

V. COMPLIANCE AND ENFORCEMENT HISTORY

V.A. Background

Until recently, EPA has focused much of its attention on measuring compliance with specific environmental statutes. This approach allows the Agency to track compliance with the Clean Air Act, the Resource Conservation and Recovery Act, the Clean Water Act, and other environmental statutes. Within the last several years, the Agency has begun to supplement single-media compliance indicators with facility-specific, multimedia indicators of compliance. In doing so, EPA is in a better position to track compliance with all statutes at the facility level and within specific industrial sectors.

A major step in building the capacity to compile multimedia data for industrial sectors was the creation of EPA's Integrated Data for Enforcement Analysis (IDEA) system. IDEA has the capacity to "read into" the Agency's single-media databases, extract compliance records, and match the records to individual facilities. The IDEA system can match air, water, waste, toxics/pesticides, EPCRA, Toxics Release Inventory (TRI), and enforcement docket records for a given facility and generate a list of historical permit, inspection, and enforcement activity. IDEA also has the capability to analyze data by geographic area and corporate holder. As the capacity to generate multimedia compliance data improves, EPA will make available more in-depth compliance and enforcement information. Additionally, EPA is developing sector-specific measures of success for compliance assistance efforts.

V.B. Compliance and Enforcement Profile Description

This section uses inspection, violation, and enforcement data from the IDEA system to provide information about the historical compliance and enforcement activity of this sector.

While other sector notebooks have used Standard Industrial Classification (SIC) data from the Toxics Release Inventory System (TRIS) to define their data sampling universes, none of the SIC codes associated with the livestock production sector identifies facilities that report to the TRI program. As such, sector-defining data have been provided from EPA data systems

Note: Many of the previously published sector notebooks contained a chapter titled "*Chemical Release and Transfer Profile*." The information and data for that chapter were taken primarily from EPA's Toxic Release Inventory (TRI). Because the industries discussed in this notebook do not, in general, directly report to TRI, that chapter has not been included in this sector notebook.

linked to EPA's Facility Indexing System (FINDS), which tracks facilities in all media databases. This section does not attempt to define the actual number of facilities that fall within each sector. Instead, the section portrays the records of a subset of facilities within the sector that are well defined within EPA databases.

As a check on the relative size of the full sector universe, most notebooks contain an estimated number of facilities within the sector according to the Bureau of Census. With sectors dominated by small businesses, such as metal finishers and printers, the reporting universe within the EPA databases may be small in comparison to Census data. However, the group selected for inclusion in this data analysis section should be consistent with this sector's general make-up.

Before presenting the data, the next section defines general terms and the column heads used in the data tables. The data represent a retrospective summary of inspections and enforcement actions and solely reflect EPA, state, and local compliance assurance activities that have been entered into EPA databases. To identify trends, EPA ran two data queries, one for five calendar years (March 7, 1992 to March 6, 1997) and the other for a twelve-month period (March 7, 1996 to March 6, 1997). The five-year analysis gives an average level of activity for that period for comparison to the more recent activity.

Because most inspections focus on single-media requirements, the data queries presented in this section are taken from single media databases. These databases do not provide data on whether inspections are state/local or EPA-led. However, the table breaking down the universe of violations does give the reader a crude measurement of the EPA's and state's efforts within each media program. The presented data illustrate the variations across EPA regions for certain sectors¹. This variation may be attributable to state/local data entry variation, specific geographic concentrations, proximity to population centers, sensitive ecosystems, highly toxic chemicals used in production, or historical noncompliance. Hence, the exhibited data do not rank regional performance or necessarily reflect which regions may have the most compliance problems.

¹EPA Regions are as follows: I (CT, MA, ME, RI, NH, VT); II (NJ, NY, PR, VI); III (DC, DE, MD, PA, VA, WV); IV (AL, FL, GA, KY, MS, NC, SC, TN); V (IL, IN, MI, MN, OH, WI); VI (AR, LA, NM, OK, TX); VII (IA, KS, MO, NE); VIII (CO, MT, ND, SD, UT, WY); IX (AZ, CA, HI, NV, Pacific Trust Territories); X (AK, ID, OR, WA).

Compliance and Enforcement Data Definitions

General Definitions

Facility Indexing System (FINDS) - assigns a common facility number to EPA single-media permit records, establishing a linkage capability to the permit data. The FINDS identification number allows EPA to compile and review all permit, compliance, enforcement, and pollutant release data for any given regulated facility.

Integrated Data for Enforcement Analysis (IDEA) - is a data integration system that can retrieve information from the major EPA program office databases. IDEA uses the FINDS identification number to link separate data records from EPA's databases. This allows retrieval of records from across media or statutes for any given facility, thus creating a "master list" of records for that facility. Some of the data systems accessible through IDEA are AFS (Air Facility Indexing and Retrieval System, Office of Air and Radiation), PCS (Permit Compliance System, Office of Water), RCRIS (Resource Conservation and Recovery Information System, Office of Solid Waste), NCBD (National Compliance Data Base, Office of Prevention, Pesticides, and Toxic Substances), CERCLIS (Comprehensive Environmental and Liability Information System, Superfund), and TRIS. IDEA also contains information from outside sources, such as Dun and Bradstreet (DUN) and the Occupational Safety and Health Administration (OSHA). Most data queries displayed in this section were conducted using IDEA.

Data Table Column Heading Definitions

Facilities in Search - based on the universe of TRI reporters within the listed SIC code range. For industries not covered under TRI reporting requirements, or industries in which only a very small fraction of facilities report to TRI, the notebook uses the FINDS universe for executing data queries. The SIC code range selected for each search is defined by each notebook's selected SIC code coverage described in Section II.

Facilities Inspected - indicates the level of EPA and state agency inspections for the facilities in this data search. These values show what percentage of the facility universe is inspected in a one-year or five-year period.

Number of Inspections - measures the total number of inspections conducted in this sector. An inspection event is counted each time it is entered into a single media database.

Average Time Between Inspections - provides an average length of time, expressed in months, between compliance inspections at a facility within the defined universe.

Facilities With One or More Enforcement Actions - expresses the number of facilities that were the subject of at least one enforcement action within the defined time period. This category is broken down further into federal and state actions. Data are obtained for administrative, civil/judicial, and criminal state actions. A facility with multiple enforcement actions is only counted once in this column, e.g., a facility with 3 enforcement actions counts as 1 facility.

Total Enforcement Actions - describes the total number of enforcement actions identified for an industrial sector across all environmental statutes. A facility with multiple enforcement actions is counted multiple times (i.e., a facility with 3 enforcement actions counts as 3).

State Lead Actions - shows what percentage of the total enforcement actions are taken by state and local environmental agencies. Varying levels of use by states of EPA data systems may limit the volume of actions accorded state enforcement activity. Some states extensively report enforcement activities into EPA data systems, while other states may use their own data systems.

Federal Lead Actions - shows what percentage of the total enforcement actions are taken by the U.S. EPA. This value includes referrals from state agencies. Many of these actions result from coordinated or joint federal/state efforts.

Enforcement to Inspection Rate - is a ratio of enforcement actions to inspections, and is presented for comparative purposes only. The ratio is a rough indicator of the relationship between inspections and enforcement. It relates the number of enforcement actions and the number of inspections that occurred within the one-year or five-year period. This ratio includes inspections and enforcement actions reported under the Clean Water Act (CWA), the Clean Air Act (CAA) and the Resource Conservation and Recovery Act (RCRA). Inspections and actions from the TSCA/FIFRA/EPCRA database are not factored into this ratio because most of the actions taken under these programs are not the result of facility inspections. Also, this ratio does not account for enforcement actions arising from non-inspection compliance monitoring activities (e.g., self-reported water discharges) that can result in enforcement action within the CAA, CWA and RCRA.

Facilities with One or More Violations Identified - expresses the percentage of inspected facilities having a violation identified in one of the following data

categories: In Violation or Significant Violation Status (CAA); Reportable Noncompliance, Current Year Noncompliance, Significant Noncompliance (CWA); Noncompliance and Significant Noncompliance (FIFRA, TSCA, and EPCRA); Unresolved Violation and Unresolved High Priority Violation (RCRA). The values presented for this column reflect the extent of noncompliance within the measured time frame, but do not distinguish between the severity of the noncompliance. Violation status may be a precursor to an enforcement action, but does not necessarily indicate that an enforcement action will occur.

Media Breakdown of Enforcement Actions and Inspections - four columns identify the proportion of total inspections and enforcement actions within EPA Air, Water, Waste, and TSCA/FIFRA/EPCRA databases. Each column is a percentage of either the “Total Inspections,” or the “Total Actions” column.

V.C. Livestock Production Industry Compliance History

Exhibit 19 provides an overview of the reported compliance and enforcement data for the livestock sector over a 5-year period (March 1992 to March 1997). These data are also broken out by EPA regions thereby permitting geographical comparisons. A few points evident from the data are listed below.

Note: It should be noted that the data presented in this section represent federal enforcement activity only. Enforcement activity conducted at the state level is not included in this analysis.

- Of the 1,001 facilities identified through IDEA with livestock SIC codes, approximately 20 percent (205) were inspected in the last 5 years.
- Region 4 had more inspections (163) than other regions and the most enforcement actions (9), accounting for 29 percent of the total enforcement actions.
- Region 10 had only 3 percent of the total inspections, but had 16 percent of the total enforcement actions yielding the highest enforcement/inspection ratio of 0.29.
- The total inspections (600) conducted nationwide have resulted in 31 enforcement actions, which results in an enforcement-to-inspection rate of 0.05. This means that for every 100 inspections conducted, there are approximately 5 resulting enforcement actions.

- Enforcement actions were primarily state-led (84%). Regions 7 and 9 had no enforcement actions.
- Several regions (1, 4, 6, 7, 8, 10) had an average time between inspections of greater than 100 months.

Exhibit 19. Five-Year Enforcement and Compliance Summary for the Livestock Industry									
A	B	C	D	E	F	G	H	I	J
Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate
I	16	3	5	192	2	1	100%	0%	0.20
II	20	12	33	36	3	6	100%	0%	0.18
III	49	24	161	18	3	5	100%	0%	0.03
IV	304	67	163	112	7	9	56%	44%	0.06
V	69	18	42	99	2	3	100%	0%	0.07
VI	96	6	14	411	1	1	100%	0%	0.07
VII	217	11	20	651	0	0	--	--	--
VIII	122	23	67	109	1	1	100%	0%	0.01
IX	40	35	78	31	0	0	--	--	--
X	68	6	17	240	1	5	80%	20%	0.29
TOTAL	1,001	205	600	100	20	31	84%	16%	0.05

Comparison of Enforcement Activity Between Selected Industries

Exhibits 20 and 21 allow the compliance history of the livestock production sector to be compared to other industries covered by the sector notebooks. Comparisons between these exhibits permit the identification of trends in compliance and enforcement records of the various industries by comparing data covering a 5-year period (March 1992 to March 1997) to that of a 1-year period (March 1996 to March 1997). Some points evident from the data are listed below.

- The one-year enforcement-to-inspection ratio (0.01) is one-fifth of the five-year ratio (0.05).
- In the 5-year comparison, the average months between inspections (100) was more than any other sector.
- In Exhibit 20, the livestock production industry data approximate the averages of the industries shown for percent state-lead versus federal-led actions.
- In Exhibit 21, when compared to all sectors over the period March 1996 - March 1997, the livestock sector had the third fewest number of inspections conducted (146) and fewest enforcement actions (2).

Exhibits 22 and 23 provide a more in-depth comparison between the livestock production sector and other sectors by breaking out compliance and enforcement data by environmental statute. As in the previous exhibits (Exhibits 20 and 21), the data cover a 5-year period (Exhibit 22) and a 1-year period (Exhibit 23) to facilitate the identification of recent trends. Points evident from the data are listed below.

- As shown in Exhibit 22, over the past 5 years, more than half (57%) of all inspections conducted at livestock facilities and nearly two-thirds (65%) of all enforcement actions have been under the Clean Water Act. It should be noted that 3 percent of all enforcement actions were taken under the FIFRA/TSCA/EPCRA/Other category although no inspections were conducted within that category. This number is possible because in many EPA regions, media inspectors are being trained to examine the facility from a multimedia viewpoint.
- As shown in Exhibits 22 and 23, Clean Water Act inspections account for more than half (57% and 51%, respectively) of all inspections, with the Clean Air Act representing nearly all of the remaining inspections (38% and 48%, respectively). However, from March 1996 - March

1997, every single enforcement action taken was under the Clean Water Act.

Exhibit 20. Five-Year Enforcement and Compliance Summary for Selected Industries										
A	B	C	D	E	F	G	H	I	J	
Industry Sector	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percent State Lead Actions	Percent Federal Lead Actions	Enforcement to Inspection Rate	
Livestock	1,001	205	600	100	20	31	84%	16%	0.05	
Crop Production	6,688	3,046	10,453	38	141	262	73%	27%	0.03	
Metal Mining	1,232	378	1,600	46	63	111	53%	47%	0.07	
Coal Mining	3,256	741	3,748	52	88	132	89%	11%	0.04	
Oil and Gas Extraction	4,676	1,902	6,071	46	149	309	79%	21%	0.05	
Non-Metallic Mineral Mining	5,256	2,803	12,826	25	385	622	77%	23%	0.05	
Textiles	355	267	1,465	15	53	83	90%	10%	0.06	
Lumber and Wood	712	473	2,767	15	134	265	70%	30%	0.10	
Furniture	499	386	2,379	13	65	91	81%	19%	0.04	
Pulp and Paper	484	430	4,630	6	150	478	80%	20%	0.10	
Printing	5,862	2,092	7,691	46	238	428	88%	12%	0.06	
Inorganic Chemicals	441	286	3,087	9	89	235	74%	26%	0.08	
Resins and Manmade Fibers	329	263	2,430	8	93	219	76%	24%	0.09	
Pharmaceuticals	164	129	1,201	8	35	122	80%	20%	0.10	
Organic Chemicals	425	355	4,294	6	153	468	65%	35%	0.11	
Agricultural Chemicals	263	164	1,293	12	47	102	74%	26%	0.08	
Petroleum Refining	156	148	3,081	3	124	763	68%	32%	0.25	
Rubber and Plastic	1,818	981	4,383	25	178	276	82%	18%	0.06	
Stone, Clay, Glass and Concrete	615	388	3,474	11	97	277	75%	25%	0.08	
Iron and Steel	349	275	4,476	5	121	305	71%	29%	0.07	
Metal Castings	669	424	2,535	16	113	191	71%	29%	0.08	
Nonferrous Metals	203	161	1,640	7	68	174	78%	22%	0.11	
Fabricated Metal Products	2,906	1,858	7,914	22	365	600	75%	25%	0.08	
Electronics	1,250	863	4,500	17	150	251	80%	20%	0.06	
Automobile Assembly	1,260	927	5,912	13	253	413	82%	18%	0.07	
Aerospace	237	184	1,206	12	67	127	75%	25%	0.10	
Shipbuilding and Repair	44	37	243	9	20	32	84%	16%	0.13	
Ground Transportation	7,786	3,263	12,904	36	375	774	84%	16%	0.06	
Water Transportation	514	192	816	38	36	70	61%	39%	0.09	
Air Transportation	444	231	973	27	48	97	88%	12%	0.10	
Fossil Fuel Electric Power	3,270	2,166	14,210	14	403	789	76%	24%	0.06	
Dry Cleaning	6,063	2,360	3,813	95	55	66	95%	5%	0.02	

Exhibit 21. One-Year Enforcement and Compliance Summary for Selected Industries									
A	B	C	D	E		F		G	H
Industry Sector	Facilities in Search	Facilities Inspected	Number of Inspections	Facilities with 1 or More Violations		Facilities with 1 or more Enforcement Actions		Total Enforcement Actions	Enforcement to Inspection Rate
				Number	Percent*	Number	Percent*		
Livestock	1001	107	146	22	21%	2	2%	2	0.01
Crop Production	6688	1012	1459	866	86%	23	2%	29	0.02
Metal Mining	1,232	142	211	102	72%	9	6%	10	0.05
Coal Mining	3,256	362	765	90	25%	20	6%	22	0.03
Oil and Gas Extraction	4,676	874	1,173	127	15%	26	3%	34	0.03
Non-Metallic Mineral Mining	5,256	1,481	2,451	384	26%	73	5%	91	0.04
Textiles	355	172	295	96	56%	10	6%	12	0.04
Lumber and Wood	712	279	507	192	69%	44	16%	52	0.10
Furniture	499	254	459	136	54%	9	4%	11	0.02
Pulp and Paper	484	317	788	248	78%	43	14%	74	0.09
Printing	5,862	892	1,363	577	65%	28	3%	53	0.04
Inorganic Chemicals	441	200	548	155	78%	19	10%	31	0.06
Resins and Manmade Fibers	329	173	419	152	88%	26	15%	36	0.09
Pharmaceuticals	164	80	209	84	105%	8	10%	14	0.07
Organic Chemicals	425	259	837	243	94%	42	16%	56	0.07
Agricultural Chemicals	263	105	206	102	97%	5	5%	11	0.05
Petroleum Refining	156	132	565	129	98%	58	44%	132	0.23
Rubber and Plastic	1,818	466	791	389	83%	33	7%	41	0.05
Stone, Clay, Glass and Concrete	615	255	678	151	59%	19	7%	27	0.04
Iron and Steel	349	197	866	174	88%	22	11%	34	0.04
Metal Castings	669	234	433	240	103%	24	10%	26	0.06
Nonferrous Metals	203	108	310	98	91%	17	16%	28	0.09
Fabricated Metal	2,906	849	1,377	796	94%	63	7%	83	0.06
Electronics	1,250	420	780	402	96%	27	6%	43	0.06
Automobile Assembly	1,260	507	1,058	431	85%	35	7%	47	0.04
Aerospace	237	119	216	105	88%	8	7%	11	0.05
Shipbuilding and Repair	44	22	51	19	86%	3	14%	4	0.08
Ground Transportation	7,786	1,585	2,499	681	43%	85	5%	103	0.04
Water Transportation	514	84	141	53	63%	10	12%	11	0.08
Air Transportation	444	96	151	69	72%	8	8%	12	0.08
Fossil Fuel Electric Power	3,270	1,318	2,430	804	61%	100	8%	135	0.06
Dry Cleaning	6,063	1,234	1,436	314	25%	12	1%	16	0.01

*Percentages in Columns E and F are based on the number of facilities inspected (Column C). Percentages can exceed 100% because violations and actions can occur without a facility inspection.

Exhibit 22. Five-Year Inspection and Enforcement Summary by Statute for Selected Industries											
Industry Sector	Facilities Inspected	Total Inspections	Total Enforcement Actions	Clean Air Act		Clean Water Act		RCRA		FFRA/TSCA/EPCRA/Other	
				% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions
Livestock	205	600	31	38%	26%	57%	65%	3%	6%	0%	3%
Crop Production	3,046	10,453	262	72%	35%	11%	23%	13%	25%	3%	17%
Metal Mining	378	1,600	111	39%	19%	52%	52%	8%	12%	1%	17%
Coal Mining	741	3,748	132	57%	64%	38%	28%	4%	8%	1%	1%
Oil and Gas Extraction	1,902	6,071	309	75%	65%	16%	14%	8%	18%	0%	3%
Non-Metallic Mineral Mining	2,803	12,826	622	83%	81%	14%	13%	3%	4%	0%	3%
Textiles	267	1,465	83	58%	54%	22%	25%	18%	14%	2%	6%
Lumber and Wood	473	2,767	265	49%	47%	6%	6%	44%	31%	1%	16%
Furniture	386	2,379	91	62%	42%	3%	0%	34%	43%	1%	14%
Pulp and Paper	430	4,630	478	51%	59%	32%	28%	15%	10%	2%	4%
Printing	2,092	7,691	428	60%	64%	5%	3%	35%	29%	1%	4%
Inorganic Chemicals	286	3,087	235	38%	44%	27%	21%	34%	30%	1%	5%
Resins and Manmade Fibers	263	2,430	219	35%	43%	23%	28%	38%	23%	4%	6%
Pharmaceuticals	129	1,201	122	35%	49%	15%	25%	45%	20%	5%	5%
Organic Chemicals	355	4,294	468	37%	42%	16%	25%	44%	28%	4%	6%
Agricultural Chemicals	164	1,293	102	43%	39%	24%	20%	28%	30%	5%	11%
Petroleum Refining	148	3,081	763	42%	59%	20%	13%	36%	21%	2%	7%
Rubber and Plastic	981	4,383	276	51%	44%	12%	11%	35%	34%	2%	11%
Stone, Clay, Glass and Concrete	388	3,474	277	56%	57%	13%	9%	31%	30%	1%	4%
Iron and Steel	275	4,476	305	45%	35%	26%	26%	28%	31%	1%	8%
Metal Castings	424	2,535	191	55%	44%	11%	10%	32%	31%	2%	14%
Nonferrous Metals	161	1,640	174	48%	43%	18%	17%	33%	31%	1%	10%
Fabricated Metal	1,858	7,914	600	40%	33%	12%	11%	45%	43%	2%	13%
Electronics	863	4,500	251	38%	32%	13%	11%	47%	50%	2%	7%
Automobile Assembly	927	5,912	413	47%	39%	8%	9%	43%	43%	2%	9%
Aerospace	184	1,206	127	34%	38%	10%	11%	54%	42%	2%	9%
Shipbuilding and Repair	37	243	32	39%	25%	14%	25%	42%	47%	5%	3%
Ground Transportation	3,263	12,904	774	59%	41%	12%	11%	29%	45%	1%	3%
Water Transportation	192	816	70	39%	29%	23%	34%	37%	33%	1%	4%
Air Transportation	231	973	97	25%	32%	27%	20%	48%	48%	0%	0%
Fossil Fuel Electric Power	2,166	14,210	789	57%	59%	32%	26%	11%	10%	1%	5%
Dry Cleaning	2,360	3,813	66	56%	23%	3%	6%	41%	71%	0%	0%

Exhibit 23. One-Year Inspection and Enforcement Summary by Statute for Selected Industries											
Industry Sector	Facilities Inspected	Total Inspections	Total Enforcement Actions	Clean Air Act		Clean Water Act		RCRA		FIFRA/TSCA/EPCRA/Other	
				% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions
Livestock	107	146	2	48%	0%	51%	100%	1%	0%	0%	0%
Crop Production	1012	1459	29	71%	31%	13%	34%	16%	28%	0%	7%
Metal Mining	142	211	10	52%	0%	40%	40%	8%	30%	0%	30%
Coal Mining	362	765	22	56%	82%	40%	14%	4%	5%	0%	0%
Oil and Gas Extraction	874	1,173	34	82%	68%	10%	9%	9%	24%	0%	0%
Non-Metallic Mineral Mining	1,481	2,451	91	87%	89%	10%	9%	3%	2%	0%	0%
Textiles	172	295	12	66%	75%	17%	17%	17%	8%	0%	0%
Lumber and Wood	279	507	52	51%	30%	6%	5%	44%	25%	0%	40%
Furniture	254	459	11	66%	45%	2%	0%	32%	45%	0%	9%
Pulp and Paper	317	788	74	54%	73%	32%	19%	14%	7%	0%	1%
Printing	892	1,363	53	63%	77%	4%	0%	33%	23%	0%	0%
Inorganic Chemicals	200	548	31	35%	59%	26%	9%	39%	25%	0%	6%
Resins and Manmade Fibers	173	419	36	38%	51%	24%	38%	38%	5%	0%	5%
Pharmaceuticals	80	209	14	43%	71%	11%	14%	45%	14%	0%	0%
Organic Chemicals	259	837	56	40%	54%	13%	13%	47%	34%	0%	0%
Agricultural Chemicals	105	206	11	48%	55%	22%	0%	30%	36%	0%	9%
Petroleum Refining	132	565	132	49%	67%	17%	8%	34%	15%	0%	10%
Rubber and Plastic	466	791	41	55%	64%	10%	13%	35%	23%	0%	0%
Stone, Clay, Glass and Concrete	255	678	27	62%	63%	10%	7%	28%	30%	0%	0%
Iron and Steel	197	866	34	52%	47%	23%	29%	26%	24%	0%	0%
Metal Castings	234	433	26	60%	58%	10%	8%	30%	35%	0%	0%
Nonferrous Metals	108	310	28	44%	43%	15%	20%	41%	30%	0%	7%
Fabricated Metal	849	1,377	83	46%	41%	11%	2%	43%	57%	0%	0%
Electronics	420	780	43	44%	37%	14%	5%	43%	53%	0%	5%
Automobile Assembly	507	1,058	47	53%	47%	7%	6%	41%	47%	0%	0%
Aerospace	119	216	11	37%	36%	7%	0%	54%	55%	1%	9%
Shipbuilding and Repair	22	51	4	54%	0%	11%	50%	35%	50%	0%	0%
Ground Transportation	1,585	2,499	103	64%	46%	11%	10%	26%	44%	0%	1%
Water Transportation	84	141	11	38%	9%	24%	36%	38%	45%	0%	9%
Air Transportation	96	151	12	28%	33%	15%	42%	57%	25%	0%	0%
Fossil Fuel Electric Power	1,318	2,430	135	59%	73%	32%	21%	9%	5%	0%	0%
Dry Cleaning	1,234	1,436	16	69%	56%	1%	6%	30%	38%	0%	0%

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VI. REVIEW OF MAJOR LEGAL ACTIONS AND COMPLIANCE/ENFORCEMENT STRATEGIES

This section provides summary information about major cases that have affected the livestock production industry, as well as regional highlights of CAFO compliance/enforcement strategies.

Usually, this section also contains information on any supplemental environmental projects (SEPs) that were negotiated. SEPs are compliance agreements that reduce a facility's stipulated penalty in return for an environmental project that exceeds the value of the reduction. However, no information on SEPs in this sector was discovered during the research process. Often, these projects fund pollution prevention activities that can significantly reduce the future pollutant loadings of a facility. To learn more about SEPs, go to <http://www.epa.gov/oeca/sep>.

Review of Major Cases

A review of EPA's FY92 and FY93 *Enforcement Accomplishments Report* and the FY94 through FY98 *Enforcement and Compliance Assurance Accomplishments Report* identified several cases involving the livestock production industry. These cases are discussed below.

- In February 1999, EPA cited David Jaindl, president of Jaindl Land Company, for filling in federally protected wetlands at a turkey farm. EPA has alleged that Mr. Jaindl violated the Clean Water Act by filling three acres of wetlands at the farm in September and October 1998 without a required permit from the U.S. Army Corps of Engineers. EPA is seeking a \$44,000 penalty for this violation.
- In October 1996, an Administrative Penalty Order (APO) with a \$25,000 penalty was administered against *Del Oro Dairy* of New Mexico for failing to provide a Pollution Prevention Plan as required by the NPDES General Permit for Concentrated Animal Feeding Operations. This violation occurred from 1994 thru 1996. In March 1997, another Administrative Penalty Order and \$5,500 fine was issued for failure to complete and implement a Pollution Prevention Plan. These enforcement actions are intended to prevent the pollution of the groundwater by requiring the facility to apply good management practices.
- *United States v. Harry James Saul and Ronnie Snead*: Harry Saul, part owner and operator of Harry Saul Minnow Farm, Inc., Prairie County, Arkansas, and a company employee, Ronnie Snead, were sentenced on June 19, 1996 by Federal Magistrate Henry Jones for a misdemeanor

violation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The defendants had mixed furadan, a restricted use pesticide, with minnows and spread the treated minnows on a levee on the minnow farm to control nuisance birds. Saul was ordered to pay a \$5,000 fine and Snead a \$1,000 fine for use inconsistent with the label. The defendants are appealing the Court's judgement.

- During fiscal year 1996, *Esplin Dairy* allegedly discharged approximately 900,000 pounds per year of animal waste to a slough discharging to Nehalem Bay, Oregon. In response to an EPA order, the dairy set up a system to keep manure from contaminating clean water and installed a 10,000 gallon tank to collect wastewater before pumping it to larger containment facilities. The wastewater is high in fecal coliform bacteria, BOD, TSS, and nutrients.
- The *Four Brothers Dairy* paid a penalty of \$7,350 in fiscal year 1996 for the alleged unpermitted discharge of an estimated 561,000 gallons of wastewater from its Shoshone, Idaho dairy to a canal draining to the Snake River. EPA measured fecal coliform levels as high as 180,000 colonies/100ml in the wastewater in the canal.
- *Gienger Farms, Inc.* allegedly discharged approximately 1.3 million gallons of manure-laden wastewater to drainage ditches flowing into the Tillamook Bay, Oregon, without a permit. In fiscal year 1996, in response to an EPA administrative complaint, the farm paid a \$20,000 penalty and modified its operations to separate clean water from contaminated material, thereby extending the holding capacity of its wastewater storage lagoon from two to 57 days. In addition, the facility began monitoring and managing its land application practices, thus preventing the discharge of wastewater containing about 6,435 pounds of BOD and TSS to waters of the U.S.
- In fiscal year 1996, *Misty Meadow Dairy* agreed to pay a \$6,000 fine for the alleged unpermitted discharge of about 685,000 pounds of manure per year to navigable waters flowing into Tillamook Bay, Oregon. The dairy is expected to sell half of its herd in order to allow more flexibility in managing waste accumulations.
- In fiscal year 1996, *Veeman Dairy* paid a \$1,000 penalty for allegedly discharging 52 to 78 million gallons of wastewater to navigable waters flowing into the Willamette River, Oregon. In response to a separate compliance order, the dairy will repair and maintain its wastewater storage ponds to eliminate future discharges.

- In March 1998, a significant criminal enforcement case was taken by the California Resource Board. The U.S. District Court assessed the operator of the *3H Dairy Farm* in Oakdale, CA a \$100,000 fine; \$101,000 in farm improvements; 90 days in jail; 90 days of home confinement; and 4 years of probation for repeatedly violating state water pollution laws.

Regional Initiatives

According to the FY 1997 and FY 1998 *Enforcement and Compliance Assurance Accomplishments Reports*, several regions targeted their enforcement efforts on agricultural practices during these fiscal years. It should be noted that while CAFOs were the primary focus within the agriculture sector, there were other agriculture activities as well. Some of the Regional initiatives included the following:

- During FY 96, **Region 6** conducted CAFO inspections in the states of Oklahoma, Texas, and New Mexico. These resulted in the EPA issuing five Orders for non-compliance and two Administrative Penalty Orders. The State of Texas also issued penalty actions to three dairies for violation of the State permit. Region 6's emphasis on CAFOs was on the NPDES general permit and its implementation. Six EPA and 24 state CAFO inspections were conducted in FY97 to determine whether facilities were compliant with the CAFO general permit. The region continues to improve its knowledge of the numbers of facilities by the improvement of the database in all states.
- In FY 1997, **Region 7** states took 26 enforcement actions against feedlots for water quality-related violations. In FY 1998, Iowa settled 13 CAFO cases with penalties of \$21,238; Kansas settled 4 CAFO cases with \$77,520 in penalties; Missouri settled 12 CAFO cases with \$20,256 in penalties; and Nebraska settled 2 CAFO cases with \$1,700 in penalties.
- In February 1997, **Region 9** initiated a Regional Agriculture Team to complement the Agriculture Initiative team by developing a Regional Agriculture Strategy and incorporating agriculture pollution prevention principles into core agency programs.
- Through the **Region 10** CAFO Whatcom County Initiative, the Region conducted NPDES inspections at 67 targeted facilities; six were issued penalties, three were designated as significant contributors of pollutants, six were issued certificates of merit, and 52 were issued warning letters.

CAFO Compliance/Enforcement Strategies

EPA concluded a total of 93 enforcement cases against this sector in fiscal years 1997, 1998, and 1999 with a total of \$163,000 in penalties. In FY 98, Regions conducted 339 compliance inspections. Each Region is working with its NPDES States to develop and implement individual state specific CAFO strategies. Regional highlights include:

- **Region 3** served as the EPA lead on the recently concluded national Poultry Dialog which included recommendations for actions by the poultry industry. Recently, in a key action growing out of the dialog, Perdue Farms Inc. agreed to help farmers dispose of chicken waste in the Delmarva peninsula region.
- **Region 6** held 5 outreach meetings in 4 states in 1998. The Region conducted 95 inspections resulting in 20 administrative orders and 2 administrative penalties.
- **Region 7** initiated a compliance tracking system to collect accurate and readily available information about state CAFO enforcement actions and penalty amounts. The Region also developed maps of CAFO locations in Iowa and Kansas by using state databases.
- **Region 9's** approach combines compliance assistance and inspections/enforcement. The Region is one of 20+ partners of the California Dairy Initiative which seeks to combine education, outreach, nutrient management plans with third party certification. In addition, the Region has developed an inspection targeting approach based on herd size and proximity to surface water. In 1998, the region conducted 133 inspections in 3 counties. The region issued 3 compliance orders and 2 penalty orders against dairy operators.
- **Region 10** expanded its compliance enforcement focus to include an additional 4 other counties in Western Washington State. The Region conducted 58 inspections resulting in 11 compliance orders/penalties; 3 compliance orders only; and 33 warning letters. Facilities found in compliance were issued courtesy letters. EPA's efforts have succeeded in raising public awareness as indicated by real-estate appraisers asking if EPA has any concerns about the facilities they are appraising.

VII. COMPLIANCE ASSURANCE ACTIVITIES AND INITIATIVES

This section highlights the activities undertaken by this industry sector and public agencies to voluntarily improve the sector's environmental performance. These activities include those independently initiated by industrial trade associations. In this section, the notebook also contains a listing and description of national and regional trade associations.

VII.A. Sector-Related Environmental Programs and Activities

There are several federal programs available to the agricultural community to assist agricultural producers in complying with environmental regulations and reducing pollution. The following examples represent some industry initiatives that promote compliance or assess methods to reduce environmental contamination.

National Agriculture Compliance Assistance Center

The U.S. Environmental Protection Agency (EPA), with the support of the Department of Agriculture (USDA), has developed a national Agriculture Compliance Assistance Center (Ag Center) to provide a base for “first-stop shopping” for the agricultural community -- one place for the development of comprehensive, easy-to-understand information about approaches to compliance that are both environmentally protective and agriculturally sound. The Ag Center, a program offered by EPA’s Office of Compliance, seeks to increase compliance by helping the agricultural community identify flexible, common sense ways to comply with the many environmental requirements that affect their business. Initial efforts will focus on providing information about EPA's requirements. The Ag Center will rely heavily on existing sources of agricultural information and established distribution mechanisms. The Ag Center is designed so growers, livestock producers, other agribusinesses, and agricultural information/education providers can access its resources easily -- through telephone, fax, mail, and Internet. The Ag Center website can be accessed at <http://www.epa.gov/oeca/ag>.

Unified National Strategy for Animal Feeding Operations

As part of President Clinton’s Clean Water Action Plan (CWAP), a USDA-EPA unified national strategy has been developed to minimize the water quality and public health impacts of animal feeding operations (AFOs). AFOs are agricultural enterprises where animals are kept and raised in confined situations and have been shown to contribute to significant problems in surface waters. Such problems have included nutrient loading, fish kills, and odors. AFOs are agricultural livestock facilities that confine feeding activities, concentrating livestock and their manure. There are approximately

450,000 AFOs in the U.S. Of these, 6,600 were concentrated AFOs, or CAFOs. CAFOs pose a greater environmental threat, since they confine larger numbers of animals. Less than a quarter of CAFOs have Clean Water Act permits to control the amount of wastes that run off into waterways.

The Unified National Strategy for Animal Feeding Operations presents USDA and EPA's plan for addressing the water quality and public health impacts associated with AFOs. USDA and EPA issued the final Strategy in March 1999. The USDA-EPA Unified National Strategy for Animal Feeding Operations reflects several guiding principles:

- Minimize water quality and public health impacts from AFOs.
- Focus on AFOs that represent the greatest risks to the environment and public health.
- Ensure that measures to protect the environment and public health complement the long-term sustainability of livestock production in the United States.
- Establish a national goal and environmental performance expectations for all AFOs.
- Promote, support, and provide incentives for the use of sustainable agricultural practices and systems.
- Build on the strengths of USDA, EPA, State and Tribal agencies, and other partners and make appropriate use of incentive-based approaches.
- Foster public confidence that AFOs are meeting their performance expectations and that USDA, EPA, local governments, States, and Tribes are ensuring the protection of water quality and public health.
- Coordinate activities among the USDA, EPA, and related State and Tribal agencies and other organizations that influence the management and operation of AFOs.
- Focus technical and financial assistance to support AFOs in meeting the national goal and performance expectation established in this Strategy.

USDA and EPA's goal is for AFO owners and operators to take actions to minimize water pollution from confinement facilities and land application of manure. To accomplish this goal, this Strategy is based on a national performance expectation that all AFOs should develop and implement technically sound, economically feasible, and site-specific Comprehensive Nutrient Management Plans (CNMPs) to minimize impacts on water quality and public health.

This Strategy describes short- and long- term activities to implement and improve the existing regulatory program using a two-phased approach to permitting CAFOs. During Round I, beginning in about 2000, EPA and States will issue permits to CAFOs under the existing National Pollutant Discharge

Elimination System (NPDES) regulations. During Round II, beginning in about 2005, EPA and States will reissue NPDES permits to CAFOs based on revised effluent guidelines for feedlots, as well as revised regulations for NPDES permitting and any other new information. During Round I and Round II, State NPDES permitting authorities will have flexibility to define specific permitting approaches within their existing programs. For more information, the complete unified national strategy can be accessed at <http://www.epa.gov/owm/finafost.htm>.

Compliance Assurance Implementation Plan For Concentrated Animal Feeding Operations

The Office of Enforcement and Compliance Assurance (OECA) is making implementation of the existing concentrated animal feeding operation (CAFO) regulations a priority. The purpose of the implementation plan is to protect and enhance water quality by ensuring compliance with the Clean Water Act and its implementing requirements. The Plan's major elements are: 1) strong state and regional compliance/enforcement partnerships; 2) effective state specific compliance/enforcement strategies; 3) productive, coordinated compliance assistance activities; 4) strong compliance monitoring programs; 5) effective enforcement; 6) better data/information on CAFOs for targeting compliance assistance and inspections; and 7) plans for developing a feedback mechanism to EPA, states, and other federal agencies. This plan was finalized in March 1998. For more information, refer to <http://es.epa.gov/oeca/strategy.html>.

VII.B. EPA Programs and Activities

Section 319 Nonpoint Source Management Program

In 1987, Congress amended the Clean Water Act (CWA) to establish the §319 Nonpoint Source Management Program in recognition of the need for greater federal leadership to help focus state and local nonpoint source efforts. Under §319, states, territories, and Indian tribes receive grant money to support a wide variety of activities, including technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and monitoring to assess the success of specific nonpoint source implementation projects. For more information about the Clean Water Act §319 Program refer to EPA's Office of Water website at <http://www.epa.gov/OWOW/NPS/sec319.html>.

Clean Lakes Program

EPA's Clean Lakes Program supports a variety of lake management activities including classification, assessment, study, and restoration of lakes. The program, authorized in §314 of the Clean Water Act, was established to provide technical and financial assistance to states/tribes for restoring the

quality of publicly owned lakes. The Clean Lakes Program has funded approximately \$145 million for grant activities since 1976 to address lake problems, but there have been no appropriations for the program since 1994. EPA has not requested funds for the Clean Lakes Program in recent years, but has encouraged states to use §319 funds to fund “eligible activities that might have been funded in previous years under Section 314.” Information on the Clean Lakes Program is available at the following Internet site:
<http://www.epa.gov/owow/lakes/cllkspgm.html>.

National Estuary Program

EPA’s National Estuary Program is a national demonstration program, authorized in §320 of the Clean Water Act, that uses a comprehensive watershed management approach to address water quality and habitat problems in 17 estuaries. Nonpoint source pollution is a major contributor of contaminants in the estuary and coastal waters around the country. In this program, EPA and states/tribes develop conservation and management plans that recommend priority corrective actions to restore estuarine water quality, fish populations, and other designated uses of the waters. Information on the National Estuary Program is available at the following Internet site:
<http://www.epa.gov/owowwtr1/estuaries/nep.html> or by contacting the National Estuary Program Office at (202) 260-1952.

Chesapeake Bay Program and The Great Lakes National Program

EPA’s Chesapeake Bay Program and the Great Lakes National Program focus substantial resources on understanding the extent of nonpoint source pollution problems in their respective watersheds and supporting State implementation of non-point source pollution controls. Since 1984, the Chesapeake Bay Program, in particular, has supported the implementation of a substantial amount of animal waste management practices through State cost share programs funded jointly by the Bay States and EPA. Information on the Chesapeake Bay Program is available at
<http://www.epa.gov/owowwtr1/ecoplaces/part1/site2.html>. Information on The Great Lakes National Program is available at <http://www.epa.gov/glnpo/>.

AgSTAR Program

The AgSTAR program is a voluntary program that promotes the use of profitable manure management systems that reduce pollution. The program, a component of President Clinton’s Climate Action Plan, is based on a computer model that shows the economic value of capturing the methane naturally produced by manure.

AgSTAR, a joint program of EPA, USDA, and the Department of Energy, helps agricultural producers determine which methane recovery and use technologies will work best for them, and develops financing sources to help with start-up costs. By investing in these technologies, AgSTAR participants

realize substantial returns through reduced electrical, gas, and oil bills, revenues from high quality manure by-products, and savings on manure management operational costs. Partners also reduce pollution associated with water resources, odors, and global warming. Information on AgSTAR is available at the following Internet site:
<http://yosemite.epa.gov/methane/home.nsf/pages/agstar>.

Ruminant Livestock Efficiency Program (RLEP)

Ruminant livestock such as cattle and sheep are the largest source of methane emissions resulting from human activity. Methane, produced as part of the animals' normal digestive process, is a potent greenhouse gas that contributes to global climate change. By improving livestock production efficiency, producers can both increase profits and reduce methane emissions.

The RLEP is a joint EPA-USDA program helping livestock producers improve their operations' efficiency, preserve the nation's natural resources and reduce methane emissions. The program focuses on reducing livestock methane emissions and producing economic benefits by offering technical assistance to producers around the country. For more information, review the Program Overview at <http://yosemite.epa.gov/methane/home.nsf/pages/rlep> to learn how RLEP is helping improve the environment and livestock producers' profits.

Pesticide Environmental Stewardship Program

EPA's Pesticide Environmental Stewardship Program (PESP) is a voluntary program dedicated to protecting human health and preserving the environment by reducing the risks associated with pesticide use. The partnership is a key element of the program, which is sponsored by EPA, USDA, and FDA. Current partners include agricultural producers as well as non-agricultural interests. Partners in PESP volunteer to develop and implement a well designed pesticide management plan that will produce the safest and most effective way to use pesticides. In turn, EPA provides a liaison to assist the partner in developing comprehensive, achievable goals. Liaisons act as "customer service representatives" for EPA, providing the partner with access to information and personnel. EPA also promises to integrate the partners' stewardship plans into its agricultural policies and programs.

So far, agricultural producers have committed to a number of projects, including conducting more research into IPM techniques, developing computer prediction models for more precise pesticide applications, educating their members and the public regarding pesticide use, and working with

Focus on Pesticides

EPA's Endangered Species Protection Program is designed to protect Federally-listed endangered and threatened species from exposure to pesticides.

equipment manufacturers to refine application techniques. Information on PESP is available at the following Internet site: <http://www.pesp.org>, or contact the PESP hotline at (800) 972-7717.

Endangered Species Protection Program

The Endangered Species Protection Program (ESPP) began in 1988. This program is largely voluntary at the present time and relies on cooperation between the U.S. Fish and Wildlife Service (FWS), EPA Regions, States, and pesticide users. ESPP is intended to provide information concerning and regulation for the use of pesticides that may adversely affect the survival, reproduction and/or food supply of listed species. Due to labeling requirements, potential users will be informed prior to making a purchase that there may be local limitations on product use due to endangered species concerns. Information on the Endangered Species Protection Program is available at the following Internet site:
<http://www.epa.gov/oppfead1/endanger/index.htm>.

Energy Star® Buildings and Green Lights® Partnership

In 1991, EPA introduced Green Lights®, a program designed for businesses and organizations to proactively combat pollution by installing energy-efficient lighting technologies in their commercial and industrial buildings. In April 1995, Green Lights® expanded into Energy Star® Buildings—a strategy that optimizes whole-building energy-efficiency opportunities. The energy needed to run commercial and industrial buildings in the United States produces 19 percent of U.S. carbon dioxide emissions, 12 percent of nitrogen oxides, and 25 percent of sulfur dioxide, at a cost of \$110 billion a year. If implemented in every U.S. commercial and industrial building, the Energy Star® Buildings upgrade approach could prevent up to 35 percent of the emissions associated with these buildings and cut the nation's energy bill by up to \$25 billion annually.

The more than 2,900 participants include corporations, small businesses, universities, health care facilities, nonprofit organizations, school districts, and federal and local governments. As of March 31, 1999, Energy Star® Buildings and Green Lights® Program participants are saving \$775 million in energy bills with an annual savings of 31.75 kilowatt per square foot and annual cost savings of \$0.47 per square foot. By joining, participants agree to upgrade 90 percent of their owned facilities with energy-efficient lighting and 50 percent of their owned facilities with whole-building upgrades, where profitable, over a seven-year period. Energy Star® participants first reduce their energy loads with the Green Lights® approach to building tune-ups, then focus on “right sizing” their heating and cooling equipment to match their new energy needs. EPA's Office of Air and Radiation is responsible for operating the Energy Star® Buildings and Green Lights® Program. (Contact: Energy Star Hotline,

1-888-STAR-YES (1-888-782-7937) or Maria Tikoff Vargas, Co-Director at (202) 564-9178 or visit the website at <http://www.epa.gov/buildings>.

WasteWi\$e Program

The WasteWi\$e Program was started in 1994 by EPA's Office of Solid Waste and Emergency Response. The program is aimed at reducing municipal solid wastes by promoting waste prevention, recycling collection, and the manufacturing and purchase of recycled products. As of 1998, the program had about 700 business, government, and institutional partners. Partners agree to identify and implement actions to reduce their solid wastes by setting waste reduction goals and providing EPA with yearly progress reports for a three-year period. EPA, in turn, provides partners with technical assistance, publications, networking opportunities, and national and regional recognition. (Contact: WasteWi\$e Hotline at (800) 372-9473 or Joanne Oxley, EPA Program Manager, (703) 308-0199.)

Climate Wise Program

In October 1993, President Clinton unveiled the Climate Change Action Plan (CCAP) in honor of the United States' commitment to reducing its greenhouse gas emissions to 1990 levels by the year 2000. Climate Wise, a project jointly sponsored by the U.S. Department of Energy and EPA, is one of the projects initiated under CCAP.

Climate Wise is a partnership between government and industry that offers companies a nonregulatory approach to reducing greenhouse gas emissions. Climate Wise state and local government "allies" work with U.S. industries to develop flexible, comprehensive strategies for achieving energy efficiency and pollution prevention. They help local business identify and implement projects that often require little capital investment, but promise a high rate of return. Companies that become Climate Wise partners receive technical assistance and financing information to help them develop and implement cost-effective changes. (Contact: Climate Wise Clearinghouse at (301) 230-4736 or visit the Climate Wise website at <http://www.epa.gov/climatewise/allies.htm> or <http://www.epa.gov/climatewise/index.htm>.)

VII.C. USDA Programs and Activities**Environmental Quality Incentives Program**

The Environmental Quality Incentives Program (EQIP) is a USDA funded program (led by Natural Resources Conservation Service) that was established in the 1996 Farm Bill to provide a voluntary conservation program for farmers and ranchers who face serious threats to soil, water, and related natural resources. EQIP embodies four of USDA's former conservation programs, including the Agricultural Conservation Program, the Water Quality

Incentives Program, the Great Plains Conservation Program, and the Colorado River Basin Salinity Control Program.

EQIP offers 5 to 10 year contracts that provide *incentive payments* and *cost-sharing* for conservation practices called for in a site-specific conservation plan that is required for all EQIP activities. *Cost-sharing* may include up to 75 percent of the costs of certain conservation practices, such as grassed waterways, filter strips, manure management facilities, capping abandoned wells, and other practices. *Incentive payments* may be made to encourage land management practices such as nutrient management, manure management, integrated pest management, irrigation water management, and wildlife habitat management. These payments may be provided for up to three years to encourage producers to carry out management practices they may not otherwise use without the program incentive.

EQIP has an authorized budget of \$1.3 billion through the year 2002. It was funded for \$174 million in 1999. Total cost-share and incentive payments are limited to \$10,000 per person per year and \$50,000 for the length of the contract. Eligibility is limited to persons who are engaged in livestock or agricultural production. Fifty percent of the funds must be spent on livestock production. The 1996 Farm Bill prohibits owners of large confined livestock operations from being eligible for cost-share assistance for animal waste storage or treatment facilities. However, technical, educational, and financial assistance may be provided for other conservation practices on such operations. Further information relating to EQIP may be found on NRCS's website located at <http://www.nhq.nrcs.usda.gov/OPA/FB96OPA/eqipfact.html>.

Conservation Reserve Program

The Conservation Reserve Program (CRP) is a highly successful conservation program administered by USDA. Since 1986, CRP has provided financial incentives to farmers and ranchers to take land out of agricultural production and plant trees, grass and other types of vegetation. The result has been reduced soil erosion, improved air and water quality and establishment of millions of acres of wildlife habitat.

With the New Conservation Reserve Program, launched with the final rule published in the Federal Register on February 19, 1997, the Farm Service Agency (FSA) begins a renewed effort to achieve the full potential of government-farmer conservation partnerships. Only the most environmentally-sensitive land, yielding the greatest environmental benefits, will be accepted into the program.

The 36.4-million-acre congressionally mandated cap on enrollments is carried over from the previous program, meaning that the new CRP has authority to

enroll only about 15 percent of the eligible cropland. To make the most of the program's potential, a new Environmental Benefits Index (EBI) was developed. The new EBI will be used to select areas and acreages offering the greatest environmental benefits.

Conservation priority areas (CPAs) are regions targeted for CRP enrollment. The four national CPAs are the Long Island Sound region, the Chesapeake Bay and surrounding areas, an area adjacent to the Great Lakes, and the Prairie Pothole region. FSA State Committees may also designate up to 10 percent of a State's remaining cropland as a State Conservation Priority Area. The NRCS is responsible for determining the relative environmental benefits of each acre offered for participation.

Continuous Sign-Up. For certain high-priority conservation practices yielding highly desirable environmental benefits, producers may sign up at any time, without waiting for an announced sign-up period. Continuous sign-up allows farmers and ranchers management flexibility in implementing certain conservation practices on their cropland. These practices are specially designed to achieve significant environmental benefits, giving participants a chance to help protect and enhance wildlife habitat, improve air quality, and improve the condition of America's waterways. Unlike the general CRP program, sign-up for these special practices is open continuously. Provided certain eligibility requirements are met, acreage is automatically accepted into the program at a per-acre rental rate not to exceed the Commodity Credit Corporation's maximum payment amount, based on site-specific soil productivity and local prevailing cash-equivalent rental rates. For more information on the CRP, see USDA's website at <http://www.fsa.usda.gov/dafp/cepd/crpinfo.htm>.

Conservation Reserve Enhancement Program

The Conservation Reserve Enhancement Program (CREP), a refinement of the CRP, is a state-federal conservation partnership program targeted to address *specific* state and nationally significant water quality, soil erosion and wildlife habitat issues related to agricultural use. The program uses financial incentives to encourage farmers and ranchers to voluntarily enroll in contracts of 10 to 15 years in duration to remove lands from agricultural production. This community-based conservation program provides a flexible design of conservation practices and financial incentives to address environmental issues. For more information about CREP, refer to USDA's website at <http://www.fsa.usda.gov/dafp/cepd/crep/crephome.htm>.

Wetlands Reserve Program

Congress authorized the Wetlands Reserve Program (WRP) under the Food Security Act of 1985, as amended by the 1990 and 1996 Farm Bills. USDA's Natural Resources Conservation Service (NRCS) administers the program in

consultation with the Farm Service Agency and other Federal agencies. WRP is a voluntary program to restore wetlands. Landowners who choose to participate in WRP may sell a conservation easement or enter into a cost-share restoration agreement with USDA to restore and protect wetlands. The landowner voluntarily limits future use of the land, yet retains private ownership.

WRP offers landowners three options: *permanent easements*, *30-year easements*, and *restoration cost-share agreements* of a minimum 10-year duration. In exchange for establishing a *permanent easement*, the landowner receives payment up to the agricultural value of the land and 100 percent of the restoration costs for restoring the wetland. In exchange for the *30-year easement*, the landowner receives a payment of 75 percent of what would be provided for a permanent easement on the same site and 75 percent of the restoration cost. The *restoration cost-share agreement* is an agreement (generally for a minimum of 10 years) to re-establish degraded or lost wetland habitat, in which USDA pays the landowner 75 percent of the cost of the restoration activity. Restoration cost-share agreements establish wetland protection and restoration as the primary land use for the duration of the agreement. In all instances, landowners continue to control access to their land. For more information about WRP, see NRCS's website at: <http://wl.fb-net.org>.

Conservation Farm Option

The Conservation Farm Option (CFO) is a voluntary pilot program for producers of wheat, feed grains, cotton, and rice. The program purposes include conservation of soil, water, and related resources, water quality protection and improvement, wetland restoration, protection and creation, wildlife habitat development and protection, or other similar conservation purposes. Eligibility is limited to owners and producers who have contract acreage enrolled in the Agricultural Market Transition program. Participants are required to develop and implement a conservation farm plan. The plan becomes part of the CFO contract which covers a ten year period. CFO is not restricted as to what measures may be included in the conservation plan, so long as they provide environmental benefits. During the contract period the owner or producer (1) receives annual payments for implementing the CFO contract, and (2) agrees to forgo payments under the Conservation Reserve Program, the Wetlands Reserve Program, and the Environmental Quality Incentives Program in exchange for one consolidated program.

Wildlife Habitat Incentives Program

The Wildlife Habitat Incentives Program (WHIP) is a voluntary program (administered by NRCS) for people who want to develop and improve wildlife habitat primarily on private lands. It provides both technical assistance and cost-share payments to help establish and improve fish and wildlife habitat.

Under this program, NRCS helps participants prepare a wildlife habitat development plan in consultation with the local conservation district. The plan describes the landowner's goals for improving wildlife habitat, includes a list of practices and a schedule for installing them, and details the steps necessary to maintain the habitat for the life of the agreement. This plan may or may not be part of a larger conservation plan that addresses other resource needs such as water quality and soil erosion.

USDA and the participant enter into a cost-share agreement that generally lasts between 5 to 10 years from the date the agreement is signed. Under the agreement: the landowner agrees to install and maintain WHIP practices and allow NRCS or its agent access to monitor the effectiveness of the practices; and USDA agrees to provide technical assistance and pay up to 75 percent of the cost of installing the wildlife habitat practices.

WHIP is currently budgeted for \$50 million total through the year 2002. WHIP funds are distributed to States based on State wildlife habitat priorities, which may include wildlife habitat areas, targeted species and their habitats, and specific practices. WHIP may be implemented in cooperation with other Federal, State, or local agencies; conservation districts; or private conservation groups. For more information, see NRCS's website at <http://www.nrcs.usda.gov>.

Conservation of Private Grazing Land Initiative

The Conservation of Private Grazing Land initiative will ensure that technical, educational, and related assistance is provided to those who own private grazing lands. It is not a cost share program. This technical assistance will offer opportunities for better grazing and land management; protecting soil from erosive wind and water; using more energy-efficient ways to produce food and fiber; conserving water; providing habitat for wildlife; sustaining forage and grazing plants; using plants to sequester greenhouse gases and increase soil organic matter; and using grazing lands as a source of biomass energy and raw materials for industrial products.

The Wetland Conservation Provision (Swampbuster)

This provision, part of the 1985, 1990, and 1996 farm bills, requires all agriculture producers to protect wetlands on the farms they own or operate if they want to be eligible for USDA farm program benefits. The Swampbuster program generally allows the continuation of most ongoing farming practices as long as wetlands are not converted or wetland drainage increased. The program discourages farmers from altering wetlands by withholding Federal farm program benefits from any person who does the following:

- S** Plants an agricultural commodity on a converted wetland that was converted by drainage, dredging, leveling or any other means after December 23, 1985.
- S** Converts a wetland for the purpose of or to make agricultural commodity production after November 28, 1990.

In order to ensure farm program benefits under the Swampbuster provisions, the local NRCS office should be contacted before clearing, draining, or manipulating any wet areas on any farmland.

VII.D. Other Voluntary Initiatives

NICE³

The U.S. Department of Energy sponsors a grant program called National Industrial Competitiveness through Energy, Environment, and Economics (NICE³). The NICE³ program provides funding to state and industry partnerships (large and small businesses) for projects demonstrating advances in energy efficiency and clean production technologies. The goal of the NICE³ program is to demonstrate the performance and economics of innovative technologies in the U.S., leading to the commercialization of improved industrial manufacturing processes. These processes should conserve energy, reduce waste, and improve industrial cost-competitiveness. Industry applicants must submit project proposals through a state energy, pollution prevention, or business development office. Awardees receive a one-time, three-year grant of up to \$400,000, representing up to 50 percent of a project's total cost. In addition, up to \$25,000 is available to support the state applicant's cost share. (Contact: View the website at <http://www.oit.doe.gov/Access/nice3>; Steve Blazek, DOE, (303) 275-4723; or Eric Hass, DOE, (303) 275-4728.)

ISO 14000

ISO 14000 is a series of internationally-accepted standards for environmental management. The series includes standards for environmental management systems (EMS), guidelines on conducting EMS audits, standards for auditor qualifications, and standards and guidance for conducting product lifecycle analysis. Standards for auditing and EMS were adopted in September 1996, while other elements of the ISO 14000 series are currently in draft form. While regulations and levels of environmental control vary from country to country, ISO 14000 attempts to provide a common standard for environmental management. The governing body for ISO 14000 is the International Organization for Standardization (ISO), a worldwide federation of over 110 country members based in Geneva, Switzerland. The American National Standards Institute (ANSI) is the United States representative to ISO. Information on ISO is available at the following Internet site: <http://www.iso.ch/welcome.html>.

VII.E. Summary of Trade Associations

There are more than 200 trade associations that deal with agricultural issues. Many of these are at the national level, while others deal specifically with regions of the country or individual states. The following identify some of the major associations addressing agricultural production.

American Dairy Goat Association
 Ronald E. Gelvin, Secretary
 Treasurer
 P.O. Box 865
 209 W. Main Street
 Spindale, NC 28160
 Telephone: 704-286-3801
 Fax: 704-287-0476

American Dairy Association
 10255 W. Higgins
 Rosemont, IL 60018
 Telephone: 847-803-2000
 Fax: 847-803-2077

Washington, DC office
 600 Maryland Avenue, SW
 Washington, DC 20024
 Telephone: 202-484-3600
 Fax: 202-484-3604

American Hereford Association
 Craig Huffhines,
 Executive Vice President
 P.O. Box 014059
 Kansas City, MO 64101
 Telephone: 816-842-3757
 Fax: 816-842-6931

American Horse Council
 James J. Hickey, Jr., President
 1700 K Street, NW, # 300
 Washington, DC 20006
 Telephone: 202-296-4031
 Fax: 202-296-1970

American Equine Association
 Carol Winterburger, Executive
 Director
 Box 658
 Newfoundland, NJ 07435
 Telephone: 973-697-9668
 Fax: 973-697-1538

American Farm Bureau Federation
 Headquarters office
 225 Touhy Avenue
 Park Ridge, IL 60068
 Telephone: 847-685-8600
 Fax: 847-685-8896

National Broilers Council
 George B. Watts
 1015 15th Street, NW, Suite 950
 Washington, DC 20005
 Telephone: 202-408-1339

National Cattlemen's Beef Assoc.
 Charles Schroeder, CEO
 1301 Pennsylvania Avenue, NW,
 Suite 300
 Washington, DC 20004-1701
 Telephone: 202-347-0228
 Fax: 202-638-0607

National Farmers Organization
 2505 Elwood Drive
 Ames, IA 50010-2000
 Telephone: 515-292-2000
 Fax: 515-292-7106

American National Cattle Women
4278 Highway 196
Lamar, CO 81052
Telephone: 303-829-4475
Fax: 303-694-2390

American Poultry Association
Lorna Rhodes, Secretary Treasurer
133 Millville Street
Mendon, MA 01756
Telephone and Fax: 508-473-8769

American Sheep Industry
Association
Peter Orwick, Executive Director
6911 South Yosemite St.
Englewood, CO 80112-1414
Telephone: 303-771-3500
Fax: 303-771-8200

Association of American Pesticide
Control Officials
P.O. Box 1249
Hardwick, VT 05843
Telephone: 802-472-6956
Fax: 802-472-6957

National Pork Producers Council
Jerry King, President
P.O. Box 10383
Des Moines, IA 50306
Telephone: 515-223-2600
Fax: 515-223-2646

National Farmers Union
Leland Swenson, President
11900 E. Cornell Avenue
Aurora, CO 80014-3194
Telephone: 303-337-5500
Fax: 303-368-1390

National Fisheries Institute
Dick Gutting,
Executive Vice President
1901 N. Fort Myer Drive, Suite 700
Arlington, VA 22209
Telephone: 703-524-8880
Fax: 703-524-4619

National Live Stock Producers
Association
R. Scott Stuart, CEO
660 Southpointe Court, Suite 314
Colorado Springs, CO 80906
Telephone: 719-538-8843
Fax: 719-538-8847

National Turkey Federation
1225 New York Avenue, NW
Washington, DC 20005
Telephone: 202-898-0100
Fax: 202-898-0203

VIII. CONTACTS/RESOURCE MATERIALS/BIBLIOGRAPHY

For further information on selected topics within the agricultural livestock production industry, a list of contacts and publications are provided below:

Contacts²

Name	Organization	Telephone	Subject
Ginah Mortensen	EPA, Office of Enforcement and Compliance Assurance (OECA), Agriculture Division, Agriculture Branch	913-551-5211	Notebook Contact
Arty Williams	EPA, Office of Prevention, Pesticides and Toxic Substances (OPPT)	703 305-5239	Ground Water Pesticide Management Plan Rule
Jean Frane	EPA, OPPT	703 305-5944	Food Quality Protection Act
David Stangel	EPA, OECA	202 564-4162	Stored or Suspended Pesticides; Good Laboratory Practice Standards; Pesticide Management and Disposal
Joseph Hogue	EPA, OPPT	703 308-9072	FIFRA Restricted Use Classifications
Robert McNally	EPA, OPPT	703 308-8085	FIFRA Pesticide Tolerances
Joseph Nevola	EPA, OPPT	703 308-8037	FIFRA Pesticide Tolerances
Ellen Kramer	EPA, OPPT	703 305-6475	FIFRA Pesticide Tolerances
Robert A. Forrest	EPA, OPPT	703 308-9376	FIFRA Exemptions
Nancy Fitz	EPA, OPPT	703 305-7385	FIFRA Pesticide Management and Disposal
John MacDonald	EPA, OPPT	703 305-7370	Certification and Training
Kevin Keaney	EPA, OPPT	703 305-5557	FIFRA Worker Protection Standards
Al Havinga	EPA, OECA	202-564-4147	Livestock Issues
Carol Galloway	EPA, OECA	913-551-5008	Livestock Issues

² Many of the contacts listed above have provided valuable information and comments during the development of this document. EPA appreciates this support and acknowledges that the individuals listed do not necessarily endorse all statements made within this notebook.

Sharon Buck	EPA, OWOW	202-260-0306	NonPoint Source Issues
Greg Beatty	EPA, OWM	202-260-6929	NPDES Permitting Issues
Roberta Parry	EPA, OPEI	202-260-2876	Livestock and Crop Issues
Robin Dunkins	EPA, OAQPS	919-541-5335	Air Issues
Kurt Roos	EPA, OAR	202-564-9041	Atmospheric Programs
Howard Beard	EPA, OGWDW	202-260-8796	Drinking water Issues
Tracy Back	EPA, CCSMD	202-564-7076	Compliance Assistance Centers

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Small and Part Time Farms, Newsletter, U.S. Department of Agriculture, Fall 1996.

Standard Industrial Classification Manual, Office of Management and Budget, 1987.

U.S. Agriculture Census, 1992 and 1997.

Operations and Pollution Prevention

Agricultural Waste Management Field Handbook, U.S. Department of Agriculture, April 1992 (www.ftw.nrcs.usda.gov/awmfh.html).

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- Manure Liquid-Solids Separation
- Design Criteria for Swine Waste Flushing Systems

- Components of a Complete Manure Management Plan
- Lagoon Design and Management For Livestock Waste Treatment and Storage
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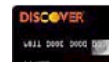
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		<i>Published in 1999</i>		
	055-000-00620-2	Profile of Local Government Operations, 310 pages	\$25.00	
		<i>Published in 2000</i>		
	055-000-00635-1	Profile of the Agricultural Chemical, Pesticide and Fertilizer Industry, 200 pp.	\$18.00	
	055-000-00636-9	Profile of the Agricultural Crop Production Industry, 178 pages	\$16.00	
	055-000-00633-4	Profile of the Agricultural Livestock Production Industry, 159 pages	\$15.00	
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