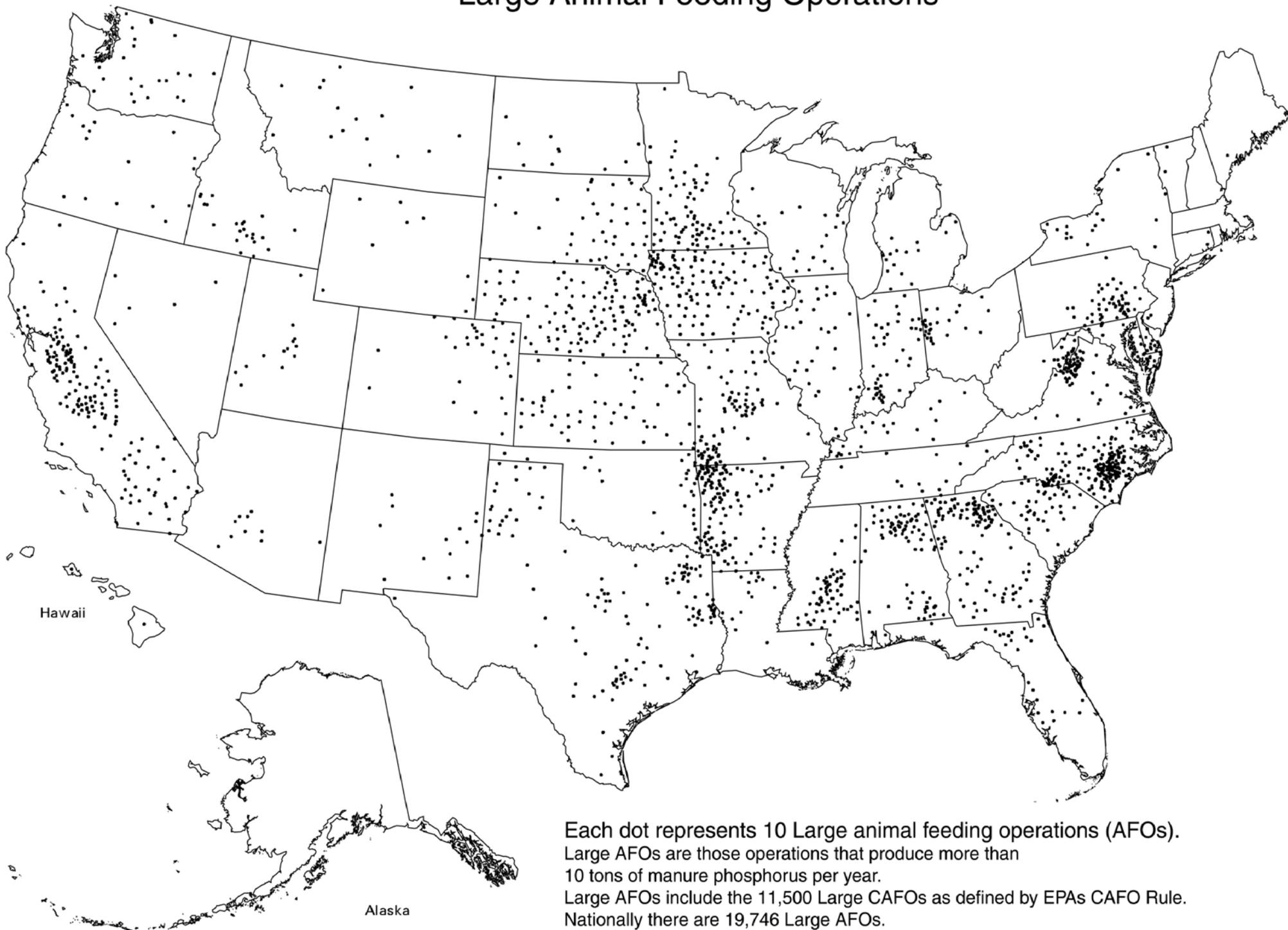
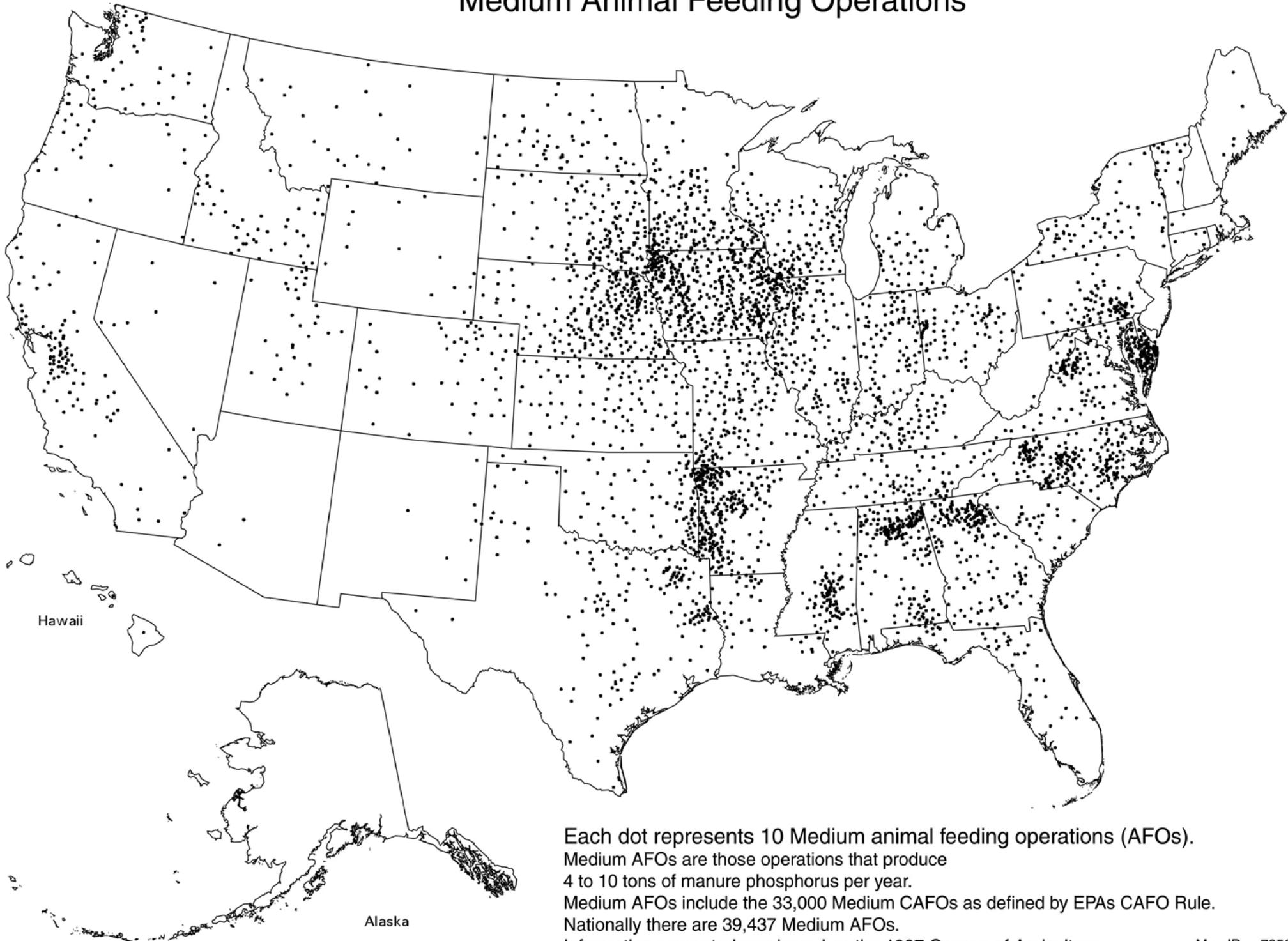


Large Animal Feeding Operations

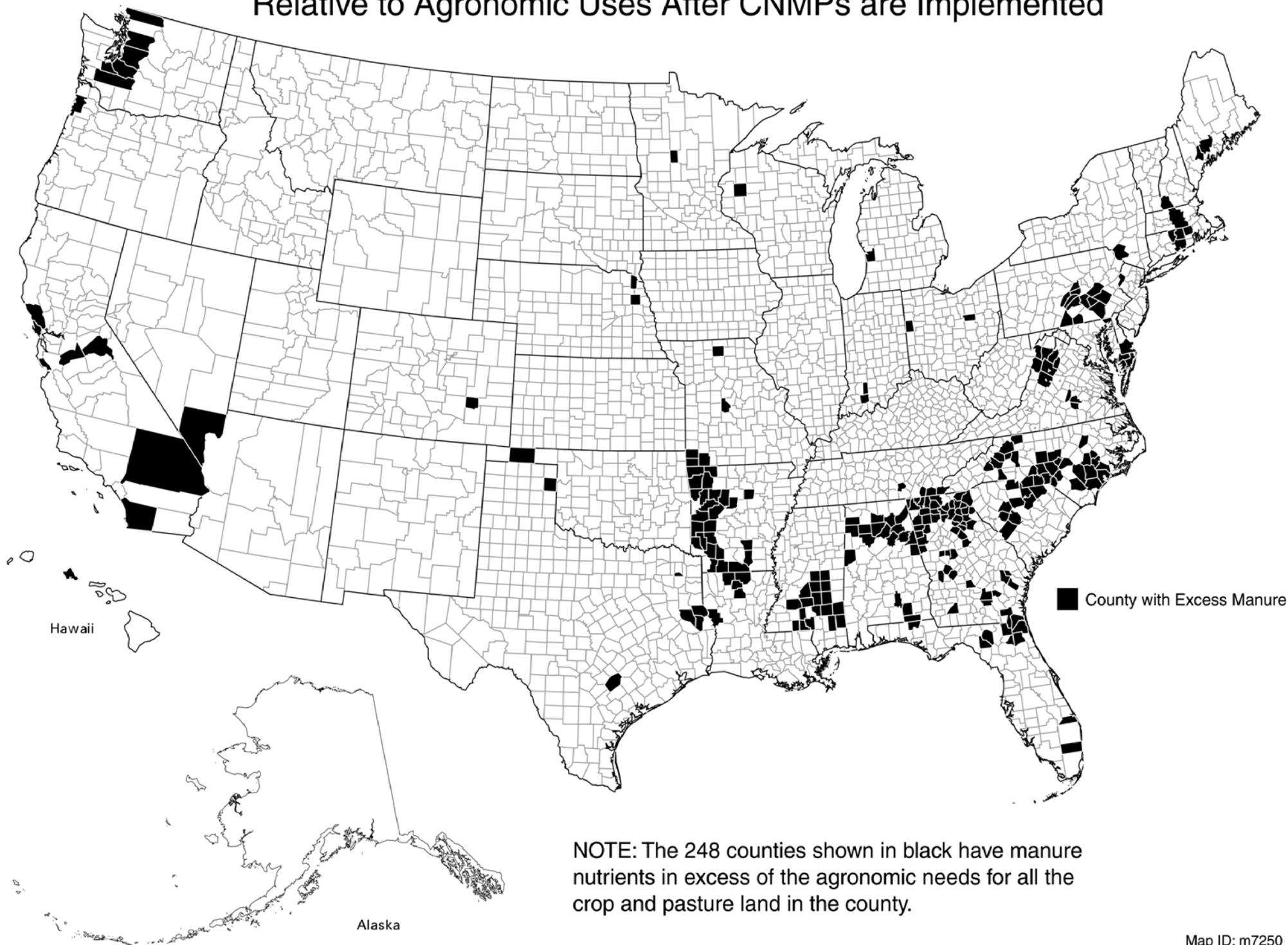


Each dot represents 10 Large animal feeding operations (AFOs). Large AFOs are those operations that produce more than 10 tons of manure phosphorus per year. Large AFOs include the 11,500 Large CAFOs as defined by EPA's CAFO Rule. Nationally there are 19,746 Large AFOs. Information presented was based on the 1997 Census of Agriculture.

Medium Animal Feeding Operations



Counties with Potential Excess Manure Relative to Agronomic Uses After CNMPs are Implemented



Concentrated Animal Feeding Operations (CAFOs) Potential Workload by State

State	Large farms					Medium farms					Available Technical Staff
	Number of Farms	Staff Years Needed	Average Hours/CNMP	Installation Cost Total	Average \$/CNMP	Number of Farms	Staff Years Needed	Average Hours/CNMP	Installation Cost Total	Average \$/CNMP	
Alabama	767	41.0	85	84,197,859	109,776	1,852	98.5	85	122,598,031	66,198	161
Alaska	*	*	*	*	*	*	*	*	*	*	23
Arizona	118	20.7	281	58,479,752	495,591	46	5.9	207	5,732,191	124,613	64
Arkansas	1,206	79.6	106	161,462,787	133,883	2,581	138.4	86	126,400,295	48,973	136
California	1,570	269.8	275	868,830,800	553,395	969	150.9	249	288,838,678	298,079	204
Colorado	314	34.5	176	206,088,923	656,334	443	38.5	139	24,250,190	54,741	228
Connecticut	20	2.8	227	13,888,942	694,447	39	7.0	286	16,042,193	411,338	34
Delaware	115	12.9	180	14,917,283	129,716	442	49.2	178	19,616,247	44,381	14
Florida	292	26.9	147	102,310,576	350,379	400	28.2	113	30,955,673	77,389	97
Georgia	1,093	62.7	92	157,272,537	143,891	1,820	107.4	94	141,779,015	77,901	132
Hawaii	21	3.2	247	6,654,857	316,898	20	2.5	203	3,728,294	186,415	24
Idaho	237	40.8	276	92,551,857	390,514	404	55.4	219	28,351,064	70,176	100
Illinois	386	56.8	236	146,873,059	380,500	1,491	154.0	165	231,478,293	155,250	209
Indiana	476	61.2	206	119,733,051	251,540	924	104.0	180	88,888,823	96,200	151
Iowa	1,125	156.3	222	369,052,530	328,047	4,447	474.0	171	548,847,314	123,420	358
Kansas	525	50.6	154	320,918,033	611,272	1,011	75.8	120	49,650,784	49,111	313
Kentucky	200	15.8	127	32,652,640	163,263	737	54.4	118	47,805,532	64,865	164
Louisiana	186	10.5	91	14,534,723	78,144	356	24.1	108	17,849,826	50,140	132
Maine	13	1.9	237	18,455,333	1,419,641	57	8.6	240	21,773,416	381,990	49
Maryland	178	19.7	177	28,363,964	159,348	615	68.7	179	44,547,725	72,435	67
Massachusetts	7	1.1	244	2,350,981	335,854	36	5.8	260	9,285,972	257,944	31
Michigan	209	31.8	244	70,545,057	337,536	505	82.4	261	64,794,102	128,305	114
Minnesota	747	109.2	234	198,533,120	265,774	1,681	215.9	205	165,612,680	98,520	258
Mississippi	643	34.9	87	52,297,653	81,334	963	54.0	90	51,435,682	53,412	225
Missouri	801	76.0	152	166,427,841	207,775	1,598	141.8	142	122,269,077	76,514	313
Montana	123	19.2	250	18,274,219	148,571	273	23.7	139	10,085,335	36,943	180
N. Carolina	1,910	168.7	141	376,062,496	196,891	2,322	168.0	116	118,652,300	51,099	135
N. Hampshire	6	1.1	281	12,381,865	2,063,644	56	5.1	145	3,030,460	54,115	19
Nebraska	1,160	100.0	138	3,465,939	2,988	14	2.7	303	4,340,703	310,050	100
Nevada	39	6.1	250	1,443,518	37,013	21	3.3	250	3,891,227	185,297	41
New Jersey	6	0.7	198	92,098,534	15,349,756	82	7.3	142	3,582,681	43,691	40
New Mexico	149	25.7	276	106,453,408	714,452	578	118.2	327	155,656,434	269,302	71

CAFO Workload

State	Large farms					Medium farms					Available Technical Staff
	Number of Farms	Staff Years Needed	Average Hours/CNMP	Installation Cost Total	Average \$/CNMP	Number of Farms	Staff Years Needed	Average Hours/CNMP	Installation Cost Total	Average \$/CNMP	
New York	159	33.6	338	630,187,476	3,963,443	2,148	150.0	112	279,613,566	130,174	108
North Dakota	118	12.9	175	14,125,443	119,707	527	44.5	135	19,816,612	37,603	191
Ohio	306	33.6	176	56,250,109	183,824	730	84.0	184	68,842,849	94,305	80
Oklahoma	319	36.1	181	124,386,154	389,925	871	60.0	110	31,794,676	36,504	223
Oregon	145	17.7	196	27,588,436	190,265	293	33.8	185	21,106,469	72,036	100
Pennsylvania	482	53.9	179	180,694,706	374,885	935	131.2	225	242,243,741	259,084	141
Rhode Island	*	*	*	*	*	*	*	*	*	*	8
S. Carolina	380	24.9	105	69,621,040	183,213	320	22.8	114	34,103,462	106,573	113
South Dakota	427	38.4	144	75,955,420	177,882	1,366	103.4	121	57,949,216	42,423	167
Tennessee	148	10.6	114	27,747,011	187,480	684	53.8	126	57,184,285	83,603	138
Texas	1,165	116.5	160	484,160,619	415,589	1,655	151.4	146	85,712,233	51,790	355
Utah	145	22.2	245	28,165,754	194,247	288	38.9	216	20,223,050	70,219	75
Vermont	30	6.3	338	22,436,700	747,890	133	27.7	334	39,059,450	293,680	34
Virginia	592	50.6	137	164,507,370	277,884	822	81.4	158	111,634,250	135,808	103
Washington	246	40.1	261	92,470,021	375,894	398	62.1	249	61,630,455	154,850	96
West Virginia	142	12.9	145	19,163,943	134,957	155	13.4	139	10,486,961	67,658	98
Wisconsin	199	31.1	250	61,657,928	309,839	1,172	176.9	242	149,305,828	127,394	185
Wyoming	101	12.2	194	18,878,738	186,918	153	13.5	141	5,341,790	34,914	81
Pacific Basin	*	*	*	*	*	*	*	*	*	*	14
Puerto Rico	*	*	*	*	*	*	*	*	*	*	44
Totals	19,746	2096.1	170	6,015,571,002	304,648	39,437	3723.1	151	3,868,533,326	98,094	6460

Definitions:

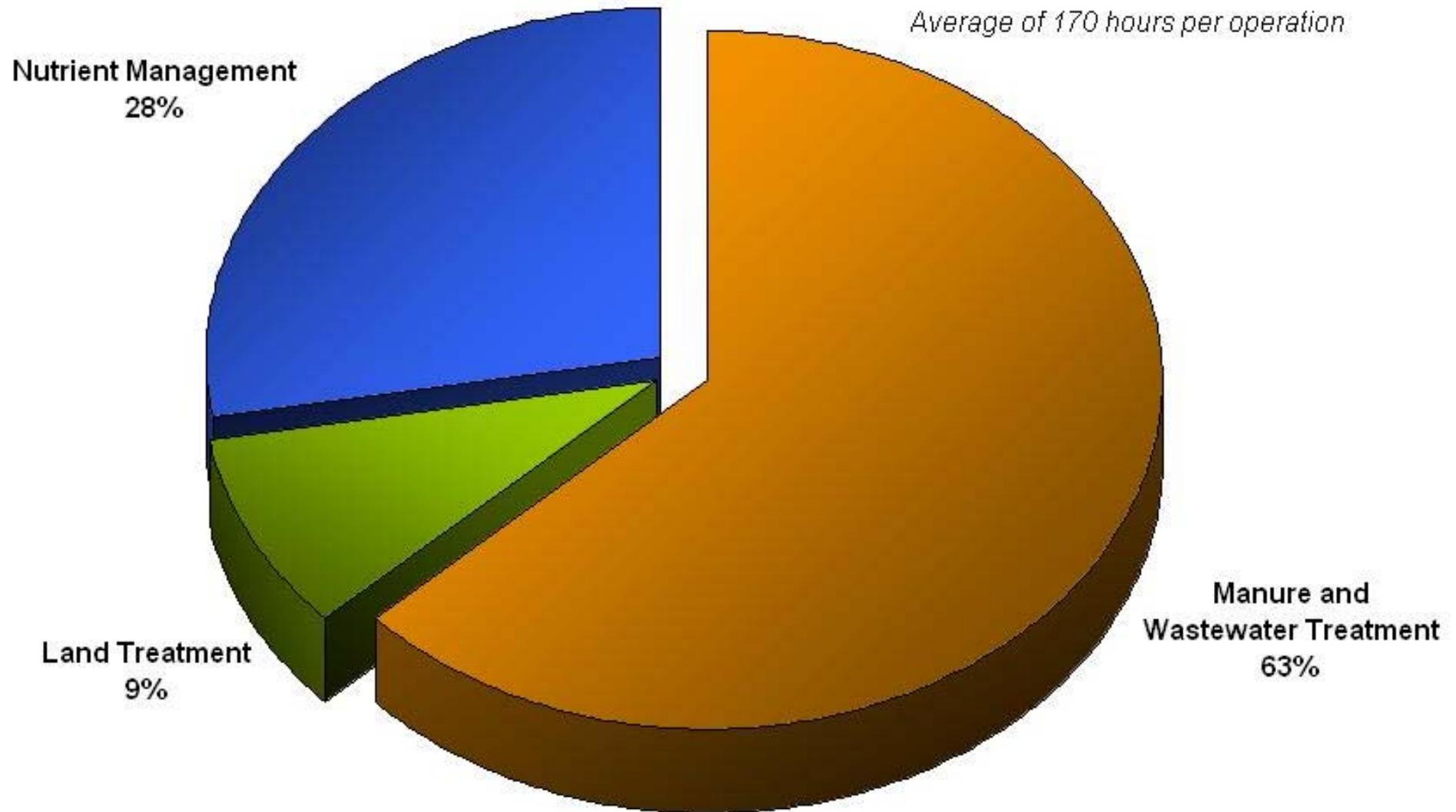
Number of Farms

The number of “Large” farms represents those confined animal feeding operations (AFOs) that generated greater than 10 tons of recoverable manure phosphorus per year and the number of “Medium” farms represents those AFOs that generated between 4 and 10 tons of recoverable manure phosphorus per year. The large farms include the 11,500 Large CAFOs as defined by the U.S. Environmental Protection Agency’s (EPA) CAFO Rule. Medium farms include the 33,000 Medium CAFOs as defined by EPA’s CAFO Rule. It can be assumed that most Large farms would need an NPDES permit. Further, Medium farms could avoid NPDES permitting by developing and implementing a comprehensive nutrient management plan. The number of farms was determined based on information in the 1997 Census of Agriculture. To maintain the confidentiality requirements of using Census data, an asterisks was placed in the table to indicate that a State had fewer than six farms that met the size category. Also, the U.S. Census of Agriculture does not collect data from the Pacific Basin or Puerto Rico, so no information could be computed for those Areas.

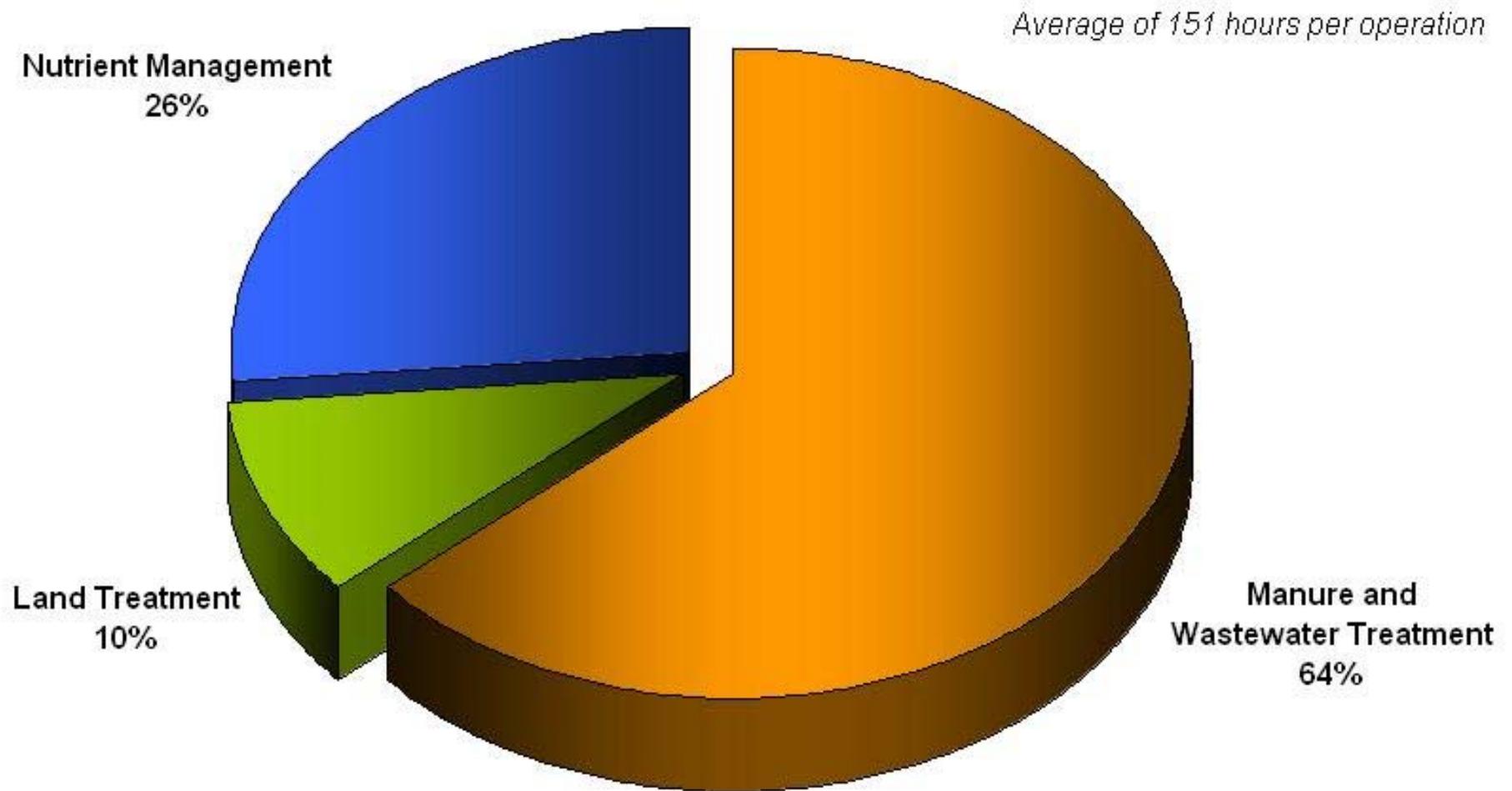
CAFO Workload

Staff Years Needed	Represents the total number of staff years of technical assistance time needed to help operators develop and implement comprehensive nutrient management plans (CNMPs) for the number of farms identified. A staff year was assumed to be 1600 hours. The staff years needed were estimated based on information and data in the 2001 NRCS/Partnership Workload Analysis (WLA). The information shown in the table are actually based on a regional averaging approach, as part of a computer model simulation used to develop national estimates. As a result, the numbers shown in this table would not agree with existing WLA data taken directly from the database for any given State. The time shown only reflects core work product tasks associated with the planning, design, installation, and follow up of a CNMP and its associated conservation practices. Estimates of technical assistance do not include administrative time associated with carrying out various additional functions that usually take place as part of the overall planning and implementation process, such as program eligibility determinations, assisting operators with the completion of State, Tribal, and local permit applications, and various agency performance reporting and documentation activities.
Average Hours/CNMP	This was computed based on “Number of Farms” and “Staff Years Needed.” Note that the average hours per CNMP shown are not the same for Large and Medium operations. The information in the WLA allowed for the identification of the size of operation for which a core work product estimate was developed. The simulation model used to calculate technical assistance time estimates for a specific size operation was able to apply this distinction of size when developing the regional estimates in the national analysis.
Installation Cost Total	NRCS performed an analysis to determine the costs associated with implementing and developing CNMPs. The results of this analysis will be released in a report --“Costs Associated with Development and Implementation of comprehensive Nutrient Management Plans – Part I Nutrient Management, Land Treatment, and Wastewater Handling and Storage, and Record Keeping, available in Spring 2003. The total Installation cost was obtained from this analysis.
Average \$/CNMP	This was computed based on “Installation Cost Total” and “Number of Farms.” Again, as for “Average Hours/CNMP” note the values differ between Large and Medium size operations.
Available Technical Staff	The available technical staff numbers listed for each State were based on the National Finance Center Work Force Planning Database, as of February 22, 2003. The number shown for a State reflects the total technical staff located in Area and Field Offices for the following occupational series: 454 – Range Management Specialist, 457 – Soil Conservationist, 458 – Soil Conservation Technician, 470 – Soil Scientist, 471 – Agronomist, 810 – Civil Engineer, and 890 – Agricultural Engineer.

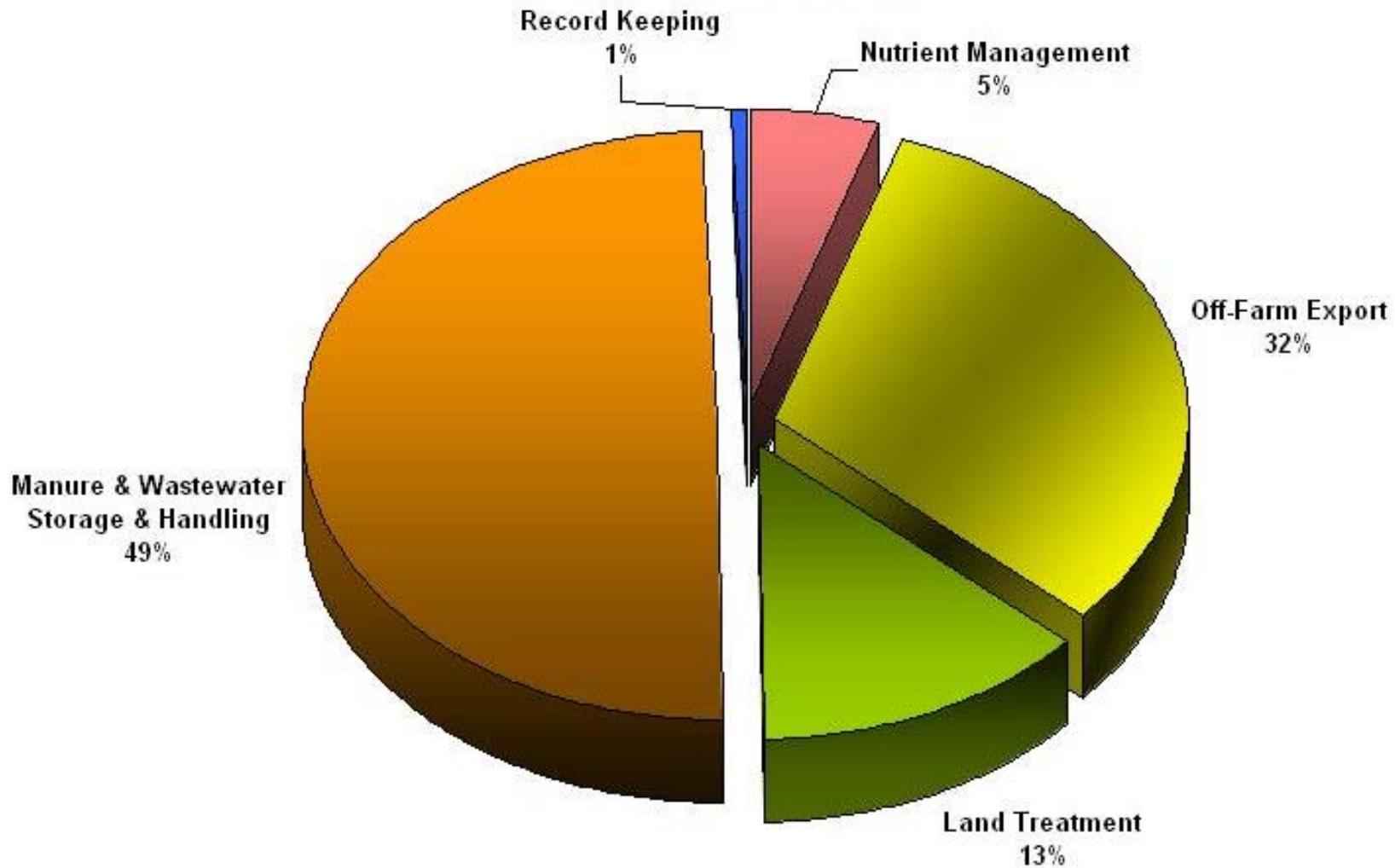
Average Technical Assistance Need for Large Operations, by CNMP Element



Average Technical Assistance Need for Medium Operations, by CNMP Element



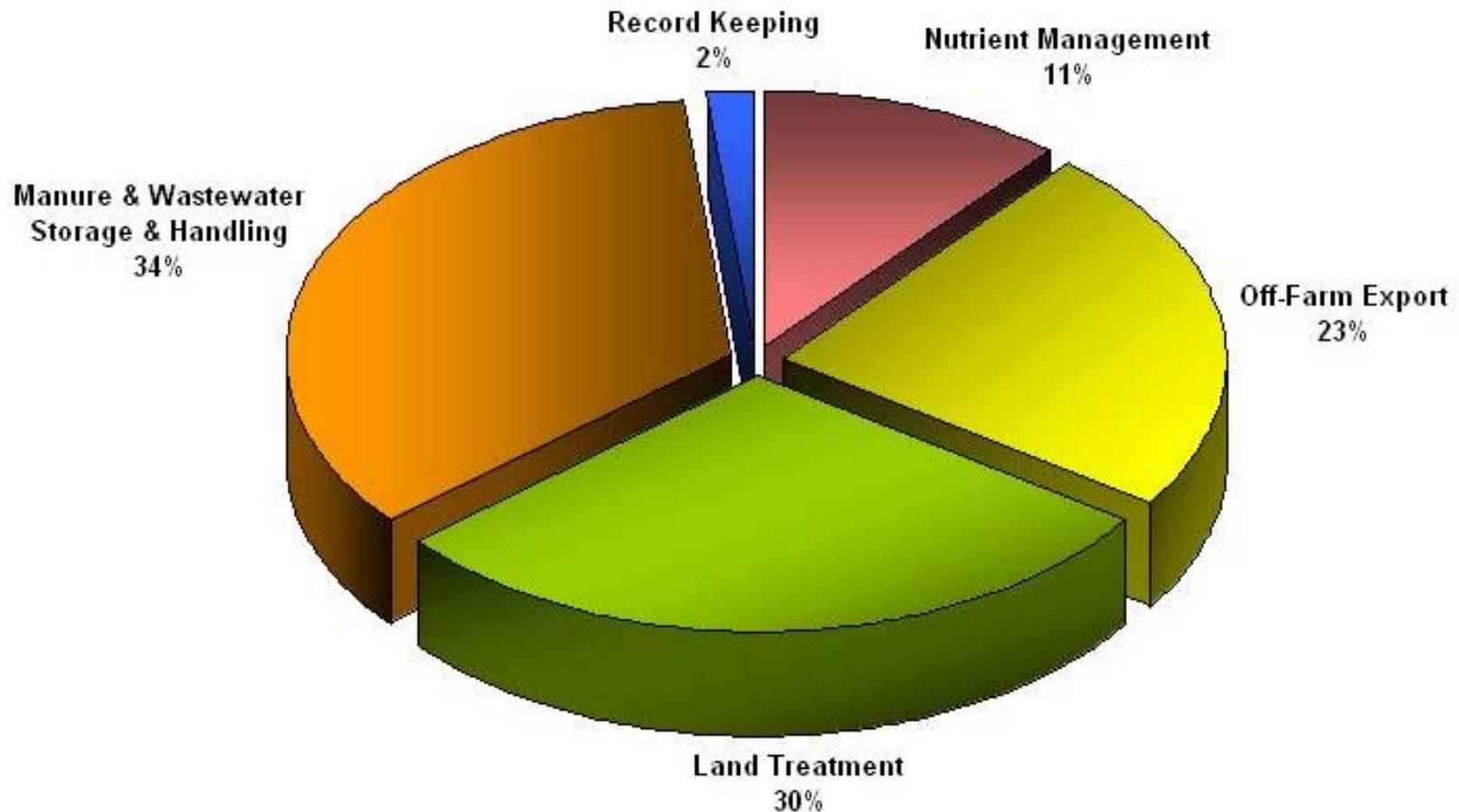
Annual Average CNMP Cost for Large Size Operations (19,746 Operations)



4,103 operations with enough land (21%)
11,736 operations with insufficient acreage (59%)
3,907 operations with no acreage available (20%)

Average annual cost = \$30,465
Annual cost for all large operations = \$601.6 million
Total cost for all large operations = \$6 billion

Annual Average CNMP Cost for Medium Size Operations (39,437 Operations)



20,469 operations with enough land (52%)
14,055 operations with insufficient acreage (36%)
4,913 operations with no acreage available (12%)

Average annual cost = \$9,810
Total annual cost for all Medium Operations = \$386.9 million
Total cost for all medium operations = \$3.9 billion