="" type="radio"/> Graph		<input type="button" value="GO"/>
<input checked="" type="checkbox"/> 00060 Discharge	2007-10-01 2012-08-03	<input type="radio"/> Graph w/ stats	-- or --	
<input checked="" type="checkbox"/> 00065 Gage height	2012-04-05 2012-08-03	<input type="radio"/> Graph w/o stats	Begin date	
		<input type="radio"/> Table	2012-07-27	
		<input type="radio"/> Tab-separated	End date	
			2012-08-03	

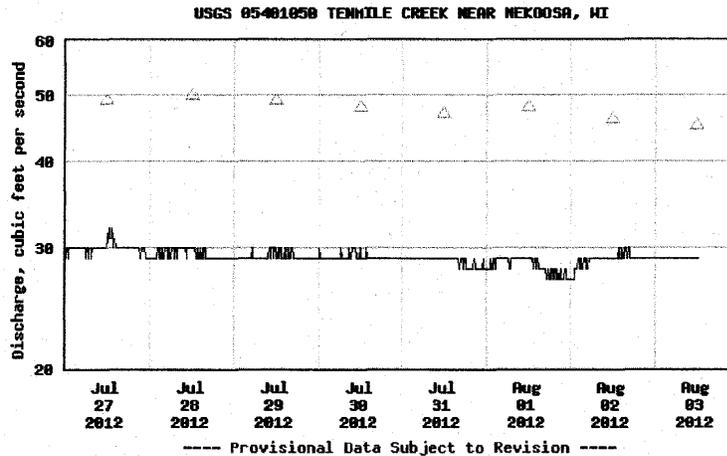
http://waterdata.usgs.gov/wi/nwis/uv?site_no=05401050

8/3/2012

Summary of all available data for this site
Instantaneous-data availability statement

Discharge, cubic feet per second

Most recent instantaneous value: 29 08-03-2012 12:30 CDT



△ Median daily statistic (37 years) — Discharge

Create [presentation-quality](#) / [stand-alone](#) graph. Subscribe to [WaterAlert](#)

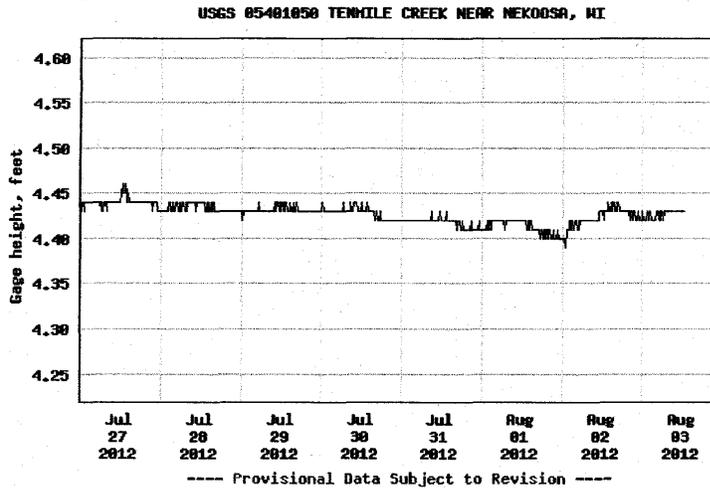
[Share this graph](#) |

Daily discharge, cubic feet per second -- statistics for Aug 3
 based on 37 years of record [more](#)

Min (1964)	Most Recent Instantaneous Value Aug 3	25th percentile	Median	Mean	75th percentile	Max (1993)
19	29	34	45	50.	67	104

Gage height, feet

Most recent instantaneous value: 4.43 08-03-2012 12:30 CDT



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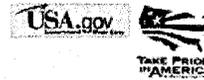
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U.S. Department of the Interior | U.S. Geological Survey

Title: USGS Current Conditions for Wisconsin
URL: <http://waterdata.usgs.gov/wi/nwis/uv?>



Page Contact Information: [Wisconsin Water Data Support Team](#)
 Page Last Modified: 2012-08-03 15:58:47 EDT
 1.03 0.89 vaww01

http://waterdata.usgs.gov/wi/nwis/uv?site_no=05401050

8/3/2012

1 Cubic ft/second = 4448.8 Gallons/minute (gpm)

Appendix 2

WAUPACA (TOMORROW) RIVER—River Road upstream to Durant Road in Portage County—Category 5
 Gear Restriction: only artificial lures may be used
 Daily Bag Limit: 1 trout
 Length Limit: brook trout and rainbow trout 12", brown trout 18"
 WAUPACA (TOMORROW) RIVER—All except portion listed above—Category 2

WAUSHARA

ALL WATERS NOT LISTED—Category 2
 JOHNS LAKE—Category 2
 Open Season: May 5 at 5:00 a.m. to March 3, 2013
 GILBERT LAKE—Category 2
 Open Season: May 5 at 5:00 a.m. to March 3, 2013
 LONG LAKE (TOWN OF SAXEVILLE)—Category 2
 Open Season: May 5 at 5:00 a.m. to March 3, 2013
 MECAN RIVER AND SPRINGS—Category 3
 PEARL LAKE—Category 2
 Open Season: May 5 at 5:00 a.m. to March 3, 2013
 PINE LAKE—Category 2
 Open Season: May 5 at 5:00 a.m. to March 3, 2013
 PINE RIVER (LOWER)—Downstream from Wild Rose millpond—Category 3
 PINE RIVER (UPPER)—Upstream from Wild Rose millpond—Category 2
 SPRING LAKE—Category 2
 Open Season: May 5 at 5:00 a.m. to March 3, 2013

WHITE RIVER POND (WEST BRANCH)—Category 2
 Open Season: May 5 at 5:00 a.m. to March 3, 2013
 WHITE RIVER (MAIN BRANCH)—Upstream from Lower White River millpond—Category 5
 Gear Restriction: only artificial lures may be used
 Daily Bag and Length Limit: 3 trout per day, only 1 brown trout over 15"
 Length Limit: 12"
 WHITE RIVER—Category 3
 WHITE RIVER (WEST BRANCH)—Category 2
 Open Season: May 5 at 5:00 a.m. to Sept. 30
 WILD ROSE MILL POND—Category 2
 Open Season: May 5 at 5:00 a.m. to March 3, 2013
 WILLOW CREEK—Downstream from Blackhawk Road—Category 3

WINNEBAGO

ALL WATERS—Category 2

WOOD

ALL WATERS NOT LISTED—Category 2
 TEN MILE CREEK—Upstream for Rangeline Road—Category 2
 TEN MILE CREEK—Downstream from Rangeline Road—Category 5
 Gear Restriction: only artificial lures may be used
 Daily Bag Limit: 1 trout
 Length Limit: 15"

Protect Wisconsin's Trout Streams! **Do your part to stop invasive species.**

Wisconsin's streams are unique and fragile resources. Before you leave any water, please...

- **Inspect** all equipment
- **Remove** all plants, mud, and debris
- **Drain** all water from boots and equipment
- **Never move** live fish or bugs
- **Consider** replacing felt-soled boots with hard rubber

Visit

<http://dnr.wi.gov>

for more information about invasive species threatening our rivers and streams

A message brought to you by the River Alliance of Wisconsin, Trout Unlimited, and the Wisconsin Department of Natural Resources.

Public or Private?

How Do I Know If I'm Trespassing?

- Navigability determines whether a waterway is public or private. Navigable lakes and streams are public waterways.
- A waterway is navigable if it has a bed and banks and it is possible to float a canoe or other small craft at sometime of the year—even if only during spring floods.
- Because they are public, you may use navigable waters for fishing, boating, swimming or other recreational activities, provided public access is available, or you have permission of the land owner to cross their property to reach the waterway. Once on a navigable waterway, AS LONG AS YOU KEEP YOUR FEET WET, YOU MAY WALK ALONG THE BED OF THE STREAM, FISH, SWIM, OR BOAT IN ANY NAVIGABLE LAKE OR STREAM.

Is Your Favorite Stream in Jeopardy?

Any physical altering of a stream requires specific permits and should be carefully supervised.

Dredging, dam building, filling, pond building, irrigating, stream channelization and straightening are all carefully controlled activities. If you see any suspicious activities in Wisconsin's streams, please notify your local DNR office. If you are a land owner, please get the proper information before altering any stream.

Report Hunting and Fishing Violations

Call 1-800-TIP-WDNR (847-9367)

Toll Free Statewide • 24 hour • Confidential

General information call:

toll free 1-888-WDNRINFO (1-888-936-7463) or
 608-266-1877 or local DNR office

Appendix 3

Recent data from UWSP's Watershed Center show water levels in streams in irrigated areas in the Central Sands are in rapid states of decline. Not so with streams and lakes outside of areas of concentrated irrigation.

Water Levels Tank in Irrigated Areas in 2012

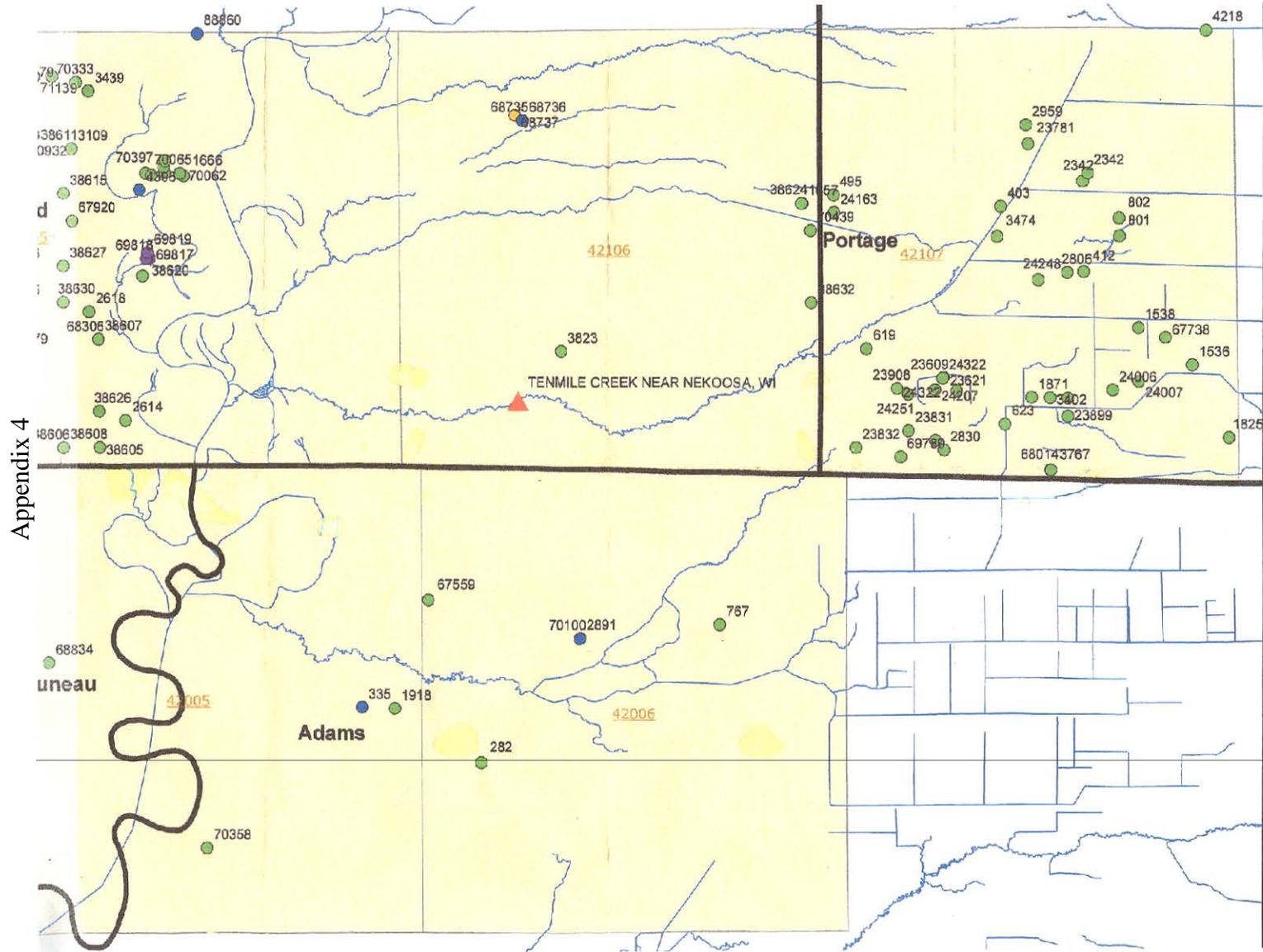
Recent streamflow and water level measurements in the irrigated area of the central sands show alarming declines, according to a USGS gauge and measurements taken by the Center for Watershed Science and Education. Streamflow declines in irrigated areas since the beginning of the growing season were often 60-100% (100% means drying). Largest declines were in the Roche a Cri, Little Roche a Cri systems, and Carter Creek systems (Adams and Waushara Counties), Buena Vista Creek (Wood and Portage Counties), and the Little Plover River (Portage County).

The Little Plover River may be headed to another dry-up, as streamflows are now down only 1.5 cubic feet per second at Eisenhower Road, well below the [WINDOWS-1252?]"healthy [WINDOWS-1252?]flow" level of 4.0 cfs.

By comparison, comparable streams outside the irrigated area are doing well. Emmons Creek (Wauapca County), Lawrence Creek, the White River (Waushara County), and Spring Creek (Portage County) have declined only a small amount, 0 to 20%.

Water levels at the USGS Hancock monitoring well, located in a heavily irrigated area, has been declining about an inch every two days. This is a six times faster than what would occur under natural, non-pumping conditions.

Attached is a flow survey comparing late May and late July streamflows at select locations.

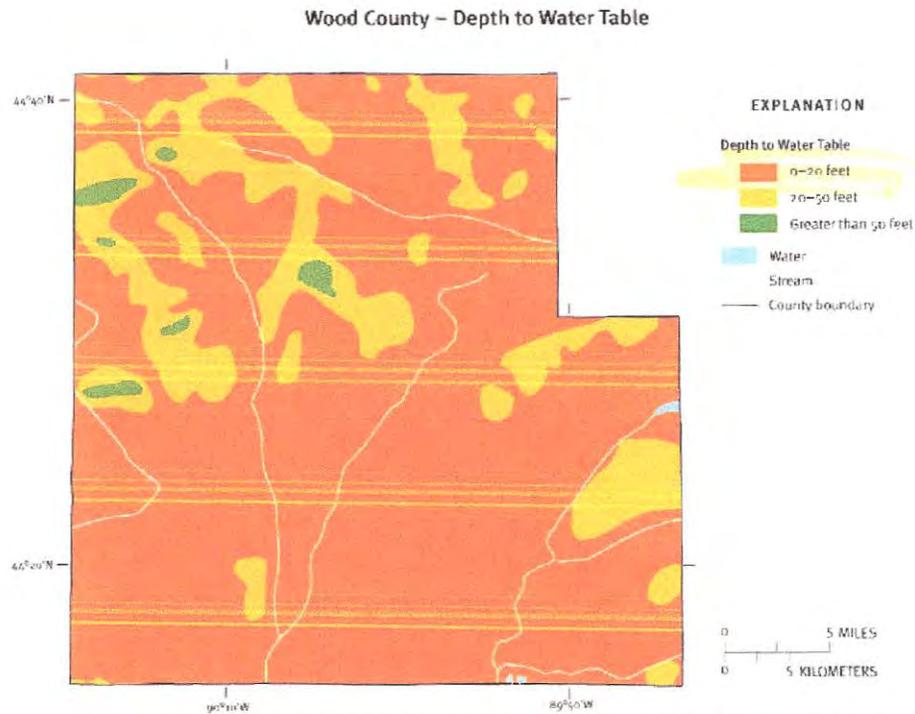


COUNTY	HICAP	WUWN	OWNER	DIR	TWP	RNG
Wood	68737	UC065	PIRKO INC	4	21	6
Wood	69817	US602	WISCONSIN RIVER CRANBERRY CO	4	21	5
Wood	69818	UY112	WISCONSIN RIVER CRANBERRY CO	4	21	5
Wood	69819	US603	WISCONSIN RIVER CRANBERRY CO	4	21	5
Adams	67559	TB492	██████████	4	20	6
Adams	767	DN585	MORTENSON BROTHERS FARM INC	4	20	6
Portage	1536		██████████	4	21	7
Portage	495	DN513	ELLIS INDUSTRIES LLC	4	21	7
Portage	24163	BD185	ELLIS INDUSTRIES LLC	4	21	7
Portage	24007	BD048	ELLIS INDUSTRIES LLC	4	21	7
Portage	24006	BD047	ELLIS INDUSTRIES LLC	4	21	7
Portage	71653	WQ593	ELLIS INDUSTRIES LLC	4	21	7
Portage	24322		ELLIS INDUSTRIES LLC	4	21	7
Portage	24251	BD270	ELLIS INDUSTRIES LLC	4	21	7
Portage	23832	BC886	ELLIS INDUSTRIES LLC	4	21	7
Portage	24255	BD274	ELLIS INDUSTRIES LLC	4	21	7
Portage	23831	BC885	ELLIS INDUSTRIES LLC	4	21	7
Portage	2830	MY642	ELLIS INDUSTRIES LLC	4	21	7
Portage	69789	UY113	ELLIS INDUSTRIES LLC	4	21	7
Portage	623	DN592	ELLIS INDUSTRIES LLC	4	21	7
Portage	23901	BC950	JOHN HANCOCK LIFE INSURANCE CO	4	21	7
Portage	3402	OC577	JOHN HANCOCK LIFE INSURANCE CO	4	21	7
Portage	1871	FL925	JOHN HANCOCK LIFE INSURANCE CO	4	21	7
Portage	23899	BC948	JOHN HANCOCK LIFE INSURANCE CO	4	21	7
Portage	2342	ME920	JOHN HANCOCK LIFE INSURANCE CO	4	21	7
Portage	4218	RT824	██████████	4	21	7
Portage	619	DN544	██████████	4	21	7
Portage	2806	OT683	██████████	4	21	7
Portage	403	EK087	M.S. & S. ENTERPRISES	4	21	7
Portage	2959		██████████	4	21	7
Portage	1825	LT632	██████████	4	21	7
Portage	1538	LI676	██████████	4	21	7
Portage	67738	RB786	██████████	4	21	7

COUNTY	HICAP	WUWN	OWNER
Wood	68737	UC065	PIRCO INC
Wood	69817	US602	WISCONSIN RIVER CRANBERRY CO
Wood	69818	UY112	WISCONSIN RIVER CRANBERRY CO
Wood	69819	US603	WISCONSIN RIVER CRANBERRY CO
Adams	67559	TB492	██████████
Adams	767	DN585	MORTENSON BROTHERS FARM INC
Portage	1536		██████████
Portage	495	DN513	ELLIS INDUSTRIES LLC
Portage	24163	BD185	ELLIS INDUSTRIES LLC
Portage	24007	BD048	ELLIS INDUSTRIES LLC
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Portage	623	DN592	ELLIS INDUSTRIES LLC
Portage	23901	BC950	JOHN HANCOCK LIFE INSURANCE CO
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Portage	1871	FL925	JOHN HANCOCK LIFE INSURANCE CO
Portage	23899	BC948	JOHN HANCOCK LIFE INSURANCE CO
Portage	2342	ME920	JOHN HANCOCK LIFE INSURANCE CO
Portage	4218	RT824	██████████
Portage	619	DN544	██████████
Portage	2806	OT683	██████████
Portage	403	EK087	M.S. & S. ENTERPRISES
Portage	2959		██████████
Portage	1825	LT632	██████████
Portage	1538	LI676	██████████
Portage	67738	RB786	██████████
Portage	23908	BC957	WYSOCKI FARMS INC
Portage	24207	BD226	WYSOCKI PRODUCE FARMS INC
Portage	23621	BC683	WYSOCKI PRODUCE FARMS INC
Portage	23609	BC671	WYSOCKI PRODUCE FARMS INC
Portage	24322		WYSOCKI PRODUCE FARMS INC
Wood	38628	BE262	B&D FARMS
Wood	68779	TY616	██████████
Wood	38610	BE246	ELLIS INDUSTRIES LLC
Wood	2618	MY638	ELLIS INDUSTRIES LLC
Wood	68306	TB478	ELLIS INDUSTRIES LLC
Wood	38630	BE263	ELLIS INDUSTRIES LLC
Wood	38607	BE243	ELLIS INDUSTRIES LLC
Wood	71166	VC281	ELLIS INDUSTRIES LLC

Wood	38606	BE242	ELLIS INDUSTRIES LLC
Wood	38626	BE260	ELLIS INDUSTRIES LLC
Wood	38605	BE241	ELLIS INDUSTRIES LLC
Wood	38608	BE244	ELLIS INDUSTRIES LLC
Wood	2614	ME940	ELLIS INDUSTRIES LLC
Wood	38624	BE258	ELLIS INDUSTRIES LLC
Wood	1657		ELLIS INDUSTRIES LLC
Wood	70439	UY091	ELLIS INDUSTRIES LLC
Wood	38632	BE265	ELLIS INDUSTRIES LLC
Wood	38627	BE261	
Wood	38636	CO521	HO CHUNK NATION
Wood	38646	DN521	HO CHUNK NATION
Wood	70932	OC527	
Wood	70933	UY121	
Wood	3439	RN354	
Wood	3823	RI646	
Wood	70333	US645	WY SOCKI FARMS INC
Wood	2994	NO895	WY SOCKI FARMS INC
Wood	71139	VC271	WY SOCKI FARMS INC
Wood	479	DS503	WY SOCKI FARMS INC
Wood	68834	TY620	WY SOCKI FARMS INC
Wood	3109	OC509	WY SOCKI FARMS INC
Wood	38615	BE251	WY SOCKI FARMS INC
Wood	67920	TY625	WY SOCKI FARMS INC
Wood	38611	BE247	WY SOCKI PRODUCE FARMS INC
Portage	412	DN551	PATRYKUS FARMS INC
Portage	24248	BD267	PATRYKUS FARMS INC
Portage	802	FN804	16 WEST ERIE LLC
Portage	801		16 WEST ERIE LLC
Portage	68014	TB452	BULA LAND COMPANY
Portage	3767	RF167	BULA LAND COMPANY
Portage	2342	ME920	JOHN HANCOCK LIFE INSURANCE CO
Portage	23781	BC836	MYRON SOIK & SONS INC
Portage	3474	RB732	TMPC, LLC
Wood	38620	BE255	WISCONSIN RIVER CRANBERRY CO
Adams	1918	LW016	LAKE ARROWHEAD ASSOC
Adams	282	BB562	LAKE ARROWHEAD ASSOC
Wood	70397	HC118	NEKOOSA PUBLIC SCHOOLS
Wood	70398		NEKOOSA PUBLIC SCHOOLS
Wood	1666	KY291	NEKOOSA PUBLIC SCHOOLS
Wood	70062	KY292	NEKOOSA PUBLIC SCHOOLS
Wood	70063	KY293	NEKOOSA PUBLIC SCHOOLS
Wood	70064	KY294	NEKOOSA PUBLIC SCHOOLS
Wood	70065	KY295	NEKOOSA PUBLIC SCHOOLS
Adams	70358	UL597	BARNUM BAY CONDO ASSOC
Adams	2891	OV251	ROME WATER UTILITY
Adams	70100	SB752	ROME WATER UTILITY

Appendix 5



This resource characteristic map was derived from generalized statewide information at small scales, and cannot be used for any site-specific purposes.

Map source: Schmidt, R.R., 1987, Groundwater contamination susceptibility map and evaluation, Wisconsin Department of Natural Resources, Wisconsin's Groundwater Management Plan Report 5, PUBLWR-177-87, 27 p.

Figure created for the "Protecting Wisconsin's Groundwater Through Comprehensive Planning" web site, 2007, <http://wi.water.usgs.gov/gwomap/>

It is important to know where the water table is when trying to determine groundwater contamination susceptibility. The closer the water table is to the land surface, the less contact contaminants have with filtering materials overlying the water table. The depth to water table is difficult to map on a statewide basis because it's almost as variable as the terrain. The information used in this mapping project identified where the water table was less than 20 feet, between 20 and 50 feet, and greater than 50 feet from the land surface.

Appendix 6

The Department of Natural Resources said Thursday it will reconsider a key permit for a large dairy farm proposed in Adams County after the agency received an analysis by a University of Wisconsin-Stevens Point hydrogeologist who concluded the farm is likely to reduce local water supplies.

The DNR had made a preliminary determination that groundwater pumping by the 4,200-cow Richfield Dairy would not harm local conditions.

And a spokesman for the company developing the farm also emphasized that the pumping of more than 50 million gallons of water annually won't be more than the irrigation now used for potatoes on the same land.

The Richfield Dairy is being developed by Kaukauna-based Milk Source, which owns the state's largest dairy farm, Rosendale Dairy, in Fond du Lac County. It operates two other farms and a third is slated to open early next year.

If Richfield Dairy is constructed, Milk Source will own five dairy farms with about 26,500 cows, according to the company. In addition, it owns a separate 9,200-calf operation near De Pere.

At Richfield Dairy, the company needs DNR permits for a high-capacity well and wastewater discharge, along with an environmental assessment of the project. Approvals on all three are pending, according to the DNR.

The DNR said it is reconsidering the permit for the high-capacity well after George Kraft of UW-Stevens Point said the farm would harm local water bodies and draw down the aquifer.

Kraft uses more sophisticated water modeling software than the state agency, the DNR acknowledged.

The decision to revisit the issue comes after a Wisconsin Supreme Court case this year involving municipal wells near Lake Beulah in Walworth County. In that case, the court said the DNR has the duty to consider adverse impacts of wells if presented with scientific evidence.

Three Democratic lawmakers said Kraft's work shows that the DNR is likely to "grossly understate" the impact of groundwater pumping and urged the agency to more closely scrutinize the environmental effect of the dairy farm.

Eric Ebersberger, water use section chief of the DNR, said the agency will evaluate the research. Depending on the outcome, the DNR could put conditions on the farm or deny the permit altogether.

Environmentalists and some residents opposed Rosendale during its development, and the same has been true with Richfield.

In the latest case, the Pleasant Lake Management District asked Kraft to study the effect of Richfield Dairy's water use on local groundwater and surface supplies. He was not paid for that work.

The lake is about 3 miles from the two proposed wells that would draw up to 500 gallons a minute.

Kraft has studied groundwater in the Central Sands region of Wisconsin for years and in a 2010 study he found that between 2000 and 2008, climate conditions alone could not account for depressed water levels and stream flows where many large wells are located.

In his most recent analysis, Kraft said in a letter to the DNR he was taking into account the replacement of an existing well with two new wells.

He concluded that the effect of the new dairy farm would increase the drawdown of the water table and divert water from several streams and Pleasant Lake.

For example, Kraft said, portions of many streams closest to the wells would experience a 10% reduction or more in recharge from groundwater.

Near Pleasant Lake, the well would draw down the aquifer by 11%, thus affecting the lake levels.

But Bill Harke, director of public affairs for Milk Source, said Richfield Dairy should not harm local groundwater conditions.

In addition to the DNR's work, he said, two other studies supplied to the DNR by the company showed the new wells won't have an effect.

Harke said the analysis by Kraft appeared to be little more than a letter to the DNR describing past research.

The DNR, he said, is obligated to review data submitted in such cases "and we encourage them to review it."

Appendix 7

**Wisconsin Department of Natural Resources
Fish Stocking Summary
DNR Hatcheries, Ponds, and Coop Ponds
05-AUG-12**

County Name Waterbody Name Local Waterbody Name Location (TRS)
[WOOD] [TENMILE CREEK] [] []

Year	Stocked Waterbody Name	Local Waterbody Name	Location	Species	Strain (Stock)	Age Class	Number Fish Stocked	Avg Fish Length (IN)
1972	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	8.00
1973	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	9.00
1974	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	10.00
1975	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	
1976	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	
1977	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	
1978	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	
1979	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	
1980	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	
1981	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	
1982	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	
1983	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	8.00
1984	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	9.00
1985	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	10.00
1986	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	9.00
1987	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	15,000	9.00
1988	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	9.00
1989	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	10,800	8.67
1991	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	8.20
1992	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,005	8.00
1993	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	5,000	7.57
1994	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	1,000	7.00
1996	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	UNSPECIFIED	YEARLING	3,000	7.20

tp://infotrek.er.usgs.gov/apex/f?p=220:1:0::NO::P1_COUNTY_NAME,P1_LOCAL_WB... 8/5/2012

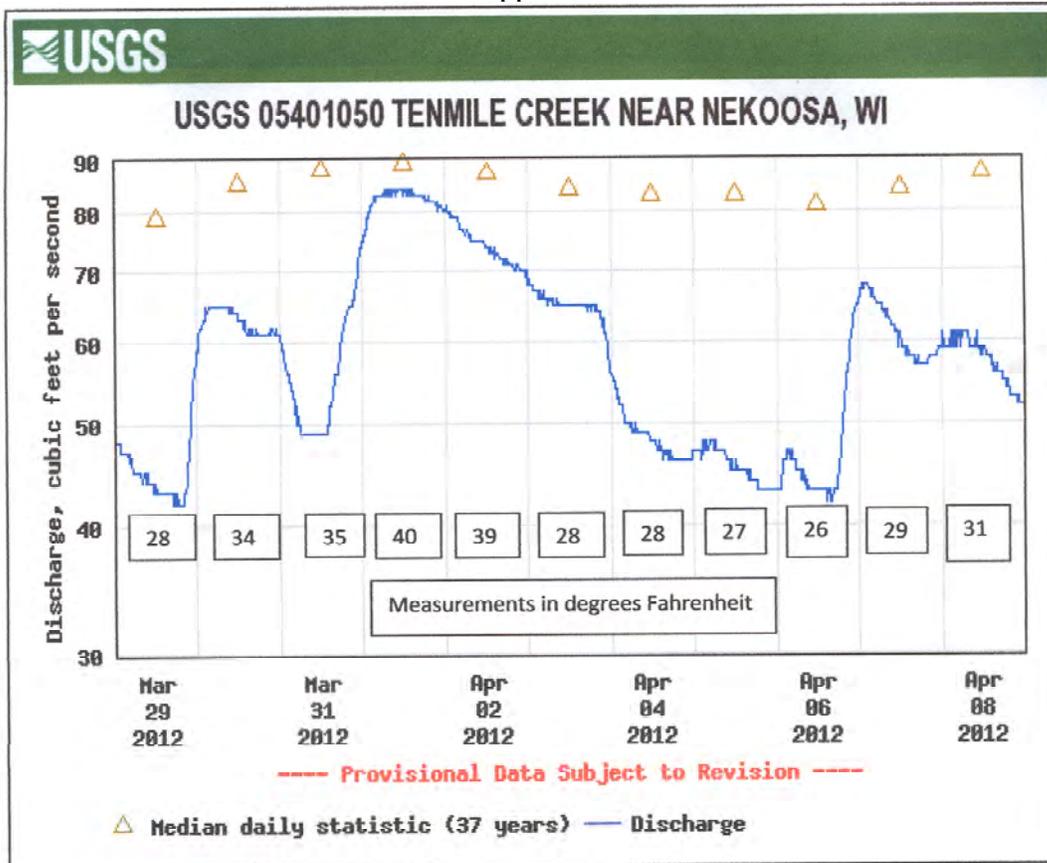
WDNR Fish Stocking Summary

Page 2 of 2

1997	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	WILD ROSE	YEARLING	3,625	8.20
1998	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	WILD ROSE	YEARLING	2,988	7.95
1999	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	WILD ROSE	YEARLING	5,565	7.50
2000	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	WILD ROSE	YEARLING	5,004	8.20
2001	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	WILD ROSE	YEARLING	5,002	7.73
2002	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	WILD ROSE	YEARLING	5,000	8.87
2003	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	WILD ROSE	YEARLING	5,200	8.63
2005	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	WILD ROSE	LARGE FINGERLING	4,310	7.90
2005	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	WILD ROSE	YEARLING	3,582	9.80
2007	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	ST. CROIX	YEARLING	3,500	7.40
2007	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	WILD ROSE	YEARLING	3,500	7.40
2008	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	ST. CROIX	YEARLING	6,099	8.88
2009	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	ST. CROIX	YEARLING	3,400	9.10
2010	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	ST. CROIX	YEARLING	3,300	9.20
2011	TENMILE CREEK	DITCH # 10	21N-5E-34	BROWN TROUT	ST. CROIX	YEARLING	827	9.06

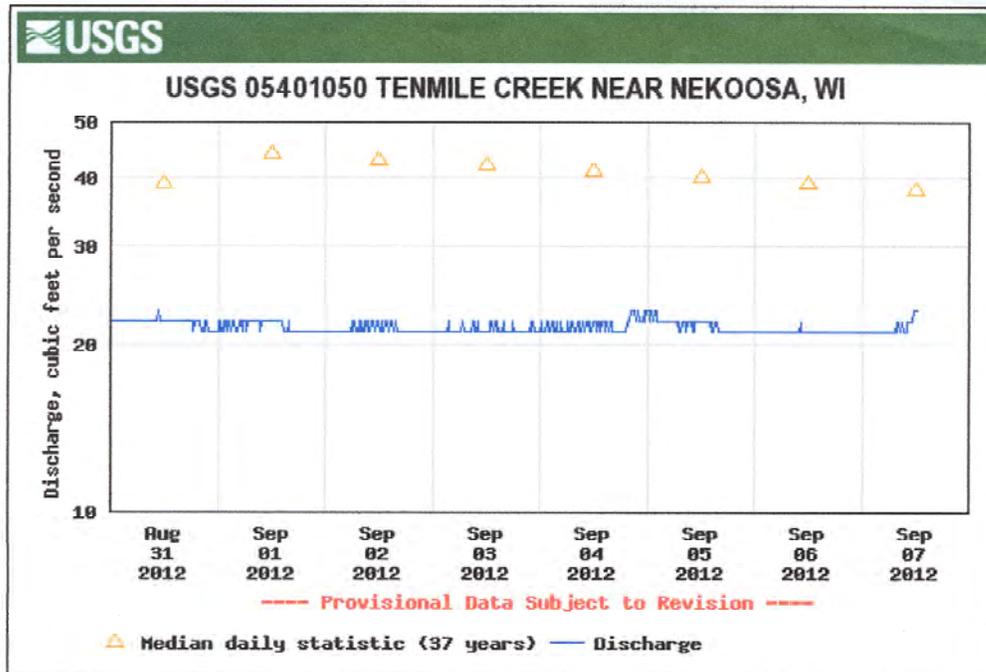
http://infotrek.er.usgs.gov/apex/?p=220:1:0::NO::P1_COUNTY_NAME,P1_LOCAL_WB... 8/5/2012

Appendix 8



This graph represents the flow rate of Ten Mile Creek. Some of the fluctuation is due to agricultural activities. The normal flow of the creek at the water gauge recording center located on State Highway 13 South averages 85 cubic feet per second.

Appendix 9



During the time period of September first through September seventh of 2012 Ten Mile Creek held a steady flow rate of 21 cubic feet/second.

Discounting the two high capacity wells devoted to the dairy, there will be 47 nearby high capacity wells impacting the flow rate of Ten Mile Creek. According to the 10 Applications submitted by the Wysocki organization for these high capacity wells, the average pumping rate during the irrigation season will be 500 gallons/minute.

So on average these 47 wells will draw $500 \text{ gpm} \times 47 \text{ wells} = 23,500 \text{ GPM}$. 23,500 gpm translates to 52.36 cubic feet of water/second. (1 CFS = 448.8 GPM).

A study done by W. Stites, D.J. Mechenich, G.J. Kraft indicates that approximately 25 % of the draw from nearby high capacity wells will negatively impact the flow rate of a stream through lowered amounts in the ground water supply. This means that the flow rate of 10 Mile Creek could easily be lowered from 21 cubic feet/second to 8 cubic feet/second. This is hardly insignificant!

Appendix 10

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DEPARTMENT OF NATURAL RESOURCES

NR 820.12

Chapter NR 820

GROUNDWATER QUANTITY PROTECTION

Subchapter I — General Provisions

NR 820.10 Purpose.
 NR 820.11 Applicability.
 NR 820.12 Definitions.
 NR 820.13 High capacity wells annual pumping reports.

Subchapter II — Groundwater Management Areas

NR 820.20 Groundwater management area designation.

Subchapter III — Environmental Review of High Capacity Well Applications

NR 820.29 Review periods.
 NR 820.30 High capacity wells in groundwater protection areas.
 NR 820.31 High capacity wells near springs.
 NR 820.32 Projects with high water loss.
 NR 820.33 Public utility wells.

Subchapter I — General Provisions

NR 820.10 Purpose. The purpose of this chapter is to designate areas of the state, consistent with s. 281.34 (9) (a), Stats., in which impacts from groundwater drawdown and pumpage are such that regional planning and management is necessary to avoid, minimize and manage future impacts. This chapter also establishes review criteria applicable to high capacity well applications involving wells situated near springs, trout streams, outstanding resource waters, and exceptional resource waters, and involving groundwater withdrawals with high water loss.

History: CR 06-121; cr. Register August 2007 No. 620, eff. 9-1-2007.

NR 820.11 Applicability. This chapter applies to all counties, cities, towns, villages, utility districts under s. 66.0827, Stats., that provide water, public inland lake protection and rehabilitation districts that have town sanitary district powers under s. 33.22 (3), Stats., joint water authorities created under s. 66.0823, Stats., and municipal water districts under s. 198.22, Stats. This chapter also applies to persons who are owners of high capacity wells and high capacity well systems including persons that propose to construct a high capacity well.

History: CR 06-121; cr. Register August 2007 No. 620, eff. 9-1-2007.

NR 820.12 Definitions. In this chapter:

(1) "Approval" means an approval issued by the department under s. 281.17 (1), 2001 Stats., s. 281.34 (2) or 281.41, Stats., prior to construction of a high capacity well.

(2) "Class 1 trout stream" means a stream, portion of a stream or a farm drainage ditch with a prior stream history that contains a self-sustaining population of trout and is classified as such in Wisconsin Department of Natural Resources publication PUB-FH-806 2002, Wisconsin Trout Streams. Farm drainage ditches that support self-sustaining populations of trout but do not have a prior stream history are not trout streams for purposes of this chapter.

Note: Copies of this document may be obtained from the Department of Natural Resources, Bureau of Fisheries Management and Habitat Protection, 101 South Webster Street, Natural Resources Building, PO Box 7921, Madison, Wisconsin 53707-7921.

(3) "Class 2 trout stream" means a stream, portion of a stream or a farm drainage ditch with a prior stream history that contains a population of trout made up of one or more age groups, above the age one year, in sufficient numbers to indicate substantial survival from one year to the next, but in which stocking is necessary to fully utilize the available trout habitat or to sustain the fishery and is classified as such in Wisconsin Department of Natural Resources publication PUB-FH-806 2002, Wisconsin Trout Streams. Farm drainage ditches that meet these criteria but do not have a prior stream history are not trout streams for purposes of this chapter.

(4) "Class 3 trout stream" means a stream or portion of a stream that has marginal trout habitat with no natural reproduction of trout occurring, requiring annual stocking of trout to provide

trout fishing, and generally without carryover of trout from one year to the next and is classified as such in Wisconsin Department of Natural Resources publication PUB-FH-806 2002, Wisconsin Trout Streams. Farm drainage ditches that meet these criteria but do not have a prior stream history are not trout streams for the purpose of this chapter.

(5) "Consumptive use coefficient" has the meaning specified in s. NR 142.02 (4).

Note: s. NR 142.02 (4) defines "consumptive use coefficient" to mean "a constant numerical measure, as determined under s. NR 142.04 (1) to (4) which is used to determine the consumptive use portion of a facility's withdrawal."

(6) "Department" means the department of natural resources.

(7) "80% exceedance flow" means the flow in a stream that, based on statistical probability, will be exceeded 80% of the time on an annual basis.

(8) "Groundwater management area" means a multi-jurisdictional area including towns, cities, villages and counties within which the level of the groundwater potentiometric surface in any of its underlying aquifers has been reduced by 150 feet or more from the level at which the potentiometric surface would be if no groundwater withdrawals had occurred.

(9) "Groundwater protection area" has the meaning specified in s. 281.34 (1) (a), Stats.

Note: s. 281.34 (1) (a), Stats., defines "groundwater protection area" to mean "an area within 1,200 feet of any of the following:

(a) An outstanding resource water identified under s. 281.15 that is not a trout stream.

(b) An exceptional resource water identified under s. 281.15 that is not a trout stream.

(c) A class 1, class 2, or class 3 trout stream, other than a class 1, class 2, or class 3 trout stream that is a farm drainage ditch with no prior stream history as identified under sub. (8) (a).

(10) "High capacity property" has the meaning specified in s. NR 812.07 (52).

Note: s. NR 812.07 (52) defines "high capacity property" to mean "one property on which a high capacity well system exists or is to be constructed."

(11) "High capacity well" has the meaning specified in s. 281.34 (1) (b), Stats.

Note: s. 281.34 (1) (b), Stats., defines "high capacity well" to mean "a well that, together with all other wells on the same property, has a capacity of more than 100,000 gallons per day."

(12) "High capacity well system" has the meaning specified in s. NR 812.07 (53).

Note: s. NR 812.07 (53) defines "high capacity well system" to mean "one or more wells, drillholes, or mine shafts used or to be used to withdraw water for any purpose on one property, if the total pumping or flowing capacity of all wells, drillholes or mine shafts on one property is 70 or more gallons per minute based on the pump curve at the lowest system pressure setting, or based on the flow rate."

(13) "Local governmental unit" has the meaning specified in s. 281.34 (1) (c), Stats.

Note: s. 281.34 (1) (c), Stats., defines "local governmental unit" to mean a "city, village, town, county, town sanitary district, utility district under s. 66.0827 that provides water, public inland lake protection and rehabilitation district that has town sanitary district powers under s. 33.22 (3), joint local water authority created under s. 66.0823 or municipal water district under s. 198.22.

(14) "One property" has the meaning specified in s. NR 812.07 (68).

The Wisconsin Administrative Code on this web site is current through the last published Wisconsin Register. See also Are the Codes on this Website Official?

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Note: s. NR 812.07 (68) defines "one property" to mean "all contiguous land controlled by one owner, lessee, or any other person having a possessory interest. Lands under single ownership bisected by highways or railroad right-of-ways are considered contiguous."

(15) "Owner" has the meaning specified in s. 281.34 (1) (d), Stats.

Note: s. 281.34 (1) (d), Stats., defines "owner" to mean "a person who owns property or, which, a well is located or proposed to be located or the designated representative of that person."

(16) "Potentiometric surface" has the meaning specified in s. 281.34 (1) (e), Stats.

Note: s. 281.34 (1) (e), Stats., defines "potentiometric surface" to mean "a measure of pressure of groundwater in an aquifer based on the level to which groundwater will rise in a well placed in the aquifer."

(17) "Prior stream history" means a determination made by the department that an artificial waterway or a portion of such waterway was originally a navigable stream before it was ditched or channelized.

(18) "Reconstruction" has the meaning specified in s. NR 812.07 (85).

Note: s. NR 812.07 (85) defines "reconstruction" to mean "modifying the original construction of a well. Reconstruction includes, but is not limited to deepening, lining, installing or replacing a screen, underreaming, hydrofracturing and blasting."

(19) "Significant adverse environmental impact" means alteration of groundwater levels, groundwater discharge, surface water levels, surface water discharge, groundwater temperature, surface water temperature, groundwater chemistry, surface water chemistry, or other factors to the extent such alterations cause significant degradation of environmental quality including biological and ecological aspects of the affected water resource.

(20) "Spring" has the meaning specified in s. 281.34 (1) (f), Stats.

Note: s. 281.34 (1) (f), Stats., defines "spring" to mean "an area of concentrated groundwater discharge occurring at the surface of the land that results in a flow of at least one cubic foot per second at least 80% of the time."

(21) "Water loss" has the meaning specified in s. 281.34 (1) (g), Stats.

Note: s. 281.34 (1) (g), Stats., defines "water loss" to mean "a loss of water from the basin from which it is withdrawn as a result of interbasin diversion, as defined in s. 281.35 (1) (g) or consumptive use or both."

(22) "Well" has the meaning specified in s. 281.34 (1) (h), Stats.

Note: s. 281.34 (1) (h), Stats., defines "well" to mean "any drillhole or other excavation or opening deeper than it is wide that extends more than 10 feet below the ground surface and is constructed for the purpose of obtaining groundwater."

History: CR 06-121; cr. Register August 2007 No. 620, eff. 9-1-2007.

NR 820.13 High capacity wells annual pumping reports. (1) Owners of high capacity wells shall record pumpage data on a monthly basis and shall report the information to the department at no less than an annual frequency using methods and forms provided by the department. Reports of annual pumpage for a given calendar year shall be submitted to the department no later than the first day of March in the following calendar year.

Note: Appropriate forms, description of acceptable estimation methodology and reporting procedures will be sent to owners of each high capacity well each year by the department. Copies of these documents may be obtained from the Department of Natural Resources, Bureau of Drinking Water and Groundwater, 701 South Webster Street, Natural Resources Building, PO Box 7921, Madison, Wisconsin 53707-7921.

(2) Individual reports shall be prepared for any high capacity wells with the capacity to withdraw water at a rate of 100,000 gallons per day or more.

(3) If one high capacity property does not contain any single high capacity well with an individual capacity to withdraw water at a rate of 100,000 gallons per day or more, the annual pumpage may be reported as a composite volume for the entire property based on estimated water usage using a method prescribed by the department.

(4) If one high capacity property contains high capacity wells with individual capacity to withdraw water at a rate of at least 100,000 gallons per day and high capacity wells with maximum pumping capacity less than 100,000 gallons per day, a composite

pumpage volume based on estimated water usage using a method prescribed by the department may be reported for those wells with individual maximum pumping capacity less than 100,000 gallons per day.

History: CR 06-121; cr. Register August 2007 No. 620, eff. 9-1-2007.

Subchapter II — Groundwater Management Areas

NR 820.20 Groundwater management area designation. The areas specified in subs. (1) and (2) are designated as groundwater management areas. Any local governmental unit contained within these areas shall be considered to be part of the groundwater management area unless it is explicitly excluded in sub. (1) or (2).

(1) Southeast Wisconsin Groundwater Management Area consisting of the following:

- (a) All of Kenosha county.
- (b) All of Milwaukee county.
- (c) All of Ozaukee county.
- (d) All of Racine county.
- (e) All of Waukesha county.

(f) The portions of Walworth county consisting of the U.S. Public Land Survey townships of East Troy, Spring Prairie, Lyons, Bloomfield, Linn and Geneva, with the exception of the village of Williams Bay and city of Elkhorn, and including the portion of the U.S. Public Land Survey township of Troy that includes part of the Village of East Troy.

(g) All of Washington county with the exception of the U.S. Public Land Survey townships of Wayne and Kewaskum.

(2) Northeast Wisconsin Groundwater Management Area consisting of the following:

- (a) All of Brown county.

(b) The portions of Calumet county consisting of the U.S. Public Land Survey townships of Woodville and Harrison and the village of Sherwood.

(c) The portions of Outagamie county consisting of the U.S. Public Land Survey townships of Grand Chute, Van den Broek, Buchanan, Freedom and Kaukauna, including the cities of Appleton and Kaukauna and the villages of Kimberly, Combined Locks and Little Chute.

History: CR 06-121; cr. Register August 2007 No. 620, eff. 9-1-2007.

Subchapter III — Environmental Review of High Capacity Well Applications

NR 820.29 Review periods. (1) HIGH CAPACITY WELLS IN GROUNDWATER PROTECTION AREAS. Unless another time period is specified by law, the department shall complete its review and make a determination on all applications for approval of proposed high capacity wells in groundwater protection areas within 65 business days after receipt of a complete application unless the department notifies the applicant under s. NR 820.30 (4) (a) or (b) that additional information is needed in order for the department to prepare an environmental assessment for the proposed high capacity well.

(2) HIGH CAPACITY WELLS NEAR SPRINGS. Unless another time period is specified by law, the department shall complete its review and make a determination on all applications for approval of proposed high capacity wells near springs within 65 business days after receipt of a complete application unless the department notifies the applicant under s. NR 820.31 (4) (a) or (b) that additional information is needed in order for the department to prepare an environmental assessment for the proposed high capacity well.

History: CR 06-121; cr. Register August 2007 No. 620, eff. 9-1-2007.

NR 820.30 High capacity wells in groundwater protection areas. (1) Except as provided in sub. (2), an application for approval of a high capacity well within a ground-

Note: s. NR 812.07 (68) defines "one property" to mean "all contiguous land controlled by one owner, lessee, or any other person having a possessory interest. Lands under single ownership bisected by highways or railroad right-of-ways are considered contiguous."

(15) "Owner" has the meaning specified in s. 281.34 (1) (d), Stats.

Note: s. 281.34 (1) (d), Stats., defines "owner" to mean "a person who owns property or, which, a well is located or proposed to be located or the designated representative of that person."

(16) "Potentiometric surface" has the meaning specified in s. 281.34 (1) (e), Stats.

Note: s. 281.34 (1) (e), Stats., defines "potentiometric surface" to mean "a measure of pressure of groundwater in an aquifer based on the level to which groundwater will rise in a well placed in the aquifer."

(17) "Prior stream history" means a determination made by the department that an artificial waterway or a portion of such waterway was originally a navigable stream before it was ditched or channelized.

(18) "Reconstruction" has the meaning specified in s. NR 812.07 (85).

Note: s. NR 812.07 (85) defines "reconstruction" to mean "modifying the original construction of a well. Reconstruction includes, but is not limited to deepening, lining, installing or replacing a screen, underreaming, hydrofracturing and blasting."

(19) "Significant adverse environmental impact" means alteration of groundwater levels, groundwater discharge, surface water levels, surface water discharge, groundwater temperature, surface water temperature, groundwater chemistry, surface water chemistry, or other factors to the extent such alterations cause significant degradation of environmental quality including biological and ecological aspects of the affected water resource.

(20) "Spring" has the meaning specified in s. 281.34 (1) (f), Stats.

Note: s. 281.34 (1) (f), Stats., defines "spring" to mean "an area of concentrated groundwater discharge occurring at the surface of the land that results in a flow of at least one cubic foot per second at least 80% of the time."

(21) "Water loss" has the meaning specified in s. 281.34 (1) (g), Stats.

Note: s. 281.34 (1) (g), Stats., defines "water loss" to mean "a loss of water from the basin from which it is withdrawn as a result of interbasin diversion, as defined in s. 281.35 (1) (g) or consumptive use or both."

(22) "Well" has the meaning specified in s. 281.34 (1) (h), Stats.

Note: s. 281.34 (1) (h), Stats., defines "well" to mean "any drillhole or other excavation or opening deeper than it is wide that extends more than 10 feet below the ground surface and is constructed for the purpose of obtaining groundwater."

History: CR 06-121; cr. Register August 2007 No. 620, eff. 9-1-2007.

NR 820.13 High capacity wells annual pumping reports. (1) Owners of high capacity wells shall record pumpage data on a monthly basis and shall report the information to the department at no less than an annual frequency using methods and forms provided by the department. Reports of annual pumpage for a given calendar year shall be submitted to the department no later than the first day of March in the following calendar year.

Note: Appropriate forms, description of acceptable estimation methodology and reporting procedures will be sent to owners of each high capacity well each year by the department. Copies of these documents may be obtained from the Department of Natural Resources, Bureau of Drinking Water and Groundwater, 701 South Webster Street, Natural Resources Building, PO Box 7921, Madison, Wisconsin 53707-7921.

(2) Individual reports shall be prepared for any high capacity wells with the capacity to withdraw water at a rate of 100,000 gallons per day or more.

(3) If one high capacity property does not contain any single high capacity well with an individual capacity to withdraw water at a rate of 100,000 gallons per day or more, the annual pumpage may be reported as a composite volume for the entire property based on estimated water usage using a method prescribed by the department.

(4) If one high capacity property contains high capacity wells with individual capacity to withdraw water at a rate of at least 100,000 gallons per day and high capacity wells with maximum pumping capacity less than 100,000 gallons per day, a composite

pumpage volume based on estimated water usage using a method prescribed by the department may be reported for those wells with individual maximum pumping capacity less than 100,000 gallons per day.

History: CR 06-121; cr. Register August 2007 No. 620, eff. 9-1-2007.

Subchapter II — Groundwater Management Areas

NR 820.20 Groundwater management area designation. The areas specified in subs. (1) and (2) are designated as groundwater management areas. Any local governmental unit contained within these areas shall be considered to be part of the groundwater management area unless it is explicitly excluded in sub. (1) or (2).

(1) Southeast Wisconsin Groundwater Management Area consisting of the following:

- (a) All of Kenosha county.
- (b) All of Milwaukee county.
- (c) All of Ozaukee county.
- (d) All of Racine county.
- (e) All of Waukesha county.

(f) The portions of Walworth county consisting of the U.S. Public Land Survey townships of East Troy, Spring Prairie, Lyons, Bloomfield, Linn and Geneva, with the exception of the village of Williams Bay and city of Elkhorn, and including the portion of the U.S. Public Land Survey township of Troy that includes part of the Village of East Troy.

(g) All of Washington county with the exception of the U.S. Public Land Survey townships of Wayne and Kewaskum.

(2) Northeast Wisconsin Groundwater Management Area consisting of the following:

- (a) All of Brown county.

(b) The portions of Calumet county consisting of the U.S. Public Land Survey townships of Woodville and Harrison and the village of Sherwood.

(c) The portions of Outagamie county consisting of the U.S. Public Land Survey townships of Grand Chute, Van den Broek, Buchanan, Freedom and Kaukauna, including the cities of Appleton and Kaukauna and the villages of Kimberly, Combined Locks and Little Chute.

History: CR 06-121; cr. Register August 2007 No. 620, eff. 9-1-2007.

Subchapter III — Environmental Review of High Capacity Well Applications

NR 820.29 Review periods. (1) HIGH CAPACITY WELLS IN GROUNDWATER PROTECTION AREAS. Unless another time period is specified by law, the department shall complete its review and make a determination on all applications for approval of proposed high capacity wells in groundwater protection areas within 65 business days after receipt of a complete application unless the department notifies the applicant under s. NR 820.30 (4) (a) or (b) that additional information is needed in order for the department to prepare an environmental assessment for the proposed high capacity well.

(2) HIGH CAPACITY WELLS NEAR SPRINGS. Unless another time period is specified by law, the department shall complete its review and make a determination on all applications for approval of proposed high capacity wells near springs within 65 business days after receipt of a complete application unless the department notifies the applicant under s. NR 820.31 (4) (a) or (b) that additional information is needed in order for the department to prepare an environmental assessment for the proposed high capacity well.

History: CR 06-121; cr. Register August 2007 No. 620, eff. 9-1-2007.

NR 820.30 High capacity wells in groundwater protection areas. (1) Except as provided in sub. (2), an application for approval of a high capacity well within a ground-

water protection area shall be supplemented to include all of the following information:

(a) The name of each class 1, 2 or 3 trout stream, outstanding resource water or exceptional resource water that is located within 1,200 feet of the proposed well location.

Note: Outstanding resource waters and exceptional resource waters are identified in ss. NR 102.10 and 102.11. Chapter NR 102 is available for viewing and printing at the internet site for the Wisconsin Legislature, Legislative Reference Bureau: <http://www.legis.state.wi.us/rsb/code/nr/nr102.pdf>. Paper copies of ch. NR 102 may be obtained from the Department of Natural Resources, Bureau of Watershed Management, 101 South Webster Street, Natural Resources Building, PO Box 7921, Madison, Wisconsin 53707-7921.

(b) The distance from each proposed high capacity well to the class 1, 2 or 3 trout stream, outstanding resource water or exceptional resource water.

(c) If the potentially affected water body is a stream, a description of the stream channel at the point nearest to the proposed well location including stream width, depth of water, publicly available information regarding seasonal flow and nature of the substrate.

(d) If the potentially affected water body is a lake or flowage, a description of the lake or flowage including identification and approximate flows of major inlets and outlets, surface area of the lake or flowage, approximate elevation of the current lake or flowage level, analysis of publicly available information pertaining to historic lake level fluctuations, and nature of the lake bed.

(e) A description of all other wells on the high capacity property including location relative to the class 1, 2 or 3 trout stream, or outstanding or exceptional resource water, maximum pumping capacity, estimated actual annual pumpage for each well and frequency of pumping for each well.

(f) A description of the hydrogeologic conditions in the vicinity of the proposed well including flow direction, groundwater elevation, depth to groundwater, and a description of the aquifer characteristics including approximate thickness of each aquifer.

(g) A discussion and analysis of alternative well locations and feasibility of siting the high capacity well outside of the groundwater protection area.

(h) A determination by a registered professional engineer, registered professional geologist or registered professional hydrologist of the 80% exceedance flow for the stream and associated water level at the location closest to the proposed well location.

(i) If the affected water body is a lake, a determination by a registered professional engineer, registered professional geologist or registered professional hydrologist of the 80% exceedance flow and associated water level for the primary surface water outlet and the invert elevation of the primary surface water outlet.

(j) The appropriate consumptive use coefficient.

(2) (a) The department may approve a high capacity well as described in pars. (b) to (j) within a groundwater protection area without preparing an environmental assessment if it determines that construction and operation of the proposed well will not result in significant adverse environmental impact. The information specified under sub. (1) (h) to (j) is not required for a proposed well if any of the conditions in pars. (b) to (j) apply. Based on information submitted by the applicant under sub. (1) and other available information, the department may determine that supplemental information and review is needed in order to issue or deny the necessary approval. The department shall include in any approval issued using the standards under s. 281.34, Stats., conditions to ensure that the high capacity well will not result in significant adverse environmental impacts to trout streams, outstanding resource waters and exceptional resource waters. The conditions may include but are not limited to conditions as to location, depth of lower drillhole, depth interval of well screen, pumping capacity, pumpage schedule, months of operation, rate of flow and conservation measures.

(b) The proposed high capacity well is a well that does not have a pump capacity of greater than 20 gallons per minute and the well is to be used solely for domestic purposes for a single residence.

(c) The proposed high capacity well is intended to be used for purposes such as fire suppression and similar non-commercial, non-industrial and non-agricultural irrigation purposes, and the well will only be used on a sporadic basis averaging less than 30 days each year and will generally operate for no more than 2 consecutive days.

(d) The high capacity well application is for reconstruction of an existing high capacity well and the application does not seek an increase in the approved pumping capacity of the well.

(e) The high capacity well application is for temporary dewatering of a single construction site in unconsolidated deposits and the duration of the project will not extend more than one construction season.

(3) (a) The department may approve a proposed high capacity well without completing an environmental assessment under ch. NR 150 if the proposed well is not a well described in sub. (2) (b) to (e) and the department determines that construction and operation of the proposed well will not result in significant adverse environmental impacts to the stream or lake and at least one of the conditions in subd. 1. to 5. is satisfied. In making this determination, the department shall consider impacts caused by other wells on the high capacity property and take into account actual or current conditions of the Class 1, 2 or 3 trout stream, outstanding resource water or exceptional resource water.

1. The potentially affected water body is a trout stream and the proposed pumping capacity of the high capacity well is less than 10% of the value for the 80% exceedance flow for the stream.

2. The potentially affected water body is an outstanding or exceptional resource water that is a stream and the proposed pumping capacity of the high capacity well is less than 10% of the value for the 80% exceedance flow for the stream.

3. The potentially affected water body is an outstanding or exceptional resource water that is a lake with a surface outlet and the proposed pumping capacity of the high capacity well is less than 10% of the value for the 80% exceedance flow for the primary surface outlet from the lake.

4. The potentially affected water body is an outstanding or exceptional resource water that is a lake with a surface water outlet and a surface area of at least 600 acres.

5. The potentially affected water body is an outstanding or exceptional resource water that is a lake with a surface water outlet, a surface area of less than 600 acres and the volume of water that would be pumped from the well in 30 days of continuous pumping at maximum capacity is less than 5% of the volume of the lake.

(b) The department shall include in any approval issued using the standards under s. 281.34, Stats., conditions to ensure that the high capacity well will not result in significant adverse environmental impacts to trout streams, outstanding resource waters and exceptional resource waters. The conditions may include but are not limited to conditions as to location, depth of lower drillhole, depth interval of well screen, pumping capacity, pumpage schedule, months of operation, rate of flow and conservation measures. The department may also modify the approvals or place additional conditions on the approvals of other previously approved wells on the high capacity property to prevent significant adverse environmental impacts.

(4) All of the following provisions shall apply to proposed high capacity wells that are not included under sub. (3) (a) 1. to 5. and proposed wells that satisfy the conditions under sub. (3) (a) 1. to 5. but for which the department has determined that the proposed well may have a significant adverse environmental impact

on the trout stream, outstanding resource water or exceptional resource water:

(a) The department shall notify the applicant that the proposed high capacity well may have a significant impact on the stream or lake and may require additional information concerning flow characteristics of the affected stream or lake, site-specific geologic and hydrogeologic information and pertinent regional information.

(b) Within 65 business days of receipt of a complete application, the department shall identify additional informational requirements necessary to evaluate the proposed well and may determine that the applicant shall develop and submit an environmental impact report in accordance with s. NR 150.25.

(c) Following receipt of the requested information, the department shall prepare an environmental assessment in accordance with the procedures of s. NR 150.22 and shall develop and publish a news release in accordance with s. NR 150.21.

(d) If the department determines that operation of the proposed high capacity well will not result in significant adverse environmental impact on critical resources within the stream or lake and other uses of the stream or lake, the department shall approve the well and include in any approval issued using the standards under s. 281.34, Stats., conditions to ensure that operation of the proposed well will not cause significant adverse environmental impact to critical aquatic resources or other existing uses of the stream or lake. The conditions may include but are not limited to conditions as to location, depth of casing, depth of lower drillhole, depth interval of well screen, pumping capacity, pumpage schedule, months of operation, rate of flow, ultimate use and conservation measures. In the case of Class 1, 2 and 3 trout streams and outstanding or exceptional resource waters that contain warm water sport fisheries, flow conditions in the stream shall be maintained such that the fish populations and critical habitat are not adversely affected.

(5) As part of an approval issued using the standards under s. 281.34, Stats., the department may require the owner of the high capacity well to implement a monitoring plan to document stream flow or lake level conditions in the vicinity of any well located within a groundwater protection area and based on results of the monitoring program may revise the approval.

(6) The department may not issue an approval using the standards under s. 281.34, Stats., for a high capacity well within a groundwater protection area unless it is able to include and includes conditions that ensure that the well does not cause significant adverse environmental impact.

(7) The department may order the owner of a high capacity well constructed prior to May 7, 2004 that is located in a groundwater protection area to mitigate the effects of the well. Mitigation may include abandonment of the well, replacement of the well, if necessary, and management strategies. If mitigation is ordered, the department shall provide funding for the full cost of the mitigation, except that full funding is not required if the department is authorized under ch. 280, Stats., to require the well to be abandoned because of issues regarding public health.

History: CR 06-121: cr. Register August 2007 No. 620, eff. 9-1-2007.

NR 820.31 High capacity wells near springs. (1) For any application for approval of a high capacity well under s. 281.34, Stats., the department shall determine if there is a spring, as defined in this chapter, located in the vicinity of the proposed well.

(2) If the department determines that a proposed high capacity well is located near a spring the department shall assess the proposed well to determine whether construction and operation of the well will result in substantially reduced flow from the spring and significant adverse environmental impact to the spring. The department shall consider the location of the well relative to the spring, well construction details, information regarding construc-

tion and operation of all other wells on the property, available information concerning the geology and hydrogeology of the area, historical flow data for the spring and other pertinent information.

(3) If the department determines that construction and operation of the proposed high capacity well will not result in a substantial reduction in flow from the spring or result in significant adverse environmental impact to the spring, the department may approve the proposed well and shall include in any approval issued using the standards under s. 281.34, Stats., conditions to ensure that the well will not result in significant adverse environmental impact to the spring. The conditions may include but are not limited to conditions as to location, depth of casing, depth of lower drillhole, depth interval of well screen, pumping capacity, pumpage schedule, months of operation, rate of flow, ultimate use and conservation measures.

(4) All of the following provisions shall apply to proposed high capacity wells that are determined to reduce flow in a spring such that significant adverse environmental impact to the spring or related aquatic and terrestrial resources may result:

(a) The department shall notify the applicant that the proposed high capacity well may have a significant adverse environmental impact on a spring and may require additional information concerning flow characteristics of the affected spring, site specific geologic and hydrogeologic information, a discussion and analysis of alternative well locations, and pertinent regional information.

(b) Within 65 business days of receipt of a complete application, the department shall identify additional informational requirements necessary to evaluate the proposed well and may determine that the applicant shall develop and submit an environmental impact report in accordance with s. NR 150.25.

(c) Following receipt of the requested information, the department shall prepare an environmental assessment in accordance with the procedures of s. NR 150.22 and shall develop and publish a news release in accordance with s. NR 150.21.

(d) If the department determines that operation of the proposed high capacity well will not result in significant adverse environmental impact to the spring and related resources, the department shall approve the well and include in any approval issued under s. 281.34, Stats., conditions to ensure that operation of the proposed well will not cause significant adverse environmental impacts to the spring or critical resources related to the spring. The conditions may include but are not limited to conditions as to location, depth of casing, depth of lower drillhole, depth interval of well screen, pumping capacity, pumpage schedule, months of operation, rate of flow, ultimate use and conservation measures. The department may approve a proposed high capacity well that is predicted to result in a reduction of flow in a spring only if the predicted reduction would not cause permanent and irreversible impacts to the spring and related resources. The department may not approve a proposed high capacity well that is predicted to result in a reduction in flow from a spring such that the spring does not flow at one cubic foot per second or greater at least 80% of the time or that will reduce the average annual flow from a spring by greater than 20%.

(5) As part of an approval issued using the standards under s. 281.34, Stats., the department may require the owner of the high capacity well to implement a monitoring plan to document conditions of the spring and related resources and based on results of the monitoring program may revise the approval.

History: CR 06-121: cr. Register August 2007 No. 620, eff. 9-1-2007.

NR 820.32 Projects with high water loss. (1) For any application for approval of a high capacity well under s. 281.34, Stats., the applicant shall identify and the department shall verify whether the proposed use of the well will result in an annual water loss of greater than 95%. The department may require submittal

of a detailed water balance as part of the application in order to determine the approximate water loss.

(2) If the department determines that a proposed high capacity well will result in an annual water loss of greater than 95%, the department shall notify the applicant that the proposed well may result in a water loss of greater than 95%. Within 65 business days of receipt of a complete application, the department shall identify additional informational requirements necessary to evaluate the proposed well and may determine that the applicant shall develop and submit an environmental impact report in accordance with s. NR 150.25.

(3) Following receipt of all requested information, the department shall prepare an environmental assessment in accordance with the procedures of s. NR 150.22, and shall develop and publish a news release in accordance with s. NR 150.21.

(4) If the department determines that construction and operation of the proposed high capacity well will not result in significant environmental impact to surface and groundwater resources, the department shall approve the well and include in any approval issued using the standards under s. 281.34, Stats., conditions to ensure that operation of the proposed well will not cause significant adverse environmental impact to surface water or groundwater resources. The conditions may include but are not limited to conditions as to location, depth of casing, depth of lower drillhole, depth interval of well screen, pumping capacity, pumpage schedule, months of operation, rate of flow, ultimate use and conservation measures.

(5) As part of an approval issued using the standards under s. 281.34, Stats., the department may require the owner of the high capacity well to develop and implement a water conservation and management plan that minimizes, to the extent technically and economically feasible, the degree of water loss related to operation of the high capacity well system.

(6) As part of an approval issued using the standards under s. 281.34, Stats., the department may require the owner of the high capacity well system to implement a monitoring plan to evaluate environmental impacts caused by operation of the high capacity well system and based on results of the monitoring program may revise the approval.

History: CR 06-121: cr. Register August 2007 No. 620, eff. 9-1-2007.

NR 820.33 Public utility wells. Sections NR 820.30 to 820.32 do not apply to proposed high capacity wells that are water supplies for public water systems operated by a public utility, as defined by s. 196.01, Stats., engaged in supplying water to or for the public, if the department determines that there is no other reasonable alternative location for the well and includes in the approval conditions that ensure that the environmental impact of the well is balanced by the public benefit of the well related to public health and safety. Conditions of the approval for the well may include, but are not limited to, conditions as to location, depth, pumping capacity, rate of flow, and ultimate use.

History: CR 06-121: cr. Register August 2007 No. 620, eff. 9-1-2007.

From: [REDACTED]
Sent: Thursday, September 13, 2012 10:31 AM
To: Baumann, Dan G - DNR
Subject: Wysocki CAFO

Dear Mr. Baumann, I am a concerned citizen from The Town of Saratoga. I am sure the concerns that I have may have already been brought to your attention but I feel the need to voice them again. My biggest concern is the safety of our water. I have an impaired immune system that cannot fight off certain infections. I am truly frightened for my health if our water becomes tainted by the CAFO. My other concern is "human error" at the farm. There have been alot of accidents at CAFOS due to errors the workers make. How safe can our wells be if the CAFO hires people who are not qualified to make proper decisions or if they are just plain negligent. One wrong move from an employee could mean disaster to our water.

I want to thank you for all your help.

Sincerely,
[REDACTED]



Saratoga Town Hall Public Listening Session

Issues Identification Comment Form

For the Proposed

Golden Sands Dairy

August 23, 2012 Meeting

Public information gathering for the Environmental Impact Statement (EIS). Please clearly state the issue(s) you feel should be addressed by WI Department of Natural Resources in the EIS:

Request the creation of a Ground Water Management Area be created to cover this central sands area.

Require a that a clay liner be ~~is~~ constructed under the waste holding area for protection in case of spills or cracks in the waste holding area.

Require that monitoring wells be placed, and regularly test, around the dairy area and if possible scattered around the periphery of their fields

Completion of this form and inclusion of personal information is voluntary. We will use your contact information to seek clarification of your comments, if necessary. All comments subject to Wisconsin's Open Records Law.

Name: _____

Contact Information: _____

From: [REDACTED]
Sent: Thursday, September 13, 2012 1:04 PM
To: Anderson, Russell A - DNR; sen.lassa@legis.wi.gov; rep.krug@legis.wi.gov;
rep.molepske@legis.wi.gov; rep.vruink@legis.wi.gov
Subject: PROPOSED CAFO for Saratogo

Dear Mr. Anderson,

We are not residents of Saratoga, but of Rome. We feel that we have the right to protest the proposed CAFO because of the potential impact on our area. We have done our own research and seen the results of others' research on the potential impact this farm could have on the surrounding areas and are very scared. We won't recite the facts and figures on the amount of existing deep wells and the impact they have had on our area lakes and waterways because by now we hope the DNR knows all of that. What frightens us is the possibility that it will be ignored in order to favor big business. We are in disbelief of the amount of deep wells that have already been approved in central Wisconsin, although the evidence of the destruction of lakes, streams and waterways is evident by the loss of these in areas where several deep wells have been allowed. This not only affects our waterways, but potentially would impact our personal use of water by polluting it or depleting it altogether.

One would have to be a fool to believe that there will be minimal or no impact on the air quality as well. You would only need to interview residents near existing CAFOs to find that out.

The issue of financial impact on the area should also be considered. Our taxes will go up in order to maintain the roads needed to service an industry of this size, while our property values will decrease because of water and air quality issues.

A couple of years ago we were upset about the Shoreline Protection act and how it would impact us, living on water. Now we are afraid we won't have good air to breathe, safe water to drink or a shoreline to protect.

PLEASE do whatever you can to stop this factory farm from destroying our area.

[REDACTED]



From: [REDACTED]
Sent: Sunday, September 16, 2012 4:05 PM
To: Anderson, Russell A - DNR
Cc: [REDACTED];
Baumann, Dan G - DNR
Subject: Letter of concern regarding the distribution of private wells in the area of the proposed Golden Sands CAFO

Mr Anderson,

I've attached a letter of concern regarding the proposed CAFO in Saratoga and have printed it below as well.

September 16, 2012

Mr. Russ Anderson
Environmental Review Coordinator
DNR South Central Region
3911 Fish Hatchery Road,
Fitchburg, WI 53711

Dear Mr. Anderson,

I would like this information included in the Environmental Impact Study being done for the proposed CAFO in Saratoga.

I have a document which I received from Adams County that shows the distribution of private wells in the area of the proposed Golden Sands Dairy, including Adams, Wood, Portage, and Juneau counties. I'll send it to you electronically. It is especially meaningful, in that it shows the distance in miles of existing private wells from the 47 proposed CAFO farm wells. Even more glaring is the sheer number of private wells in close proximity to the proposed farm. There are too many to count easily, but one could estimate their number by the number of residential properties in the area. Professor Robert Glennon, in his book Water Follies, indicates the cone of depression from a high cap well can extend up to 3 miles. As an example:

There are 5500 properties in the Town of Saratoga, conservatively a third within 3 miles = 1833 wells.

There are 7,000 properties in the Town of Rome, 990 on municipal water, and about a third of the remaining 6,000 within 3 miles = 2,000 wells. That's nearly 4,000 private wells at risk.

Another interesting comparison on the map is the small number of private wells in the Town of Armenia, where another Wysocki CAFO resides. There appear to be a few dozen private wells at most. In addition, that is an existing agricultural

area, whereas Saratoga is not. That amplifies the extreme difference in the two environments and the risk to a recreational area already inhabited by many thousands of residents and the new home facility of the Wisconsin Trapshooters Association. Imagine the damage and impending civil liability if Professor Glennon is right, and even half these wells go bad as a result of low water levels or high nitrate levels. As keepers of the environment, the Wisconsin DNR needs to do all it can to do the right thing and not just hide behind the diluted requirements of the well permits. I believe it was you who said in a presentation a few weeks ago that this EIS has to be done right to avoid a court action. I hope it doesn't come to that.

[REDACTED]

CC: Dan Baumann
Gov. Scott Walker & local representatives
Rome Concerned Citizens Group
Wisconsin Rapids Tribune

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[REDACTED]

[REDACTED]