

## **Annual Report**

### **Michigan Example Dairy**

To follow the timeline of this example, this annual report would be sent in for the first time by April 1, 2008, covering the manure applications occurring during the 2007 calendar year.



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER BUREAU  
Concentrated Animal Feeding Operation (CAFO)**

## Annual Report Form

**PART 1 – GENERAL INFORMATION**

<b>A. FACILITY INFO</b>
1. Name of Facility: Sample Dairy
2. Facility Address: 456 Deer Road, Junction, MI 49999
3. Telephone Number: (123) 555-7890 (office)
4. Permit Number/COC Number:
5. Certified Operator:
<b>B. OWNER INFO</b>
1. Facility Owner: David and Joe Brown
2. Owner Address: <u>  above  </u>
3. Owner Telephone: (123) 555-2345 (cell)
<b>C. REPORTING PERIOD</b>
January 1, 2006 through December 31, 2006.
<b>D. PLAN REVIEW</b>
1. a. Was the current Comprehensive Nutrient Management Plan (CNMP) prepared or approved by a certified CNMP provider? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b. Name of certified provider: I.M. Engineer
2. Did the permittee review the CNMP as specified in Part 1.B.c. of the permit during the reporting period? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3. a. Did the review indicate that the CNMP needed to be revised or modified? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b. If yes, list revisions or modifications to the CNMP during the reporting period (attach additional sheet if necessary).

**\*\*\*\*\* CERTIFICATION \*\*\*\*\***

I certify that the information contained in this report, including attachments, is true, accurate, and complete. I am aware there are legal penalties for submitting false information.	
Signature:	
Title:	Date:

**PART 2 – SPECIFIC INFORMATION**

A. What was the average number of animals and type of animals held during the reporting period? <i>855 total (milking cows, dry cows, replacement heifers, and calves).</i>
B. What was the maximum number of animals and type of animals held during the reporting period? <i>855 cows and calves.</i>
C. Was livestock kept in open confinement or housed under roof? <u>Under roof.</u>
D. Estimated amount of CAFO waste generated during the reporting period (tons/gallons). <i>5,583,000 gallons liquid manure + 3,600 tons solid manure.</i>
E. Estimated amount of CAFO waste transferred to other persons during the reporting period (tons/gallons). <u>None.</u>
F. Total number of acres identified in the CNMP for land application of CAFO waste? <i>1,484 acres.</i>
G. Total number of acres identified in the CNMP that were used for land application of CAFO waste during the reporting period? <u>446.</u>
H. List all discharges, including date, time, and approximate volume, from the production area during the reporting period. <i>None.</i>
I. Attach a copy of the spreading plan for the next 12 months, including fields, amount of waste to be applied to each field, and when the CAFO waste will be applied.

## 2007 Spreading Records (from the previous calendar year)

Crop Yr	App Yr	Mon	Field	Subfield	Acres	For Crop	Storage Id	Equipment	P Test	Units	MARI	Rate/A	Unit	Amt Applied	Avail. N	P2O5	K2O
2007	2007	Apr	BK	1	5.9/21.7	Soybean	Weekly Haul	V Bottom	17	ppm		17	Ton	100	24	78	71
2007	2007	Apr	BK	1	5.9/21.7	Soybean	Mon.Wed. Fri. Haul	V Bottom	17	ppm		17	Ton	100	24	36	97
2007	2007	Apr	BM3	a	10.2/10	Corn grain	#1 ADL	Injector	13	ppm		6500	Gal	66,000	175	156	169
2007	2007	Apr	BY	1	48.5/47.4	Corn silage	#1 ADL	Liquid box	42	ppm		5200	Gal	252,000	46	125	135
2007	2007	Apr	D	1	50.2/50	Corn grain	#5 ADL	Injector	71	ppm		5800	Gal	291,000	182	87	168
2007	2007	Apr	F	N3,4	37.5/37.2	Corn silage	#5 ADL	Injector	52	ppm		5600	Gal	210,000	176	84	162
2007	2007	Apr	F	S1,2	35.4/35	Corn silage	#5 ADL	Injector	80	ppm		5600	Gal	198,000	176	84	162
2007	2007	Apr	LM	1	40.2/40	Corn silage	#5 ADL	Injector	64	ppm		5600	Gal	225,000	176	84	162
2007	2007	Apr	LM	2	37/36.5	Corn silage	#5 ADL	Injector	46	ppm		5600	Gal	207,000	176	84	162
2007	2007	Apr	W	1	20/19.7	Corn grain	#5 ADL	Injector	23	ppm		4500	Gal	90,000	141	68	131
2007	2007	Apr	W	2	10.7/10	Corn grain	#5 ADL	Injector	23	ppm		4500	Gal	48,000	141	68	131
2007	2007	Apr	W	3	24/23.9	Corn grain	#5 ADL	Injector	24	ppm		4500	Gal	108,000	141	68	131
2007	2007	May	BK	1	5/21.7	Soybean	Mon.Wed. Fri. Haul	V Bottom	17	ppm		20	Ton	100	28	42	114
2007	2007	May	BK	1	5/21.7	Soybean	Weekly Haul	V Bottom	17	ppm		20	Ton	100	28	92	84
2007	2007	May	CO	S	40/40	Corn grain	Earthen storage #2	Irrigate	107	ppm		27000	Gal	1,080,000	24	22	124
2007	2007	May	D 10		2.4/4.5	Corn grain	Mon.Wed. Fri. Haul	V Bottom	66	ppm		50	Ton	120	70	105	285
2007	2007	May	D 10		2.3/4.5	Corn grain	Weekly Haul	V Bottom	66	ppm		51.5	Ton	120	72	237	216
2007	2007	May	W	4	20.7/20.4	Corn grain	#5 ADL	Injector	24	ppm		4500	Gal	93,000	141	68	131
2007	2007	May	WR	1	20/20	Corn grain	#5 ADL	Injector	80	ppm		5400	Gal	108,000	170	81	157
2007	2007	Jun	D 11		3/3.2	Alfalfa topdress	Weekly Haul	V Bottom	66	ppm		20	Ton	60	28	92	84
2007	2007	Jun	D 12		2.5/2.3	Alfalfa topdress	Weekly Haul	V Bottom	66	ppm		20	Ton	50	28	92	84
2007	2007	Jul	BM	2	2.5/20	Corn silage	Weekly Haul	V Bottom	28	ppm		20	Ton	50	28	92	84
2007	2007	Jul	BM	2	2.5/20	Rye for cover	Mon.Wed. Fri. Haul	V Bottom	28	ppm		20	Ton	50	28	42	114
2007	2007	Jul	BM	2	2.5/20	Corn silage	Mon.Wed. Fri. Haul	V Bottom	28	ppm		20	Ton	50	28	42	114
2007	2007	Jul	BM	2	2.5/20	Rye for cover	Weekly Haul	V Bottom	28	ppm		20	Ton	50	28	92	84
2007	2007	Aug	BM	2	2.5/20	Corn silage	Mon.Wed. Fri. Haul	V Bottom	28	ppm		20	Ton	50	28	42	114
2007	2007	Aug	BM	2	2.5/20	Rye for cover	Weekly Haul	V Bottom	28	ppm		20	Ton	50	28	92	84
2007	2007	Aug	BM	2	2.5/20	Corn silage	Weekly Haul	V Bottom	28	ppm		20	Ton	50	28	92	84
2007	2007	Aug	BM	2	2.5/20	Rye for cover	Mon.Wed. Fri. Haul	V Bottom	28	ppm		20	Ton	50	28	42	114
2008	2007	Sep	BG	4	17.3/16.8	Corn grain	#5 ADL	Injector	15	ppm		4500	Gal	78,000	141	68	131
2008	2007	Sep	BK	4	17.9/16.9	Corn grain	#1 ADL	Liquid box	17	ppm		4700	Gal	84,000	42	113	122
2008	2007	Sep	BK	5	54.9/54	Corn grain	#1 ADL	Liquid box	16	ppm		4700	Gal	258,000	42	113	122
2008	2007	Sep	BK	6	6.4/5.9	Corn grain	#1 ADL	Liquid box	16	ppm		4700	Gal	30,000	42	113	122
2008	2007	Sep	BK	7	3.8/3	Corn grain	#1 ADL	Liquid box	16	ppm		4700	Gal	18,000	42	113	122
2008	2007	Sep	BM	2	2.5/20	Rye for cover	Weekly Haul	V Bottom	28	ppm		20	Ton	50	28	92	84
2008	2007	Sep	BM	2	2.5/20	Corn silage	Weekly Haul	V Bottom	28	ppm		20	Ton	50	28	92	84
2008	2007	Sep	BM	2	2.5/20	Rye for cover	Mon.Wed. Fri. Haul	V Bottom	28	ppm		20	Ton	50	28	42	114

2008	2007	Sep	BM	2	2.5/20	Corn silage	Mon.Wed. Fri. Haul	V Bottom	28	ppm		20	Ton	50	28	42	114
2008	2007	Oct	CN	2	30/29.2	Corn grain	#5 ADL	Liquid box	27	ppm		6400	Gal	192,000	51	96	186
2008	2007	Oct	CO	N	36/36.4	Corn grain	Earthen storage #2	Irrigate	69	ppm		27000	Gal	972,000	24	22	124
2008	2007	Oct	HM	2	5/39.1	Corn grain	Mon.Wed. Fri. Haul	V Bottom	69	ppm		20	Ton	100	28	42	114
2008	2007	Oct	HM	2	5/39.1	Corn grain	Weekly Haul	V Bottom	69	ppm		20	Ton	100	28	92	84
2008	2007	Oct	NO	4	30/29.1	Corn grain	#1 ADL	Liquid box	21	ppm		5200	Gal	156,000	46	125	135
2008	2007	Oct	SH	5	14.4/14	Soybean	#5 ADL	Injector	21	ppm		4800	Gal	69,000	151	72	139
2008	2007	Nov	Bg	3	26.4/26	Corn grain	#5 ADL	Injector	90	ppm		5000	Gal	132,000	157	75	145
2008	2007	Nov	BM	2	20/20	Corn silage	#5 ADL	Liquid box	28	ppm		5700	Gal	114,000	46	86	165
2008	2007	Nov	BM	2	20/20	Rye for cover	#5 ADL	Liquid box	28	ppm		5700	Gal	114,000	46	86	165
2008	2007	Nov	HM	2	5/39.1	Corn grain	Mon.Wed. Fri. Haul	V Bottom	69	ppm		20	Ton	100	28	42	114
2008	2007	Nov	HM	2	5/39.1	Corn grain	Weekly Haul	V Bottom	69	ppm		20	Ton	100	28	92	84
2008	2007	Nov	SA	1	18.5/23.6	Corn grain	#1 ADL	Liquid box	46	ppm		5200	Gal	96,000	46	125	135
2008	2007	Nov	SA	2	24/23.1	Corn grain	#5 ADL	Liquid box	46	ppm		6000	Gal	144,000	48	90	174
2008	2007	Nov	SA	3	23.3/23.3	Corn grain	#5 ADL	Injector	25	ppm		4500	Gal	105,000	141	68	131
2008	2007	Nov	SA	4	14.7/14.5	Corn grain	#5 ADL	Injector	25	ppm		4500	Gal	66,000	141	68	131
2008	2007	Dec	HM	2	5/39.1	Corn grain	Mon.Wed. Fri. Haul	V Bottom	69	ppm		20	Ton	100	28	42	114
2008	2007	Dec	HM	2	5/39.1	Corn grain	Weekly Haul	V Bottom	69	ppm		20	Ton	100	28	92	84

## Spreading Plan for the 2008 year (upcoming calendar year)

Crop Yr	App Yr	Mon	Field	Subfield	Acres	For Crop	Storage Id	Equipment	P Test	Units	MARI	Rate/A	Unit	Amt Applied	Avail. N	P2O5	K2O
2008	2008	Jan	HM	2	5/39.1	Corn grain	Mon.Wed. Fri. Haul	V Bottom	69	ppm		20	Ton	100	28	42	114
2008	2008	Jan	HM	2	5/39.1	Corn grain	Weekly Haul	V Bottom	69	ppm		20	Ton	100	28	92	84
2008	2008	Feb	CN	5	2.5/5.2	Corn grain	Mon.Wed. Fri. Haul	V Bottom	30	ppm		20	Ton	50	28	42	114
2008	2008	Feb	CN	5	2.5/5.2	Corn grain	Weekly Haul	V Bottom	30	ppm		20	Ton	50	28	92	84
2008	2008	Mar	SE	7	5/10.1	Alfalfa topdress	Mon.Wed. Fri. Haul	V Bottom	52	ppm		20	Ton	100	28	42	114
2008	2008	Mar	SE	7	5/10.1	Alfalfa topdress	Weekly Haul	V Bottom	52	ppm		20	Ton	100	28	92	84
2008	2008	Apr	BK	2	38.3/11.3	Wheat	#5 ADL	Injector	12	ppm		4700	Gal	180,000	148	71	136
2008	2008	Apr	BM	1	27.9/27.5	Corn silage	#5 ADL	Injector	77	ppm		5600	Gal	156,000	176	84	162
2008	2008	Apr	BM	1	27.9/27.5	Rye for cover	#5 ADL	Injector	77	ppm		5600	Gal	156,000	176	84	162
2008	2008	Apr	BM	2	15.6/20	Corn silage	#5 ADL	Injector	28	ppm		5400	Gal	84,000	170	81	157
2008	2008	Apr	BM	2	15.6/20	Rye for cover	#5 ADL	Injector	28	ppm		5400	Gal	84,000	170	81	157
2008	2008	Apr	CO	S	40/40	Soybean	Earthen storage #2	Irrigate	107	ppm		27000	Gal	1,080,000	24	22	124
2008	2008	Apr	D	2	37.2/36.9	Corn grain	#5 ADL	Injector	36	ppm		6700	Gal	249,000	210	101	194
2008	2008	Apr	SW	1	12.1/12.1	Alfalfa topdress	#5 ADL	Liquid box	46	ppm		10400	Gal	126,000	83	156	302
2008	2008	Apr	SW	2	5/23.9	Alfalfa topdress	Mon.Wed. Fri. Haul	V Bottom	57	ppm		20	Ton	100	28	42	114
2008	2008	Apr	SW	2	5/23.9	Alfalfa topdress	Weekly Haul	V Bottom	57	ppm		20	Ton	100	28	92	84
2008	2008	Apr	WR	2	26.9/26.5	Alfalfa seeding	#5 ADL	Injector	80	ppm		4800	Gal	129,000	151	72	139
2008	2008	May	Bg	2	5/14.3	Alfalfa seeding	Weekly Haul	V Bottom	65	ppm		20	Ton	100	28	92	84
2008	2008	May	Bg	2	5/14.3	Alfalfa seeding	Mon.Wed. Fri. Haul	V Bottom	65	ppm		20	Ton	100	28	42	114
2008	2008	May	CN	5	5/5.2	Corn grain	Weekly Haul	V Bottom	30	ppm		20	Ton	100	28	92	84
2008	2008	Jun	SW	2	5/23.9	Alfalfa topdress	Mon.Wed. Fri. Haul	V Bottom	57	ppm		20	Ton	100	28	42	114
2008	2008	Jun	SW	2	5/23.9	Alfalfa topdress	Weekly Haul	V Bottom	57	ppm		20	Ton	100	28	92	84
2009	2008	Jul	BK	1	5/21.7	Corn grain	Mon.Wed. Fri. Haul	V Bottom	17	ppm		20	Ton	100	28	42	114
2009	2008	Jul	BK	1	5/21.7	Corn grain	Weekly Haul	V Bottom	17	ppm		20	Ton	100	28	92	84
2009	2008	Aug	BK	1	6/21.7	Corn grain	Weekly Haul	V Bottom	17	ppm		20	Ton	120	28	92	84
2009	2008	Aug	BK	1	6/21.7	Corn grain	Weekly Haul	V Bottom	17	ppm		20	Ton	120	28	92	84
2009	2008	Sep	SH	123E	23.3/23	Corn grain	#1 ADL	Injector	110	ppm		4000	Gal	93,000	108	96	104
2009	2008	Sep	SH	123W	24.4/24	Corn grain	#1 ADL	Injector	29	ppm		4800	Gal	117,000	129	115	125
2009	2008	Sep	SH	3	19.5/18.3	Corn grain	#1 ADL	Liquid box	54	ppm		4000	Gal	78,000	36	96	104
2009	2008	Sep	SH	4	10.5/10.3	Corn grain	#1 ADL	Liquid box	21	ppm		4000	Gal	42,000	36	96	104
2009	2008	Sep	W	1	21/19.7	Corn grain	#1 ADL	Liquid box	23	ppm		4000	Gal	84,000	36	96	104
2009	2008	Sep	W	2	10.5/10	Corn grain	#1 ADL	Liquid box	23	ppm		4000	Gal	42,000	36	96	104
2009	2008	Sep	W	3	24/23.9	Corn grain	#1 ADL	Liquid box	24	ppm		4000	Gal	96,000	36	96	104
2009	2008	Sep	W	4	21/20.4	Corn grain	#1 ADL	Liquid box	24	ppm		4000	Gal	84,000	36	96	104
2009	2008	Sep	WR	1	21.5/20	Alfalfa seeding	#1 ADL	Liquid box	80	ppm		3900	Gal	84,000	35	94	101

2009	2008	Oct	BK	3	16.8/16.8	Corn grain	#5 ADL	Injector	30	ppm	5000	Gal	84,000	157	75	145
2009	2008	Oct	BK	4	16.2/16.9	Soybean	#5 ADL	Injector	17	ppm	5000	Gal	81,000	157	75	145
2009	2008	Oct	BM	2	20/20	Rye for cover	#5 ADL	Injector	28	ppm	5100	Gal	102,000	160	77	148
2009	2008	Oct	BM	2	20/20	Corn silage	#5 ADL	Injector	28	ppm	5100	Gal	102,000	160	77	148
2009	2008	Oct	BM3	A	10.6/10	Corn grain	#5 ADL	Injector	13	ppm	5100	Gal	54,000	160	77	148
2009	2008	Oct	BY	1	48/47.4	Corn grain	#5 ADL	Injector	42	ppm	5000	Gal	240,000	157	75	145
2009	2008	Nov	CO	N	33.3/36.4	Corn silage	Earthen storage #2	Irrigate	69	ppm	27000	Gal	900,000	24	22	124
2009	2008	Nov	F	N3,4	37.2/37.2	Corn silage	#5 ADL	Injector	52	ppm	5400	Gal	201,000	170	81	157
2009	2008	Nov	F	S1,2	35.3/35	Corn silage	#5 ADL	Injector	80	ppm	5700	Gal	201,000	179	86	165
2009	2008	Nov	HM	1	39.1/39.1	Corn silage	#5 ADL	Injector	71	ppm	5600	Gal	219,000	176	84	162
2009	2008	Nov	HM	2	39.6/39.1	Corn silage	#5 ADL	Injector	69	ppm	5300	Gal	210,000	166	80	154
2009	2008	Nov	HM	3	20/20	Corn silage	Earthen storage #2	Irrigate	54	ppm	27000	Gal	540,000	24	22	124
2009	2008	Apr	CO	S	18.5/40	Corn silage	Earthen storage #2	Irrigate	107	ppm	27000	Gal	500,000	24	22	124

Crop year = crop year that manure nutrients are credited to.  
Available N includes storage and application losses.  
Acres = acres applied/total acres in field  
Available N, P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O are pounds per acre

**All of the following record sheets would obviously be filled in if they were being submitted for annual report requirements.**

**These blank pages are just examples of the information required by the permit process.**





Example of one field

## Nutrient Applications – All Sources

<i>Year</i>	<i>Field ID</i>	<i>Sub ID</i>	<i>Nutrient Needs</i>	<i>Crop</i>	<i>Yield Goal Acres</i>		<i>N</i>	<i>P<sub>2</sub>O<sub>5</sub></i>	<i>K<sub>2</sub>O</i>	
2006	BK	7	Crop Fertilizer Recs	Soybean	35 Bu	3	0	30	70	
2006	BK	7	Crop Nutrient Removal	Soybean	35 Bu	3	133	28	49	
<i>Date</i>	<i>Field ID</i>	<i>Sub ID</i>	<i>Nutrient Activity</i>	<i>Source</i>	<i>Equipment/Method</i>	<i>Rate Acres</i>	<i>N</i>	<i>P<sub>2</sub>O<sub>5</sub></i>	<i>K<sub>2</sub>O</i>	
Apr 06	BK	7	Fertilizer App (1-yr K)	0-0-60	Surface broadcast	116 Lb	3	0	0	70
2006	BK	7	Total Nutrients Applied	Spreadable Area		3	0	0	70	
2006	BK	7	Balance After Recs	Spreadable Area		3	0	-30	0	
2006	BK	7	Balance After Removal	Spreadable Area		3	-133	-28	21	
<i>Year</i>	<i>Field ID</i>	<i>Sub ID</i>	<i>Nutrient Needs</i>	<i>Crop</i>	<i>Yield Goal Acres</i>		<i>N</i>	<i>P<sub>2</sub>O<sub>5</sub></i>	<i>K<sub>2</sub>O</i>	
2007	BK	7	Crop Fertilizer Recs	Corn grain	135 Bu	3	125	50	60	
2007	BK	7	Crop Nutrient Removal	Corn grain	135 Bu	3	122	50	36	
<i>Date</i>	<i>Field ID</i>	<i>Sub ID</i>	<i>Nutrient Activity</i>	<i>Source</i>	<i>Equipment/Method</i>	<i>Rate Acres</i>	<i>N</i>	<i>P<sub>2</sub>O<sub>5</sub></i>	<i>K<sub>2</sub>O</i>	
Sep 06	BK	7	Manure App (1-yr N)	ADL Tank #1	Liquid box	4,700 Gal	3.8	42	113	122
Apr 07	BK	7	Fertilizer App (1-yr N)	28-0-0	Shallow subsurface band (<4")	24 Gal	3	72	0	0
2007	BK	7	Total Nutrients Applied	Spreadable Area		3	125	143	155	
2007	BK	7	Balance After Recs	Spreadable Area		3	0	93	95	
2007	BK	7	Balance After Removal	Spreadable Area		3	4	93	140	
<i>Year</i>	<i>Field ID</i>	<i>Sub ID</i>	<i>Nutrient Needs</i>	<i>Crop</i>	<i>Yield Goal Acres</i>		<i>N</i>	<i>P<sub>2</sub>O<sub>5</sub></i>	<i>K<sub>2</sub>O</i>	
2008	BK	7	Crop Fertilizer Recs	Soybean	45 Bu	3	0	35	85	
2008	BK	7	Crop Nutrient Removal	Soybean	45 Bu	3	171	36	63	
<i>Date</i>	<i>Field ID</i>	<i>Sub ID</i>	<i>Nutrient Activity</i>	<i>Source</i>	<i>Equipment/Method</i>	<i>Rate Acres</i>	<i>N</i>	<i>P<sub>2</sub>O<sub>5</sub></i>	<i>K<sub>2</sub>O</i>	
2008	BK	7	Residual Manure N			3	20			
2008	BK	7	Total Nutrients Applied	Spreadable Area		3	20	0	0	
2008	BK	7	Balance After Recs	Spreadable Area		3	0	58	10	
2008	BK	7	Balance After Removal	Spreadable Area						