United States
Environmental Protectio
Agency

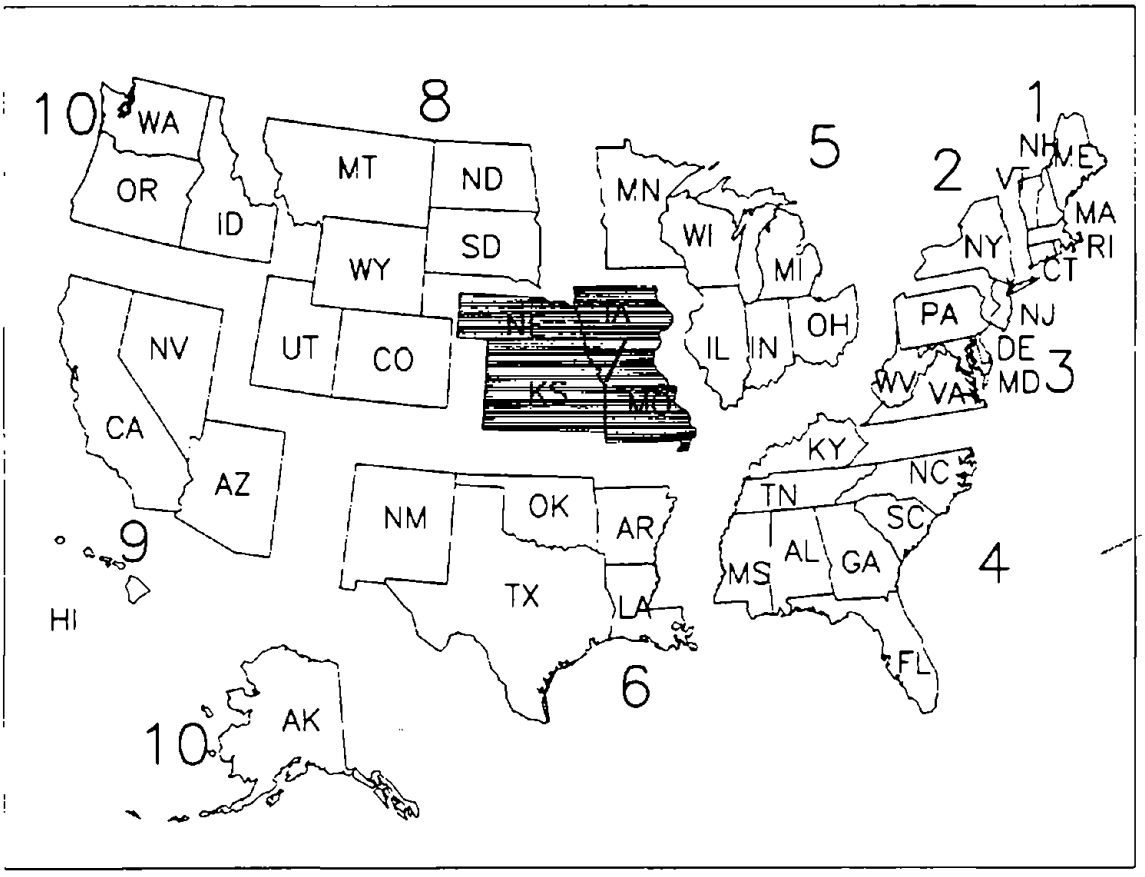
Prevention
Pesticides and
Toxic Substances
(H7507C)

EPA 734-12-92-001
August 1992

EPA Pesticides In Ground Water Database

A Compilation Of Monitoring Studies: 1971-1991

Region 7



IOWA KANSAS MISSOURI NEBRASKA

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

PB93-163780	2. REPORT DATE August 1992	3. REPORT TYPE AND DATES COVERED final report 1971 - 1991

4. TITLE AND SUBTITLE
Pesticides In Ground Water Database
A Compilation Of Monitoring Studies: 1971 - 1991
Region 7

5. FUNDING NUMBERS
none

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7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
US Environmental Protection Agency
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Washington, DC 20460

8. PERFORMING ORGANIZATION REPORT NUMBER
EPA 734-R-92-008

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
same as above

10. SPONSORING/MONITORING AGENCY REPORT NUMBER
same as above

11. SUPPLEMENTARY NOTES
Supersedes the "Pesticides In Ground Water Database: 1988 Interim Report"

12a. DISTRIBUTION/AVAILABILITY STATEMENT
publically available, no limitations

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)
This report presents summary results on pesticide monitoring of ground water from 1971 to 1991. It was compiled from ground water monitoring projects performed primarily by federal agencies, state agencies and research institutions. The data is well and sample specific. The report is broken into a National Summary and 10 US EPA regional volumes. The information ispresented as text, maps, graphs and tables on a national, EPA regional and state/county level.

The Region 7 volume is comprised of data from Iowa, Kansas, Missouri and Nebraska.

14. SUBJECT TERMS
database, ground water, pesticides
national, water, pesticide monitoring
report, drinking water

15. NUMBER OF PAGES
476

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
none	none	none	none

Pesticides in Ground Water Database
A Compilation of Monitoring Studies: 1971 - 1991
Region 7

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INTRODUCTION AND OVERVIEW

I. INTRODUCTION

The U.S. Environmental Protection Agency/Office of Pesticide Programs (EPA/OPP) is responsible for protecting human and environmental health from unreasonable risk due to pesticide exposure. Monitoring efforts carried out during the last decade have shown that the nation's ground water can become contaminated with pesticides, particularly in areas with high pesticide use and vulnerable aquifers. Therefore, OPP has taken a strong preventive approach to the protection of this valuable resource. Regulatory activities have evolved to include, as a condition of registration or re-registration, a more rigorous evaluation of a pesticide's potential to reach ground water. OPP has also formed strong partnerships with other federal and state agencies responsible for various aspects of ground-water protection.

The Pesticides in Ground Water Database (PGWDB) was created to provide a more complete picture of ground-water monitoring for pesticides in the United States. It is a collection of ground-water monitoring studies conducted by federal, state and local governments, the pesticide industry and private institutions. It consists of monitoring data and auxiliary information in both computerized and hard-copy form. This report, *Pesticides in Ground Water Database -- A Compilation of Monitoring Studies: 1971 - 1991*, was prepared to summarize and share the results of the studies in the PGWDB. It consists of 11 volumes: a National Summary and ten EPA regional summaries. Each volume provides a detailed description of the computerized PGWDB and a guide to reading and interpreting the data. The data are presented as maps, graphs and tables.

These data are extremely valuable, but must be interpreted carefully. In general, the PGWDB provides an overview of the ground-water monitoring efforts for pesticides in the United States, the pesticides that are being found in the nation's ground water, and the areas of the country that appear to be vulnerable to pesticide contamination.

When viewed as a whole, it might appear the data gathered for this report are representative of the United States and/or of general drinking water quality. This is not necessarily the case. For example, many studies included sampling of aquifers that supply drinking water, however these samples were usually taken at the well, not at the consumer's tap. Therefore, conclusions concerning finished water can only be drawn by careful examination of the data on a study by study basis. In addition, ground-water monitoring programs vary widely in sampling intensity and design from state to state. Not surprisingly, the states that sampled the greatest number of wells were often those that found the greatest number of contaminated wells. This should not be misconstrued to mean that the ground water in these states is more contaminated than that of other states, or that all ground water in these states is contaminated. On the contrary, an active, supported sampling program generally indicates a high regard for ground-water quality.

The database and this report are the result of the efforts of a great many individuals, significant among whom are the state officials and principal investigators who gave generously of their time to provide OPP with information concerning their work. In publishing this report, OPP intends not only to provide data, but also to identify points of contact, in order to share expertise among those responsible for the protection of the nation's ground-water resources.

To make this information available to as many decision makers in state and other federal agencies as possible, the computerized portion of the PGWDB will become a part of the Pesticide Information Network (PIN).[1] The PIN is a computerized collection of files that contain pesticide monitoring and regulatory information. The PIN functions much like a PC-PC bulletin board and can be accessed by anyone with a computer and a modem. The PIN is currently undergoing an expansion that will allow new types of information to be included and increase the number of simultaneous users. The new PIN will be available in 1993 and will contain the PGWDB, environmental fate chemical/physical parameters for pesticides, pesticide regulatory information (Restricted Use, Special Review, canceled and suspended) and a certification and training bibliography.

II. THE ROLE OF PESTICIDE MONITORING

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requires EPA to monitor the environment for pesticide residues [section 20, parts (b) and (c)]. The primary goal of pesticide monitoring is to improve the soundness of FIFRA risk/benefit regulatory decisions by providing information on the concentrations of pesticide residues and the effects that exposure to these residues have on human health and the environment. In addition, long-term changes in environmental quality can be detected through the analysis of monitoring data. OPP can use this information to measure the effectiveness of regulatory decisions and to indicate potential environmental problems.

EPA has directly sponsored some large-scale pesticide monitoring projects, such as the National Monitoring Programs of the 1970s[2] and the recent National Survey of Pesticides in Drinking Water Wells.[3] This type of monitoring is intended to provide information on a national level involving large numbers of pesticides. It does not provide information concerning localized problems or long-term trends. This method of data gathering is also extremely resource-intensive. An alternative approach for OPP is to support and gather information from monitoring studies performed by others. Since the responsibility for protecting the nation's ground water is shared by federal and state governments, OPP's data-handling responsibilities not only include procuring the most current information for its own needs, but also sharing this information with its partners in state and federal agencies. The development of the Pesticides in Ground Water Database is a step in this direction.

III. BACKGROUND

OPP began collecting ground-water studies for the PGWDB in the early 1980s. In 1988, an effort was made to review and catalog these data. Summary results of this effort were computerized and then published in the *Pesticides in Ground Water Database: 1988 Interim Report.*[4]

Since the 1988 Interim Report was issued, many things have changed. State-sponsored projects, initiated in the late 1980s, have been completed and digitized, monitoring methodologies and computer technology have improved, and the quality and quantity of data have increased. Based on extensive use of the 1988 database by OPP's Ground Water Technology Section and the comments received from other users, both within and outside of OPP, the computerized database and the hard-copy report were restructured. The new computerized structure is more appropriate for the quality and quantity of the information currently available, as well as for that expected in the future. The new structure is both well and sample specific; that is, it contains description and location information for each well sampled and the results of each analysis. This structure allows ground-water monitoring data to be sorted in a variety of ways, such as by well depth, well location, and sampling date. The new report structure provides national, regional, state and county summaries so that readers can select the resolution appropriate for their needs.

Most of the data in the PGWDB have been produced directly by state agencies or by private institutions that are sponsored by federal or state agencies. Some pesticide industry-sponsored studies have also been included in the PGWDB. These studies were conducted to support the registration status of a particular pesticide and were generally conducted in areas that are vulnerable to ground-water contamination by pesticides.

The database is a compilation of data submitted in several different formats, including computerized and hard-copy sampling results as well as hard-copy reports containing study descriptions and summary information. Many states are now routinely storing their data in computerized form and have shared their data with OPP. Some of the hard-copy data are from older studies that were never computerized. Some are from studies that have been computerized, but OPP has not yet been able to obtain the data. OPP is also retaining hard-copy final reports for as many studies as possible. These reports provide vital information such as study design, well design, analytical methods, quality control and environmental conditions.

The focus of the PGWDB is quite narrow. It contains only ground-water monitoring data in which pesticides were included as analytes. Therefore, the PGWDB does not replicate STORET[5] or WATSTORE[6]. While these large databases contain some pesticide monitoring data and some ground-water data, their primary focus is general water quality. As a result, these databases contain a great deal more information about water quality, but lack many of the pesticide focused studies that are included in the PGWDB. Many states have used STORET to store water-quality data, including analyses for pesticides. STORET data were downloaded and added to the PGWDB when the data could be directly

associated with specific study summaries or reports sent to OPP by state agencies. These state agencies provided their agency code, station codes, parameter codes, sampling dates and other pertinent information so that the correct data could be extracted from STORET.

Data from the National Survey of Pesticides in Drinking Water Wells (NPS)[3] have not been included in PGWDB, since these data have been recently and extensively presented elsewhere. We are currently working on electronically transferring the results of the NPS pesticide analyses so they will be available when the PGWDB becomes part of the PIN.

IV. THE COMPUTERIZED DATABASE

The computerized database consists of three files related to each other by study identification and unique well number. The first file contains information describing the study, the second contains information describing each well and the third contains sample information. Data elements stored in these files are presented in Figure 1. These data elements are based on EPA's recommended minimum set of data elements for ground-water monitoring published in *Definitions for the Minimum Set of Data Elements for Ground-Water Quality, July 22, 1990.*[8]

FIGURE 1. Data Elements for the Pesticides in Ground Water Database

STUDY FILE	WELL FILE	SAMPLE FILE
Study Number	Study Number(s)	Study Number
Study Title	Unique Well Number[1]	Unique Well Number[1]
Sponsoring Agency(ies)	State and County FIPS Codes[2]	Pesticide[7]
Project Officer(s) (PO)	Latitude and Longitude[3]	Concentration (ug/L)
PO Address(es)	Depth to Water Table (m)	Limit of Detection (ug/L)
PO Telephone(s)	Well Depth (m)	Sample date
USEPA Region	Depth to Top and Bottom of Screen Interval (m)	Analytical Method[8]
Starting and Ending Dates	Well Type[4]	Origin of Contamination[9]
Publication Date	Well Log & Other Information[5]	
Abstract	Altitude[6]	

1. This is a unique identifier assigned to each well in the well file. Many states have assigned a unique identifier to wells sampled. In these cases, the number was retained, and used in the PGWDB as that well's unique well number.

2. The Federal Information Processing Standard (FIPS) alphabetic or numeric codes for states (example MI is the alphabetic code for Michigan, 26 in the numeric code for Michigan). County codes are three digit numeric codes.

3. Coordinate representations that indicate a location on the surface of the earth using the equator (latitude) and the Prime Meridian (longitude) as origin. Coordinates are measured in degrees, minutes, and seconds with an indicator of north or south, and east or west.

4. Wells have been classified as follows:
   Drinking water public community - a system of piped drinking water that either has at least 15 service connections or serves at least 25 permanent residents.
   Drinking water public non-community - wells serving public facilities such as fire stations, schools, or libraries.
   Drinking water private - privately owned wells serving a residence or farm.
   Non-drinking water monitoring - wells installed specifically for monitoring ground water.
   Non-drinking water other - wells used for irrigation, industrial application, etc.

5. This field will allow storage of limited well log or other information about the well, such as construction details.

6. The vertical distance from the National Reference Datum to the land surface or other measuring point in meters.

7. Pesticides are tracked by their Chemical Abstracts System (CAS) number. There is also a cross-reference file that contains all pesticide synonyms and other OPP reference numbers. Any chemical that is currently or has ever been registered as a pesticide by the USEPA, Office of Pesticide Programs is eligible to be included in the PGWDB. Some chemicals might be more commonly associated with industrial processes; however, if these chemicals are now or were previously registered and used as pesticides, monitoring results will be included in the database.

8. A short name, reference or description of the analytical method which was used. This field is not intended to hold the entire method.

9. An origin of contamination is listed for each analysis performed as follows:
   NFU - Known or suspected normal field use
   PS - Known or suspected point source
   UNK - Unknown source of contamination

These files will be available through the PIN in 1993. The data management software for this system is ORACLE running under UNIX. However, OPP will accept and translate data created in nearly any format, operating system or medium. To access the PIN, contact User Support at 703-305-7499.

V. THE 1992 PESTICIDES IN GROUND WATER DATABASE REPORT

The 1992 PGWDB report is a summary and presentation of all the data OPP currently has available, both in computerized and in hard-copy form, concerning pesticides in ground water. The report is organized as a National Summary and ten EPA regional summaries. Each volume provides background information on pesticide monitoring, a description of the computerized portion of the database and a guide to reading and interpreting the data presented in the report.

The National Summary contains summary results of the data collection effort for all states and a discussion of the data. The regional volumes contain data from the individual states in each EPA Region. Each regional volume contains state summaries, which consist of: 1) a short overview of the state's philosophy and pertinent regulations concerning ground-water quality and pesticides, 2) a summary of each study or monitoring effort sent to OPP, and 3) summary data for each state presented in tables, graphs and maps. In essence, the study summaries were written by the principal investigators of each study. Whenever possible, the author's abstracts, summaries and conclusions were reproduced *verbatim*, so that the tone and intent of their work would not be misinterpreted.

There are two appendices in each volume of the report. Appendix I contains a Pesticide Cross Reference Table, which provides pesticide names, synonyms and the regulatory status and lifetime Health Advisory (HA) Level or Maximum Contaminant Level (MCL)[7] for each pesticide. Appendix II provides a brief overview and reference information for the NPS.

Summary and Presentation of Ground-Water Monitoring Data

The data in this report are presented in three different formats: maps, graphs and tables. Their format and content are explained below. Each format is displayed at four different resolution levels: national, regional, state and county. The charts and maps were intended to provide an "at-a-glance" visual summary of the information collected for the area in question. The tables provide detailed information concerning sampling dates, numbers of wells sampled, samples analyzed, concentration ranges, and the relationship between pesticide concentrations and current EPA drinking water standards.

1. Maps

The maps presented in this report display the number of wells sampled and the number of wells with pesticide detections. Map legends are consistent throughout the report to assist in any visual comparison of the maps. A regional-scale map illustrating the frequency of pesticide detections as a function of the total number of wells sampled is presented at the beginning of each EPA regional volume. The regional maps display information for each state in that EPA region. All of the regional maps are included in the National Summary. In addition, a state- scale map, in which the data are presented at the county level, is included with each state summary. State maps are also annotated with a list of pesticides detected in that state.

2. Graphs

Bar graphs, for each state within a region, illustrate the number of wells sampled, the number of wells with pesticide detections, and the number of wells with pesticide detections exceeding the MCL or lifetime HA. The graphs present this information ranked in descending order by the number of wells with pesticide detections. The version of this graph in the National Summary displays this information for each state. A similar graph in each EPA regional volume presents data only for the states in that region. The National Summary contains an additional graph, illustrating the above information by pesticide. Pesticides for which analyses were performed but were not detected in any wells are listed alphabetically at the end.

3. Tables

Two basic data tables are used throughout this report to summarize ground-water monitoring information: the "Pesticides" table and the "Wells" table. Figures 2 and 3 provide a detailed explanation of the information contained in each column for the two standard tables. The numbers that occur in the field descriptors correspond to the definitions listed below the example table.

The "Pesticides" table is illustrated in Figure 2. In this table, information is organized by pesticide. The monitoring locations, sampling frequencies, number of wells monitored, sampling results and concentration ranges are provided. In the National Summary, this table details the monitoring location to the state level and also includes the regulatory status for each pesticide. In the regional volumes, monitoring location is provided to the county level for each state and the table is expanded to include monitoring data for samples taken from each well.

FIGURE 2. Pesticides Table

PESTICIDE SAMPLING IN THE STATE OF _____

			WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATION (µg/l) 8
PESTICIDE 1	COUNTY 2	DATE 3	TOTAL WELLS SAMPLED 4	# OF POSITIVE WELLS 5		TOTAL # SAMPLES 6	NUMBER OF POSITIVE SAMPLES 7		
		YR/ MO		≥ MCL	< MCL		≥ MCL	< MCL	
Pesticide A	County A	1989/ 1,3							
		1990/6							
	County B	1987/ 1-5							
TOTAL DISCRETE WELLS OR SAMPLES			9	10	10	11	12	12	
Pesticide B	County A	1989							
		1990							
	County B	1987							
TOTAL DISCRETE WELLS/SAMPLES									
GRAND TOTAL DISCRETE WELLS/SAMPLES			13	14	14	15	16	16	

1 The tables are arranged in alphabetical order by the parent pesticide common name. Degradates of parent pesticides are listed directly following the parent. Any chemical that is currently or has ever been registered as a pesticide by the USEPA Office of Pesticide Programs is eligible to be included in these tables. Some chemicals included in these tables are more commonly associated with industrial processes; however, these chemicals were at some time also registered as pesticides.

2 County names are listed in alphabetical order for each pesticide that was monitored.

3 Well sampling dates are given by year and month(s). Months separated by a comma (1,3) means that samples were taken in these months only. Months separated by a dash (1-5) is the range of months in which sampling occurred, samples were taken in all months within the range.

4 The total number of wells that were sampled at least once during the time period stated in the previous column.

5 Wells with pesticide detections within the time period given in the date column (3). Wells with positive analytical results were classified based upon whether the results were above or below the MCL. If a pesticide did not have an established MCL, the lifetime HA level was used and noted at the end of the table. If neither of these values were established, the well was classified as less than the MCL. Wells were classified based upon their highest analytical result. Therefore, any well with at least one positive analysis equal to or greater than the MCL or HA during the time period listed in the date column (3) was classified as ≥ MCL. Any well with at least one positive analysis but all analyses less than the MCL or HA was classified as < MCL.

6 The total number of samples analyzed for that pesticide within the time period recorded in the date column.

7 Samples with pesticide detections were counted based upon whether the results were above or below the MCL or lifetime HA as stated in 5 above.

8 The range of positive results in ug/L (ppb) for the time period specified in the date column.

9 The total number of discrete wells that were sampled at least once and analyzed for the pesticide listed in column 1. *See Note

10 The total number of discrete wells in which the pesticide was detected based upon whether the results were above or below the MCL. Wells were classified as explained in 5 above, based upon the highest analytical result.

11 Total number of samples analyzed for a particular pesticide.

12 The total number of samples in which the pesticide was detected that are ≥ MCL or < MCL as explained in 5 above.

13 The grand total of discrete wells sampled in the state for any pesticide. * See Note

14 The grand total of discrete wells with at least one detection of any pesticide. Wells are classified above or below MCL or HA as explained in 5 above. *See Note

15 Grand total of samples taken in the state. *See Note

16 The grand total of samples with any pesticide detection for the state. Samples were classified as ≥ or < the MCL based upon their highest analytical result as explained in 5 above. *See Note

*Note: Some wells were sampled more than once, (i.e., during several successive years) and some wells were sampled for more than one pesticide. Therefore, the total number of discrete wells is not necessarily the arithmetic sum of the wells listed. Similarly some samples were analyzed for more than one pesticide, therefore, the total number of discrete samples for the state will not be, in all cases, the arithmetic sum for the column.

Figure 3 illustrates the "Wells" table. In this table, ground-water monitoring information is organized by well type, or use, and source of contamination. In the National Summary, the information is summarized by state. In the regional volumes, the information is summarized by county for each state in the region.

FIGURE 3. Wells Table

STATE OF _____
WELLS BY COUNTY

COUNTY	TYPES OF WELLS									SOURCE OF CONTAMINATION (NUMBER OF WELLS)		
	DRINKING WATER 1			MONITORING 2			OTHER 3					
	TOTAL SMPLD 4	≥ MCL 5	< MCL 5	TOTAL SMPLD 4	≥ MCL 5	< MCL 5	TOTAL SMPLD 4	≥ MCL 5	< MCL 5	NFU 6	PS 7	UNK 8
County A												
County B												
TOTAL 9												

1 Drinking Water wells include community (municipal), public non-community, and private wells. Public non-community wells are those that exclusively serve public buildings such as fire stations, schools, or libraries.

2 Monitoring wells, installed solely to monitor ground water for contaminants.

3 Other wells include: irrigation wells, stock watering wells, springs, and tile drains.

4 Total number of each type of well sampled in each county.

5 The number of wells per county in which a pesticide was detected. Wells were classified based upon whether the results were above or below an MCL for any of the pesticides detected. If a pesticide did not have an established MCL, the lifetime HA level was used. If neither of these values were applicable, the well was classified as less than the MCL and it was so noted at the end of the table. Wells were classified based upon their highest analytical result. Therefore, any well with at least one positive analysis greater than or equal to the MCL or HA was classified as ≥ MCL. Any well with at least one positive analysis but all analyses less than the MCL or HA was classified as < MCL.

Contaminated wells were placed in one of the following categories based on the opinion of the study director:

6 NFU = Known or Suspected Normal Field Use.

7 PS = Known or Suspected Point Source.

8 UNK = Unknown source of contamination. Wells were categorized as "unknown" if the study director did not know the source of contamination, or if there was no information available concerning the source of contamination.

9 Total number of wells in each category.

VI. DATA INTERPRETATION

Ground-water monitoring data in this report have been assembled from numerous sources, including state and federal agencies, chemical companies, consulting firms, and private institutions that are investigating the potential for ground-water contamination by pesticides. These data are extremely valuable, but must be interpreted carefully. In general, the PGWDB provides a relatively comprehensive overview of the ground-water monitoring efforts for pesticides in the United States, the pesticides that are being found in the nation's ground water, and the areas of the country that appear to be the most vulnerable to pesticide contamination.

Nationally, part of OPP's regulatory mission is to prevent contamination of ground-water resources resulting from the normal use of registered pesticides. OPP routinely reassesses the impact that registered pesticides have on the quality of ground-water resources. The PGWDB will be used to support ongoing regulatory activities, such as ground-water label advisories, monitoring studies required for pesticide re-registration and special review activities. In addition, combining the information in the PGWDB with other environmental fate data and usage data will assist OPP, at an early stage in the regulatory process, in refining criteria used to identify pesticides that tend to leach to ground water.

On a state or local level, the PGWDB can be used as a reference so that a state may access data from neighboring states. Evidence that pesticide residues occur in ground water can be used to target a state's resources for future monitoring and to re-assess pesticide management practices to prevent future degradation of ground-water quality. The information presented in this report will also be useful to state and regional agencies when implementing two pollution-prevention measures being developed by EPA; the *Restricted Use Rule* and the *State Management Plans* outlined in the *Pesticides and Ground Water Strategy*. Additional uses for the data in the PGWDB include identification of areas in need of further study, identification of the intensity of monitoring for particular pesticides, and graphic display of ground-water monitoring activities and localization of pesticide contamination.

VII. DATA LIMITATIONS

Despite their apparent value, these data do have limitations and must be used and interpreted carefully. Differences in study design, laboratory procedures/equipment, sampling practices, or well use can affect results. Some of the limitations governing the interpretation of the data in the PGWDB are discussed below:

1) The PGWDB is not a complete data set of all ground-water monitoring for pesticides in the United States. While we have attempted to include as many sources as possible, other data exist of which we are not aware or to which we do not yet have access.

2) Monitoring for pesticides in ground water has not been performed in a uniform manner throughout the United States. Some states have extensive monitoring programs for pesticide residues, while others have more limited monitoring programs. In general, more extensive ground-water monitoring programs tend to be found in the states where pesticide use is heavy. This creates a picture that does not necessarily represent the overall impact of pesticides on ground-water quality nationwide.

3) Differences in ground-water monitoring study design can radically affect the results. Many monitoring efforts were initiated in response to suspected problems, and therefore yielded a disproportionately high number of positive samples. These results cannot be extrapolated to represent a larger region or state. Other efforts sampled a small number of wells or sampled under conditions in which contamination was unlikely. Still others were statistically designed studies, intended to be extrapolated to a specific population of wells. Each of these scenarios presents a vastly different view of the condition of the ground-water resource sampled.

4) Analytical methods and limits of detection have changed over time, and also vary from laboratory to laboratory. Therefore, comparisons between the results of different studies and across several years must be performed carefully to avoid errors in interpretation.

5) Differences in construction, depth, location and intended use can greatly affect the likelihood that a particular well will become contaminated by pesticides. Some of these issues were addressed in the individual study summaries when such details were available. However, this information was not always provided and tends to be obscured when large amounts of data are summarized. The reader is cautioned to read the study summaries carefully and interpret the resulting data summaries conservatively.

VIII. THE FUTURE

The vulnerability of ground water to contamination by pesticides depends upon a variety of factors including depth, topography, soil, climate, pesticide use and pesticide application practices. In some cases, ground water is shallow or closely connected with surface water and the results of surface activities can be observed within months. More often, contamination is not observed for many years, allowing cause-and-effect relationships to become obscured. This report, for the most part, is a retrospective examination of the agricultural practices of the 1960s and 1970s, the results of which were observed through monitoring performed 20 years later. The condition of our ground-water resources for the next 20 years will be greatly affected by how we are handling our chemicals now. Our challenge today is clearly prospective.

EPA's Office of Pesticide Programs (OPP) is planning to publish a summary report of the data in the PGWDB on approximately a yearly basis. We are interested in presenting the data in a manner that is the most helpful to as many users as possible. The following are areas in which we would like to receive comments:

1. Should future reports summarize only "new data" (those received since the last report) or all of the data? Should we continue to report very old monitoring data (10 to 20 years), given the fact that some of these studies had very high detection limits and monitored for pesticides that are no longer of regulatory interest?

2. What changes should be made to the maps, graphs and tables? Are they too detailed or not detailed enough? Are important pieces of information missing? Is there a clearer or more useful way to present these data?

3. How are those outside of OPP using the PGWDB?

We appreciate all of those who took the time to comment on the draft version of this report. Many of the suggestions offered were included in this final version. However, some very good suggestions regarding changes to the tables could not be included in this report due to time constraints. These suggestions were taken seriously and will be considered for future reports.

For the PGWDB to retain its value, OPP must continue to gather and share as much pesticide monitoring information as possible. Any government agency or private institution that would like to have its work included in the PGWDB should provide a hard copy of a final or interim report and the sample and well data in electronic format. PGWDB data elements are listed on page OV-4 of this report. Electronic media should be accompanied by a description that includes, hardware compatibility (IBM, Apple etc.), operating system (DOS, UNIX, OS2), format identification (ASCII or software package name) and a data dictionary. Anyone wishing to provide comments or data may do so by contacting:

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5. *U.S. Environmental Protection Agency, Office of Information Resources Management* **STORET** (Water Quality Database). Washington, D.C. User assistance: 1-800-424-9067.

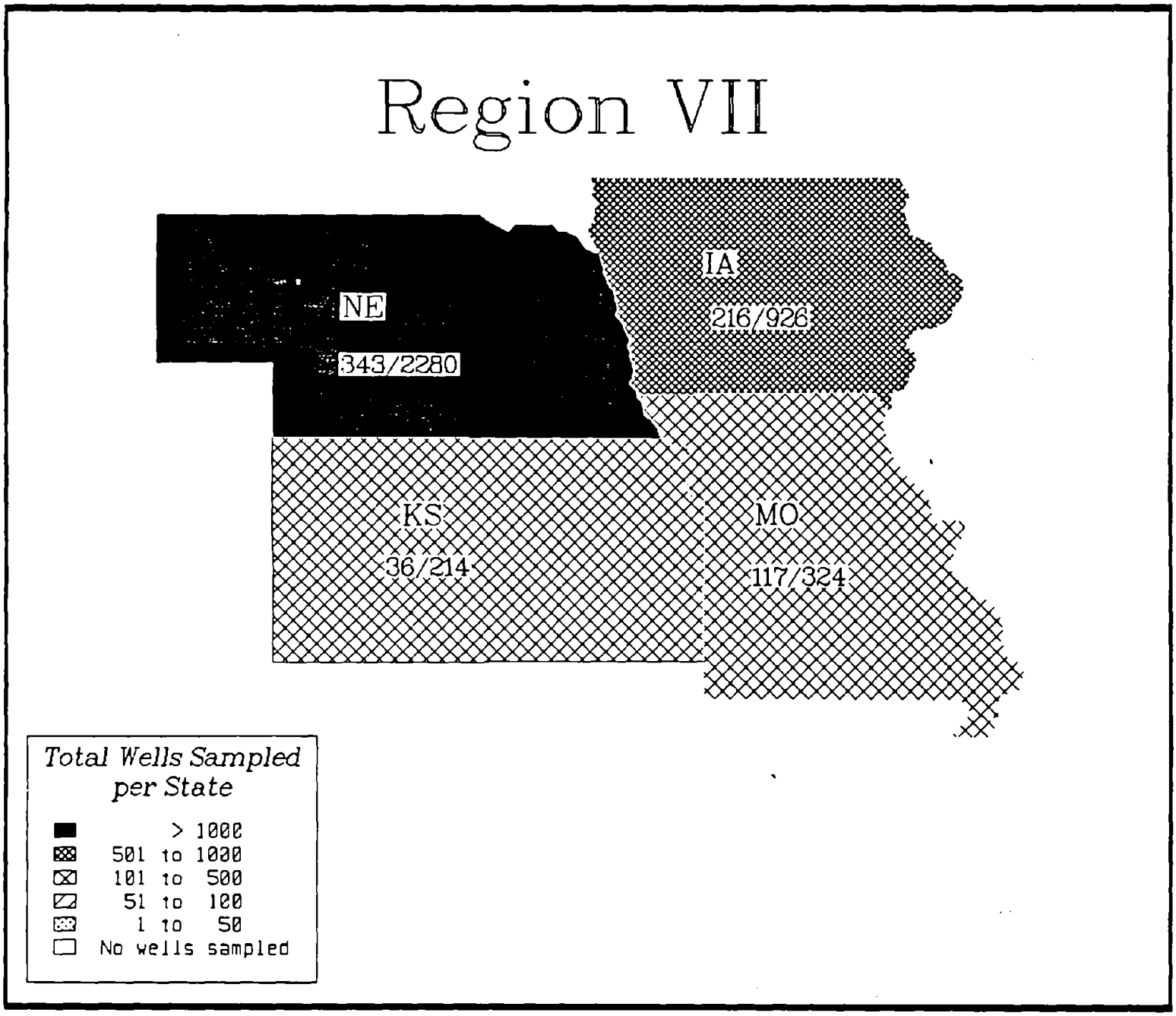
6. *U.S. Geological Survey, National Water Data Exchange.* **WATSTORE** (Water Quality Database). Reston, VA. For further information: 703-648-5671.

7. *U.S. Environmental Protection Agency, Office of Water.* **Drinking Water Regulations and Health Advisories.** Washington, D.C., November 1991. Tel: 202-260-7571.

8. *U.S. Environmental Protection Agency, Office of Ground Water and Drinking Water* **Definitions for the Minimum Set of Data Elements for Ground-Water Quality.** Washington, D.C., 1991.

Well Sampling by State

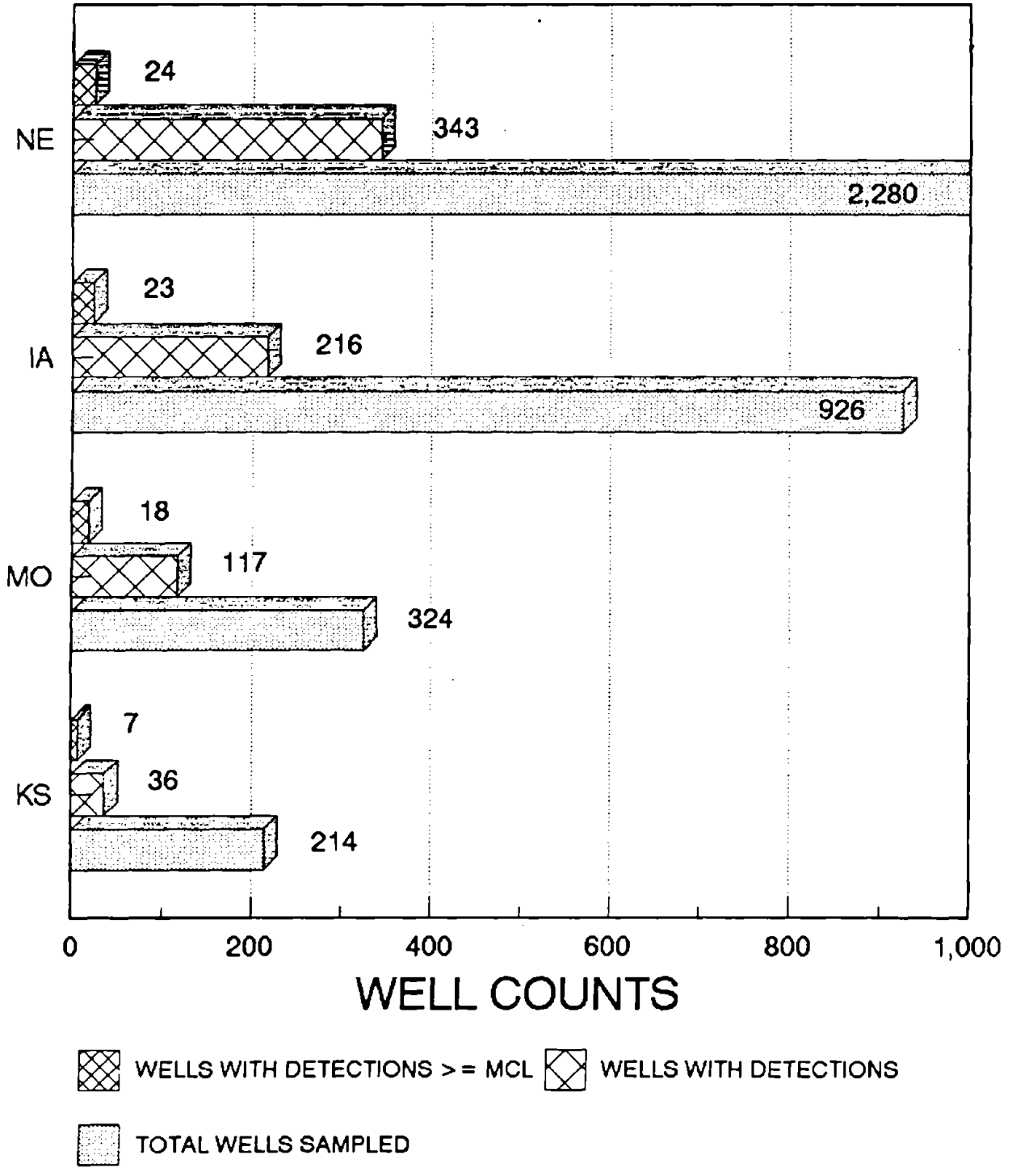
(Total Number of Wells with Pesticide Detections / Total Number of Wells Sampled)



REGION 7

WELL STATUS BY STATE

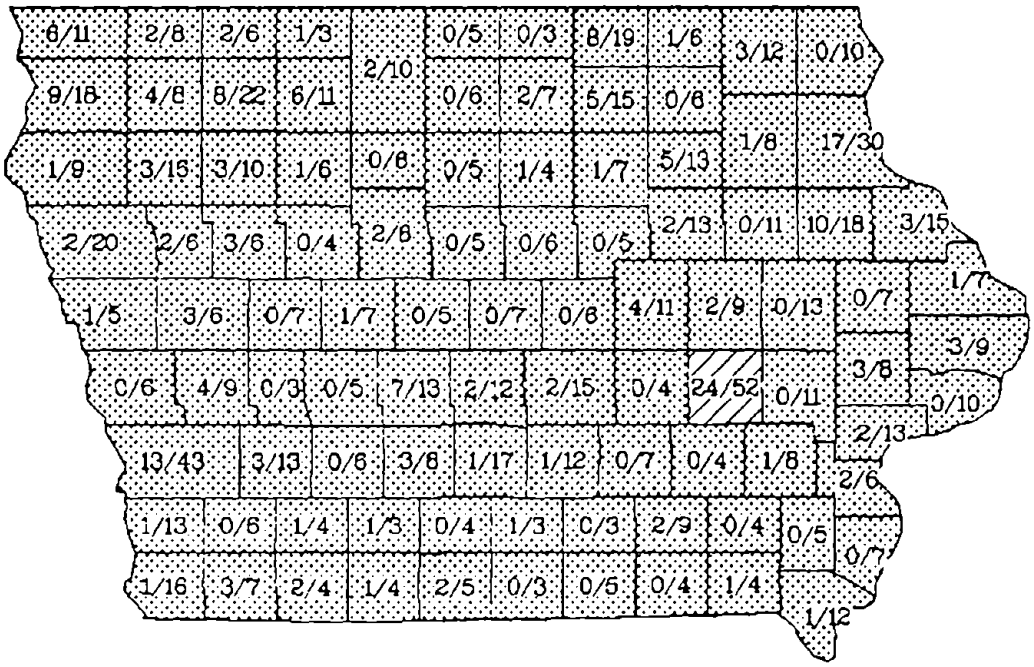
DESENDING BY NUMBER OF WELLS WITH DETECTIONS



STATE SUMMARIES

Well Sampling by County

(Total Number of Wells with Pesticide Detections / Total Number of Wells Sampled)



Pesticides Detected

Fonofos	Alachlor	3–Hydroxy Carbofuran
	Atrazine	3–Keto Carbofuran
	Carbofuran	DCPA
	Cyanazine	Des–Ethyl Atrazine
	Metolachlor	Des–Isopropyl Atrazine
	Metribuzin	Hydroxy Alachlor
	Simazine	Pendimethalin
	Sulprofos	Picloram
	Terbufos	Propachlor
	2, 4–D	Trifluralin

Total Wells Sampled per County

- > 1000
- 501 to 1000
- 101 to 500
- 51 to 100
- 1 to 50
- No wells sampled

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OVERVIEW OF STATE LEGISLATIVE AND ENVIRONMENTAL POLICIES REGARDING PESTICIDES IN GROUND WATER

Iowa's ground water quality monitoring program was begun in 1982 and is an extension of a previous program that had been in operation since 1950 by the Iowa State Health Department. This early program consisted of nonspecific, periodic sampling of untreated water from municipal wells . The current program has two objectives: 1) a fixed objective - to describe and assess the long-term chemical quality of surficial aquifers in Quaternary deposits and shallow bedrock aquifers of Iowa, and 2) a variable objective - to direct sampling and water-quality assessment toward new or emerging areas of ground water quality concern.

A network of monitoring wells was designed to meet data needs solicited from several State and Federal agencies. The network initially consisted of 1,200 municipal wells, but was expanded over time to include domestic and test wells. Wells were selected based on accessibility, availability, well integrity, and reliable geologic information. Wells were monitored every 2, 4 or 6 years depending upon the depth of the well. From 1982-1987 water samples were analyzed for common minerals, nutrients and trace metals. In addition a small percentage of wells finished in superficial aquifers were sampled for priority contaminants and pesticides each year.

In 1987 Iowa provided this program with stronger legislative support through the Iowa Groundwater Protection Act. The principal objectives of this Act are: 1) to provide education to increase awareness and understanding of the responsibility the people of Iowa have to protect their ground water; 2) to promote and fund research to develop methods to improve resource management and understand the effects of environmental contaminants; and 3) to implement demonstration projects that help Iowans implement improved technologies that minimize or eliminate adverse effects on ground water resources.

In 1988 the monitoring program was altered to reflect the increasing concern and the new legislation to protect the ground water resources of Iowa, particularly from agricultural chemicals. In addition to the overall objectives of the program, the 1988 program has these specific objectives: 1) to describe and assess the long-term chemical quality of surficial, deep (greater than 150 ft) and bedrock aquifers in Iowa; 2) to focus water quality sampling and assessment on the problem of current degradation of shallow (less than 150 ft) ground water resources by agricultural chemicals, which will include seasonal and geographic evaluation of contaminants detected in shallow ground water; and 3) to focus water quality sampling and assessment on the problem of current degradation of shallow ground water resources by synthetic organic chemicals.

Analyses for pesticides in water are performed at the University of Iowa Hygienic Laboratory.

Pesticides Analyses Routinely Performed by the
University of Iowa Hygienic Laboratory

PESTICIDE	DETECTION LIMIT ug/L	PESTICIDE	DETECTION LIMIT ug/L
2,4-D	0.1	Endosulfan	0.04
2,4,5-TP (Silvex)	0.1	Endrin	0.04
Alachlor	0.1	Ethoprop	0.1
Aldrin	0.04	Fonofos	0.1
Atrazine	0.1	Heptachlor	0.04
BHC ($\alpha,\beta,\Gamma,\delta$)	0.04	Methyl Parathion	
Butylate	0.1	Metolachlor	0.1
Carbofuran	0.1	Metribuzin	0.1
Chloramben	0.1	Phorate	0.1
Chlordane	0.2	Sulprofos	0.1
Chlorpyrifos	0.1	Terbufos	0.1
DDT, DDD, DDE	0.04	Toxaphene	0.5
Dicamba	0.1	Trifluralin	0.1
Dieldrin	0.04		

Narrative from: Detroy, Mark G. et.al.; **Ground Water Quality Monitoring Program in Iowa: Nitrate and Pesticides in Shallow Aquifers**; US Geological Survey, Water Resources Investigations Report, 88-4123, 1988; Detection limits from reference (3) below.

REPORTED STUDIES ON PESTICIDES IN GROUND WATER

Hallberg, George R., Bernard E. Hoyer, E. Arthur Bettis, III, Robert D. Libra; **Hydrogeology, Water Quality and Land Management in the Big Spring Basin, Clayton County, Iowa**; Iowa Department of Natural Resources; Open File Report 83-3; June 1983

Hallberg, George R., Robert D. Libra, E. Arthur Bettis, III, Bernard E. Hoyer; **Hydrogeology, Hydrogeologic and Water Quality Investigations in the Big Spring Basin, Clayton County, Iowa: 1983 Water Year**; Iowa Department of Natural Resources; Open File Report 84-4; June 1984

Objectives

These studies are part of a program initiated to study the hydrogeology of the karst-carbonate aquifer area in northeast Iowa. The objectives of this program were to 1) provide detailed information about the nature of the degradation of ground water quality in the

sinkhole regions and shallow carbonate aquifer areas; 2) evaluate possible programs to alleviate problems; and 3) provide the technical information needed for public use and education. The first phase of the study provided a regional assessment of the physical nature of the karst regions and documented significant contamination of ground water by nitrates in karst areas and regions where the carbonate bedrock aquifers occur at shallow depths below the land surface. The second phase of the program was undertaken to provide a controlled and detailed assessment of a single karst basin. This detailed study provides a more thorough assessment of the mechanics of ground water degradation in these areas.

Methods

Ground water samples were collected from existing domestic water wells. During the initial phase of this study 271 wells were inventoried. Water samples were collected for nitrate and bacterial analyses from approximately 125 wells which had the best information and allowed the determination of the aquifer supplying the well. From the initial inventory, a network of sites was selected for water-quality monitoring throughout the duration of the project. Eighteen (18) wells were selected which were representative of the spectrum of geologic and hydrologic conditions in the basin and the range of water quality found during the inventory. Also in the monitoring network is the Big Spring and surface water sites. Water samples were collected for pesticide analysis at varying times throughout this study. The methods of analysis used can identify most of the commonly used pesticides and chlorinated hydrocarbon compounds.

During 1983 the water quality sampling scheme was altered for that of 1982 because of modification in objectives, lessons learned from the prior year's sampling, and available funding. Less effort was placed on well monitoring while the Big Spring and various surface water and tile line sites were monitored much more intensively. This was done to further isolate the details of how the hydrogeologic system of the Big Spring basin responds to hydrologic events. Big Spring was sampled at least weekly for analyses of nitrate and pesticides. During particular 'runoff events' samples were often collected every one or two hours. For water year 1983, 248 nitrate samples and 81 pesticide samples were analyzed from Big Spring. In contrast only 17 samples from 6 wells were analyzed for the presence of pesticides.

Results

No pesticides were detected in samples taken from Big Spring during the first six months of the study (November 1981-April 1982). This period correlated with winter base flow and spring snowmelt conditions. Atrazine was first detected in Big Spring samples in early May, one to two weeks after chemicals were applied to the fields within the basin. Through May and June cyanazine and alachlor were also present in water from the spring. Atrazine concentrations ranged from 0.2-2.5 ug/L with most above 0.5 ug/L. Cyanazine and alachlor levels did not exceed 0.2 ug/L. During the summer/fall base flow recession when little or no recharge occurred, cyanazine and alachlor fell below detection limits. However, atrazine was present throughout the year at concentrations that slowly decreased to 0.1 ug/L.

Similarly, atrazine was first detected in well waters in late May-early June. Thirteen of the eighteen samples contained detectable amounts of atrazine (range 0.05-0.45ug/L). Subsequent sampling from these wells showed decreasing levels of atrazine with most falling below detection limits. The only other pesticide detected was cyanazine, in a well shown to be in direct connection with the major conduit system associated with Big Spring. Wells located beneath thick Maquoketa Shale or lying along the ground water basin divide did not have detectable atrazine residues. The highest atrazine concentrations occurred near the major conduit zones leading to Big Spring.

There was a dramatic change in land management in the basin because of the USDA Payment-in-Kind program. Reduction in total corn acreage and slight reductions in fertilizer rates produced about a 30-40% decrease in N-fertilizer application for the basin and a somewhat lesser decrease in pesticide use.

Both years had higher than normal precipitation. However, water year 1983 totaled 44.5 inches; and increase of 31% from water year 1992. The greater water discharge and particularly the greater ground water movement through the soil in infiltration caused a significant increase in chemical discharge from the basin. The discharge of the herbicide atrazine in ground water increased 120% over water year 1992. However, this still only amounted to about 31 lbs of atrazine. Atrazine was the only pesticide detected in ground water year-round, with concentrations ranging from 0.1-5.1 ug/L. Four other commonly used herbicides were intermittently detected in ground water but primarily during run-recharge events in May, June, and July. These herbicides were (maximum concentrations in parentheses) alachlor(0.63ug/L), cyanazine (1.2ug/L), metolachlor (0.62ug/L), and fonofos (0.11ug/L).

Large spring or early summer runoff and discharge events can significantly affect the total pesticides lost in water. During the two week period of large runoff-discharge events in late-June and early-July, about 35% of the total discharge of atrazine occurred. The amount discharged during this period alone equaled about 80% of the atrazine discharge in water year 1992.

Libra, Robert D.; George R.Hallberg, Gale G. Ressmeyer, Bernard E. Hoyer; **Groundwater Quality and Hydrogeology of Devonian-Carbonate Aquifers in Floyd and Mitchell Counties, Iowa**; Iowa Department of Natural Resources; Open File Report 84-2; 1984

Objectives

The Floyd-Mitchell Study is the third phase of an assessment of the hydrogeology and ground water quality of karst-carbonate aquifers in northeast Iowa. This phase of the assessment was undertaken to 1) gather detailed data on the hydrogeology and ground water quality of an area where karst developed in the Devonian carbonate rocks in a belt parallelling the Cedar River; 2) assess the ground water quality in different hydrogeologic settings; and 3) further study how surficial contaminants are delivered into carbonate aquifers.

Methods

Ground water samples for this study were taken from existing domestic water wells. As a first step towards evaluating ground water quality in this area 55 rural water supply wells were inventoried. Water samples were collected for nitrate and bacterial analyses from 48 wells, one spring, tile drains and surface water sites. From the initial inventory, conducted in December of 1982, a network of sites was selected for water-quality monitoring throughout 1983. Sixteen wells were selected which were representative of the spectrum of geologic and hydrologic conditions in the basin and the range of water quality found during the inventory. Also monitored were 2 surface water sites, 2 tile line outlets, and Osage Spring. As monitoring progressed 3 wells and one surface water site were added to the network. Water samples were collected for pesticide analysis at varying times throughout this study. The methods of analysis used can identify most of the commonly used pesticides and chlorinated hydrocarbon compounds.

Results

A variety of pesticides was detected in all three of the relatively 'unprotected' geologic regions--Shallow Bedrock, Karst, and Incipient Karst. In all three areas, 70-80% of wells sampled had detectable levels of pesticides. The herbicides atrazine, alachlor, cyanazine, metribuzin, and metolachlor were all detected in ground water prior to the 1983 application. Concentrations ranged from 0.11-3.30 ug/L with total pesticide concentrations as high as 20 ug/L. These results indicate these herbicides are persisting in ground water and/or soil year round. There were no pesticides detected in the carbonate aquifers of the Deep Bedrock regions.

Kelley, Richard; **Synthetic Organic Compound Sampling of Public Water Supplies**, Iowa Department of Water, Air and Waste Management, April 1985

Kelley, Richard; Monica Wnuk; **Little Sioux River Synthetic Organic Compound Municipal Well Sampling Survey**, Iowa Department of Water, Air and Waste Management, March 1986

Kelley, Richard; **1986 Little Sioux River Pesticide Monitoring Report**, Iowa Department of Natural Resources, March 1988 (515-281-5145)

Objectives

The above three studies are a related effort to monitor the alluvial aquifer of the Little Sioux River. The objectives of the initial survey were:

1. to identify those systems contaminated by synthetic organic compounds (SOC) including pesticides;

2. to identify, where possible, any apparent patterns of contamination which could be related to local or regional geologic or geographic conditions; and,

3. to assess the accuracy and validity of previous sampling which suggested that there may be systematic deterioration of alluvial systems across the state.

Sampling began in May of 1984. The findings in 1984 and 1985 prompted additional monitoring in 1986. The objectives of the 1986 monitoring were:

1. to better understand the relationships between pesticide concentrations in ground water and various environmental factors; and

2. to identify possible sources of pesticide contamination.

Methods

The regional staff of the Department of Water, Air and Waste Management sampled 128 wells providing water to 58 public water supplies across the State of Iowa. The sampling locations were selected on the basis of their proximity to industrial areas, hazardous waste sites, spills or abandoned dumps, the detection of SOC's in previous sampling, or elevated nitrate levels. Seventy (70) of the selected wells were for the presence of 34 pesticides.

In May of 1985 water samples were collected from 25 wells at the well head and before any treatment. The wells sampled serve 12 municipal public water supplies along the Little Sioux River in northwestern Iowa.

In 1986 eight (8) wells serving six public water supplies, one well serving a private water supply, one monitoring well, and the Little Sioux River were sampled. Six of the public water supply wells were finished to the alluvial aquifer, one public and the private water supply well were finished to Pleistocene formations and one public water supply well was finished to the bedrock. All of the public water supply wells had been monitored in the 1985 study. Pesticides had been detected in 7 of the 8 public water supply wells. The well finished in bedrock did not have pesticides in 1985 and served as a control well for 1986. The private well was chosen because it was located on a high pleistocene terrace, construction features of the well were known, and the only identifiable source of contamination was the widespread application of pesticides to the surrounding farm fields.

In the 1986 study, sampling was conducted between March 15 and July 30. Initial sampling was completed prior to the planting season at all public water supply wells, except the control. Subsequent sampling was carried out after approximately 70% of the crop had been planted. Samples taken during these two studies were analyzed for the pesticides listed in the previous table and other SOC's.

Results

In the 1984 study one or more SOC's and/or pesticides were detected in 57 wells serving 33 water supplies. These 33 supplies were distributed fairly evenly across the State with the exception of north-central Iowa. The absence of contaminants in the supplies monitored in this region appears to be related to the fact that six out of eight supplies monitored in that region use wells finished to bedrock. Six of the 34 pesticides analyzed for were detected in

at least one water supply. The most commonly detected of all contaminants was the herbicide atrazine, appearing in 24 wells from 14 supplies. Cyanazine appeared in 6 supplies.

In the 1985 study one or more of eleven contaminants were found in nine wells serving six of the supplies sampled. The contaminants could be divided into three groups: industrial solvents; aromatic hydrocarbons; and pesticides. The greatest array and most frequently detected compounds were pesticides. Ten samples collected from seven wells, serving five public water supplies were found to have measurable residues of pesticides present. The insecticide terbufos and the herbicide atrazine were the most frequently detected compounds. Other pesticides detected were cyanazine, metribuzin, metolachlor, alachlor and sulprofos. Sulprofos is not registered for use in Iowa.

In the 1986 study, pesticides were detected in eight of ten wells (36 of 40 samples). No pesticides were detected in the control well or in the monitoring well. Multiple residues were detected in six of the eight wells (26 of 40) samples. Atrazine was the most commonly detected and carbofuran was the least detected pesticide. Others detected were cyanazine, alachlor, metolachlor, and metribuzin. Because of the high rate of occurrence in the 1985 study, samples were analyzed for terbufos and terbufos sulfone. However, neither of these were detected in 1986.

Conclusions

The authors felt that the results of these studies support the findings of other studies conducted in Iowa with regard to the appearance of agricultural chemicals in shallow ground water. Shallow alluvial systems are at highest risk of becoming contaminated.

In 1985 climatic conditions restricted planting to a short period of time. Approximately 60% of the crop was planted over a ten day period; terbufos was applied at this time. In addition 2.5 inches of rain fell in the time prior to and during sampling in 1985. These conditions were not repeated in 1986, which may explain the absence of terbufos in samples taken that year. However, the appearance of terbufos in ground water samples in 1985 demonstrated that even chemicals which decay rapidly can impact ground water resources under certain climatic conditions.

The following five studies are part of, or extensions of Iowa's ongoing study of alluvial aquifers. The major objectives of these studies were 1) to evaluate the overall availability and quality of the ground water from these aquifers; and 2) evaluation of the spatial and temporal water quality variability with particular reference to nitrate and pesticide concentrations. Other objectives included comparison of the quality of surface water with that of ground water in the same areas, and comparison of water quality between pumping and non-pumping wells.

Detroy, Mark G; Ronald L. Kuzniar; **Occurrence and Distribution of Nitrate and Herbicides in the Iowa River Alluvial Aquifer, Iowa--May 1984-November 1985;** US Geological Survey; University of Iowa Hygienic Laboratory; Iowa Department of Natural Resources; Water Resources Investigations Report 88-4117; 1988

Methods

Water quality monitoring consisted of sampling 25 test wells, 33 domestic wells, 10 municipal wells and nine surface water sites (three on the Iowa River and six on its major tributaries) in Iowa County. Six of the test wells were nested to allow for sampling at various depths. Samples were collected from May 1984 to November 1985. Selected samples were analyzed for the herbicides atrazine, cyanazine, metribuzin, alachlor, metolachlor, and trifluralin.

Results

All of the above herbicides were detected in ground water samples. The maximum concentration of atrazine in ground water samples was 2.4 ug/L; the maximum concentration of metribuzin was 8.1 ug/L. Area streams also contained herbicides in concentrations generally larger than concentrations in ground water.

Detailed sampling of vertical profiles using well nests indicated that the distribution of herbicides is not vertically homogeneous. Herbicides were detected more frequently and at higher concentrations at shallower depths.

Seasonal variation of herbicide occurrence was also apparent. For nested wells the variations were greater at the shallower sampling depths. Seasonal variations of herbicide concentrations illustrate that these chemicals move quickly from surface application to shallow underlying aquifers. Herbicides can be detected in ground water soon after chemical applications, usually within 6 weeks. At a municipal well adjacent to a stream, similar seasonal concentrations of atrazine were detected for both ground and surface water samples. Surface water may be a source of herbicides in adjacent ground water.

Thompson, Carol A., Donald L. Koch; **Water Resources of the Ocheyedan - Little Sioux Alluvial Aquifer;** Open File Report 86-3; Iowa Department of Natural Resources; December 1986; 319-335-1581, 319-355-1575

Methods

Water quality sampling was performed monthly on 31 wells at 19 sites and 10 surface water sites. Pesticide analyses were performed on samples from a smaller subset of 17 wells from 9 sites. Sites were located in the counties of Cherokee, Woodbury, Osceola, O'Brien, and Clay.

Results
The herbicides atrazine and metolachlor, and the insecticide carbofuran were detected in three wells. These wells were all shallow (less than 30 ft.). A sample from one well, with a screen interval between 7-9 ft., contained residues of all three pesticides.

Thompson, Carol A., Donald L. Koch; **Water Resources of the Rock River Alluvial Aquifer**; Open File Report 87-1; Iowa Department of Natural Resources; January 1987; 319-335-1581, 319-355-1575

Methods
Water quality sampling was performed on 12 wells at 8 sites and 2 surface water sites. Pesticide analyses were performed on samples from a smaller subset of 7 wells from 5 sites. Sites were located in Lyon and Sioux Counties.

Results
The herbicide atrazine and the insecticide carbofuran were detected at low levels in three wells. These wells were all shallow (less than 20 ft.).

Thompson, Carol A.; **Nitrate and Pesticide Distribution in the West Fork Des Moines River Alluvial Aquifer**; Technical Information Series 18; Iowa Department of Natural Resources; April 1990; 319-335-1581

Methods
Samples for water quality and/or nitrate analysis were collected from 66 monitoring wells at 12 sites and 9 surface water sites. Wells were nested at all sites. Monitoring sites were located in Palo Alto, Pochahontas and Humbolt Counties. A smaller subset of samples from 9 wells at 4 sites and one surface water site was analyzed for pesticides.

Results
Two pesticides were detected in alluvial ground water and four were found in river water. Atrazine was detected in ground water at two sites (3 wells). Alachlor was the only other pesticide detected in ground water and was found in the upper and middle wells at one site at levels close to the MCL of 2 ug/L (.99-1.1 ug/L). Atrazine, cyanazine, metolachlor and alachlor were found in surface water.

Thompson, Carol A., Paul E. VanDorpe, Donald L. Koch; **Water Quality Monitoring of the Nishnabotna Alluvial System**; Open File Report 88-1; Iowa Department of Natural Resources; 1988; 319-335-1581, 319-335-1575

Methods

The monitoring network for this study consisted of 28 wells (16 municipal wells and 6 monitoring well sites with 2 wells at each site) and four surface water sites. All wells at monitoring sites were nested pairs (separate wells finished at different depths within the aquifer and installed in the same drill hole). Wells were located in Pottawatamie, Cass, Mills, Montgomery, Fremont, and Page Counties. Pesticide samples were collected at eight of the municipal wells and all twelve of the monitoring wells during May, June, and July 1987. In addition surface water samples were analyzed for pesticides in June and July. Samples were analyzed for nineteen pesticides (ten common herbicides and nine insecticides).

Results

Detections of pesticides occurred at nine municipal wells. Atrazine was detected most frequently with detections ranging from 0.16 ug/L to 0.88 ug/L. Metolachlor was detected twice at concentrations of 0.1-0.64 ug/L. Cyanazine was detected once at a concentration of 1.7, simazine was detected once at a concentration of 0.98 ug/L and alachlor was detected once at a concentration of 0.87 ug/L. Pesticides were not detected at any of the monitoring wells. Pesticide concentrations varied through time and were usually highest following a rainstorm immediately after application.

Detroy, Mark G.; Pamela K.B. Hunt, Maureen A. Holub; **Ground-Water Quality Monitoring Program in Iowa: Nitrate and Pesticides in Shallow Aquifers;** U.S. Geological Survey, Water-Resources Investigations Report 88-4 123, University of Iowa Hygienic Laboratory, Iowa Department of Natural Resources. 1988

Objectives

Concern exists about the occurrence of agricultural chemicals, primarily nitrate and pesticides, in shallow ground water. In response to this concern, the focus of the Iowa ground-water quality monitoring program has shifted to emphasize the nonpoint contaminants. The objective of the program are to describe and assess the long-term chemical quality of the principal aquifers in Iowa and to direct water qualtiy assessment and sampling toward regional ground-water qualtiy concerns.

Design

In the spring of 1985, emphasis was placed on the analysis of pesticides in water samples collected from wells completed in surficial aquifers in Quaternary deposits from wells less that 200 feet deep or both. Samples from these wells were analyzed for nitrate and selected pesticides. Water samples were collected from 515 individual shallow wells.

Results and Conclusions

Detectable concentrations of at least one pesticide, including alachlor, atrazine, cyanazine, dicamba, metolachlor or metribuzin were detected in 20% of the samples. Atrazine was the most prevalent pesticide. Concentrations of atrazine ranging from 0.10 to 21 ug/L were detected in 18% of the samples. The results of the monitoring program indicate a relationship between decreasing well depth and the presence of detectable concentrations of nitrate and pesticides. Most nitrate and pesticide detections were in areas where surficial aquifers in Quaternary deposits are the principal source of ground water. Pesticides were detected in samples collected throughout the year; samples collected in late spring and early summer more frequently contained pesticide than other samples.

Hallberg, G. R.; B.C. Kross, R.D. Libra, L.F. Burmeister. L.M.B. Weih, C.F. Lynch, D.R. Bruner, M.Q. Lewis, K.L. Cherryholmes, J.K. Johnson, M.A. Culp, **The Iowa State-Wide Rural Well-Water Survey,** Iowa Department of Natural Resources, University of Iowa; Technical Information Series 17; February 1990

Objectives

As part of the implementation of the Iowa Ground Water Protection act of 1987 the Iowa Department of Natural Resources and the University of Iowa conducted a one-time survey of the quality of private drinking water supplies used by rural Iowans. The intent of the Iowa State-Wide Rural Water-Well Survey (SWRL) is to provide a statistically valid state-wide generalization of the conditions of private water supplies. SWRL was designed to determine what portion of the private rural wells in Iowa are affected by various environmental contaminants and what portion of rural Iowa residents are utilizing well water containing these contaminants. In addition this study examines the relationships between contamination and factors such as well construction and placement, farm chemical handling practices, spills and back siphoning accidents, local hydrogeologic factors, land use, and disposal. SWRL also examines the extent and use of water treatment systems, basic family health, development of pesticide analytical methods and the development and testing of toxicity screening methods for environmental contaminants in rural well water. Because of its statistical design the results of the SWRL Survey and/or its population of wells and residents may also serve as a baseline for 1) developing a long-term monitoring program for private water supplies; 2) designing water quality sampling in other programs; 3) measuring future trends and changes in ground water and /or rural private drinking water quality; and 4) designing and collecting data for other types of surveys.

Methods

To provide a statistically valid framework, a systematic sample, stratified by rural population density was designed. A target of 698 sites was defined based on statistical considerations, available funds, and logistical constraints. The systematic framework was defined using every 5-minute intersection of latitude and longitude in the state. The intersections chosen for sampling sites were distributed proportionally through the population, based on county

level rural population density. The drinking water well closest to each chosen intersection was selected for sampling. At the time of sampling well owners were interviewed to collect well construction, land use, and general health information.

The effect of temporal variability in ground water quality was addressed by sampling 10% of all sites a second time during a different season and by sampling quarterly all sites within a county typifying six general hydrogeologic regions in Iowa. In addition routine sampling was seasonally dispersed throughout the state.

All primary samples were analyzed for total coliform bacteria, nitrate, major inorganic ions, 27 commonly used pesticides and selected pesticide metabolites. The final SWRL well water sample was 686 sites based on completion criteria set for site inventory, sample collection and analysis, and completed health questionnaires.

Results

Sixteen pesticide compounds were detected in the SWRL well water samples, including 11 parent compounds and 5 environmental metabolites. In descending order, the most commonly detected pesticides were atrazine, des-ethyl atrazine, des-isopropyl atrazine, metribuzin, pendimethalin, metolachlor, alachlor, cyanazine, picloram, 2,4-D, propachlor, trifluralin, dacthal, 3-hydroxy carbofuran, 3-keto carbofuran, and hydroxy alachlor. Multiple residues were detected in all regions of the state.

The mean concentrations of these pesticides on a state wide basis were generally less than 1 ug/L, and typically were below the recommended lifetime heath advisory levels. Lifetime health advisory levels were exceeded at eight sites: five with atrazine , two with alachlor, and one with trifluralin. On a state-wide basis, 1.2% of the private rural drinking water wells in Iowa are estimated to be contaminated with a pesticide exceeding the EPA recommended lifetime health advisory levels.

Pesticide contamination showed statistically significant variation regionally. A larger portion of wells in western regions have both single and multiple pesticide detections. State wide shallow wells (<50ft) are significantly more likely to be contaminated with a pesticide. Approximately eighteen percent of private shallow wells are contaminated with one or more pesticides, while about twelve percent of deeper wells are contaminated.

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
2,4,5-T	ADAIR	1988 6	6	0	0	12	0	0	
	ADAMS	1988 12	4	0	0	8	0	0	
	ALLAMAKEE	1988 8	10	0	0	20	0	0	
	APPANOOSE	1988 9	5	0	0	10	0	0	
	AUDUBON	1988 6	3	0	0	6	0	0	
	BENTON	1989 4	8	0	0	16	0	0	
	BLACK HAWK	1989 1,2	13	0	0	26	0	0	
	BOONE	1988 5	5	0	0	10	0	0	
	BREMER	1988 8	9	0	0	18	0	0	
	BUCHANAN	1989 2,5	11	0	0	22	0	0	
	BUENA VISTA	1988 6	7	0	0	14	0	0	
	BUTLER	1988 5	7	0	0	14	0	0	
	CALHOUN	1988 6	4	0	0	8	0	0	
	CARROLL	1989 3	7	0	0	14	0	0	
	CASS	1988 7	5	0	0	10	0	0	
	CEDAR	1989 4	7	0	0	14	0	0	
	CERRO GORDO	1988 8	7	0	0	14	0	0	
	CHEROKEE	1989 3	4	0	0	8	0	0	
	CHICKASAW	1988 4	6	0	0	12	0	0	
	CLARKE	1988 5	4	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4,5-T)	CLAY	1988 8	6	0	0	12	0	0	
	CLAYTON	1988 8	10	0	0	20	0	0	
	CLINTON	1988 12	8	0	0	16	0	0	
	CRAWFORD	1988 10	6	0	0	12	0	0	
	DALLAS	1988 10	2	0	0	4	0	0	
		1989 3	11	0	0	22	0	0	
	DAVIS	1988 5	4	0	0	8	0	0	
	DECATUR	1988 5	5	0	0	10	0	0	
	DELAWARE	1988 9	1	0	0	2	0	0	
		1989 4	12	0	0	24	0	0	
	DES MOINES	1988 8	1	0	0	2	0	0	
		1989 5	6	0	0	12	0	0	
	DICKINSON	1988 8	6	0	0	12	0	0	
	DUBUQUE	1988 8	1	0	0	2	0	0	
		1989 6	11	0	0	22	0	0	
	EMMET	1988 8	1	0	0	2	0	0	
		1989 1	2	0	0	4	0	0	
	FAYETTE	1988 4	8	0	0	16	0	0	
	FLOYD	1988 8	7	0	0	14	0	0	
	FRANKLIN	1989 1	4	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4,5-T)	FREMONT	1988 6	4	0	0	8	0	0	
	GREENE	1988 6 10	7	0	0	14	0	0	
	GRUNDY	1988 10	5	0	0	10	0	0	
	GUTHRIE	1988 9	5	0	0	10	0	0	
	HAMILTON	1988 7	5	0	0	10	0	0	
	HANCOCK	1988 5	6	0	0	12	0	0	
	HARDIN	1989 3	6	0	0	12	0	0	
	HARRISON	1988 6	6	0	0	12	0	0	
	HENRY	1988 8	5	0	0	10	0	0	
	HOWARD	1989 1	6	0	0	12	0	0	
	HUMBOLDT	1988 6	4	0	0	8	0	0	
	IDA	1988 4	4	0	0	8	0	0	
	IOWA	1988 9	1	0	0	2	0	0	
		1989 5	6	0	0	12	0	0	
	JACKSON	1988 5	7	0	0	14	0	0	
	JASPER	1988 7 12	15	0	0	30	0	0	
	JEFFERSON	1989 6	4	0	0	8	0	0	
	JOHNSON	1988 9 11	11	0	0	22	0	0	
	JONES	1988 9	7	0	0	14	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4,5-T)	KEOKUK	1988 7	4	0	0	8	0	0	
	KOSSUTH	1988 7 10	9	0	0	18	0	0	
	LEE	1988 10,11	12	0	0	24	0	0	
	LINN	1988 6	13	0	0	26	0	0	
	LOUISA	1988 4	6	0	0	12	0	0	
	LUCAS	1988 7	3	0	0	6	0	0	
	LYON	1988 6,8	5	0	0	10	0	0	
	MADISON	1988 9	1	0	0	2	0	0	
		1989 1	7	0	0	14	0	0	
	MAHASKA	1988 10	1	0	0	2	0	0	
		1989 4	6	0	0	12	0	0	
	MARION	1988 10	1	0	0	2	0	0	
		1989 4	11	0	0	22	0	0	
	MARSHALL	1988 7	6	0	0	12	0	0	
	MILLS	1988 5 6	4	0	0	8	0	0	
	MITCHELL	1989 1	7	0	0	14	0	0	
	MONONA	1988 10	5	0	0	10	0	0	
	MONROE	1988 7	3	0	0	6	0	0	
	MONTGOMERY	1988 9	3	0	0	6	0	0	
	MUSCATINE	1988 4,5	10	0	0	20	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4,5-T)	O'BRIEN	1989 3	5	0	0	10	0	0	
	OSCEOLA	1988 6	3	0	0	6	0	0	
	PAGE	1988 9	4	0	0	8	0	0	
	PALO ALTO	1989 1	5	0	0	10	0	0	
	PLYMOUTH	1988 6 11	9	0	0	18	0	0	
	POCAHONTAS	1989 1	4	0	0	8	0	0	
	POLK	1988 9 12	11	0	0	22	0	0	
		1989 1	1	0	0	2	0	0	
	POTTAWATTAMIE	1988 7	3	0	0	6	0	0	
		1989 1	24	0	0	48	0	0	
	POWESHIEK	1988 6	4	0	0	8	0	0	
	RINGGOLD	1988 5	4	0	0	8	0	0	
	SAC	1988 6	1	0	0	2	0	0	
		1989 3	3	0	0	6	0	0	
	SCOTT	1989 6	10	0	0	20	0	0	
	SHELBY	1988 12	5	0	0	10	0	0	
	SIOUX	1988 7	10	0	0	20	0	0	
	STORY	1988 9	7	0	0	14	0	0	
	TAMA	1988 8	8	0	0	16	0	0	
	TAYLOR	1989 1	4	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4,5-T)	UNION	1989 1	3	0	0	6	0	0	
	VAN BUREN	1988 5	4	0	0	8	0	0	
	WAPELLO	1988 10,11	9	0	0	18	0	0	
	WARREN	1988 9	12	0	0	24	0	0	
	WASHINGTON	1988 7	8	0	0	16	0	0	
	WAYNE	1988 9 11	3	0	0	6	0	0	
	WEBSTER	1988 5	8	0	0	16	0	0	
	WINNEBAGO	1988 5	5	0	0	10	0	0	
	WINNESHIEK	1988 8	9	0	0	18	0	0	
	WOODBURY	1988 4	9	0	0	18	0	0	
	WORTH	1988 8	3	0	0	6	0	0	
	WRIGHT	1989 3	5	0	0	10	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			678	0	0	1356	0	0	
2,4,5-TP	CLAYTON	1981 10,11,12	1	0	0	3	0	0	
		1982 2,3,5 6	5	0	4	10	0	8	0.070-0.200
		1983 3,5 7 10	16	0	1	17	0	1	0.100
		1984 5 6	6	0	0	6	0	0	
	FLOYD	1983 2,4,5 7,8 10,12	39	0	0	39	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4,5-TP)	FLOYD	1984 4	1	0	0	1	0	0	
	MITCHELL	1983 2,4,5 7,8,9 10,12	43	0	7	45	0	7	0.120-0.480
	WOODBURY	1985 5	1	0	0	1	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			29	0	5	122	0	16	0.070-0.480
▶ 2,4,5-TP (SILVEX)	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	9	0	0	
	CASS	1984 6,8	2	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	9	0	0	
		1986 4,5 6,7	3	0	0	8	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	4	0	0	
		1986 4 6,7	3	0	0	6	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (2,4,5-TP (SILVEX))	DELAWARE	1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	MUSCATINE	1984 7 10	2	0	0	3	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
	SAC	1986 6	1	0	0	2	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (2,4,5-TP (SILVEX))	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	10	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			59	0	0	110	0	0	
2,4-D	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4-D)	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1984 8	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1987 1	1	0	0	1	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
		1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
		1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
		1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4-D)	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1985 8	2	0	0	2	0	0	
		1986 8	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4-D)	FREMONT	1987 8,9	3	0	0	3	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
		1988 4	4	0	1	4	0	1	0.150
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	2	0	0	
		1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4-D)	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	9	0	2	9	0	2	0.190-0.260
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	1	5	0	1	0.180
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1986 6,8	3	0	0	3	0	0	
		1987 6,9	3	0	0	3	0	0	
		1988 5 6	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4-D)	MITCHELL	1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1988 9	3	0	0	3	0	0	
	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
		1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1986 8	1	0	0	1	0	0	
		1987 3	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1985 8	2	0	0	2	0	0	
		1986 6 12	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4-D)	POTTAWATTAMIE	1987 1,2,5 6	4	0	0	4	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	5	0	0	5	0	0	
	SIOUX	1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	8	0	0	8	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	12	0	0	12	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4-D)	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
		1988 8	9	0	0	9	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			739	0	4	776	0	4	0.150-0.260
▶ 2,6-DIETHYLANILINE	CLAYTON	1983 3,5 7 10	16	0	0	17	0	0	
		1984 5 6	6	0	0	6	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			8	0	0	23	0	0	
▶ 2,6_DIETHYLANILINE	ADAMS	1988 12	4	0	0	4	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (2,6_DIETHYLANILINE)	CHEROKEE	1989 3	4	0	0	4	0	0	
	CLINTON	1988 12	8	0	0	8	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DELAWARE	1989 4	12	0	0	12	0	0	
	DES MOINES	1989 5	6	0	0	6	0	0	
	DUBUQUE	1989 6	11	0	0	11	0	0	
	EMMET	1989 1	2	0	0	2	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	GREENE	1988 10	6	0	0	6	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	IOWA	1989 5	6	0	0	6	0	0	
	JASPER	1988 12	14	0	0	14	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 11	1	0	0	1	0	0	
	KOSSUTH	1988 10	5	0	0	5	0	0	
	LEE	1988 11	2	0	0	2	0	0	
	MADISON	1989 1	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (2,6_DIETHYLANILINE)	MANASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MITCHELL	1989 1	7	0	0	7	0	0	
	O'BRIEN	1989 3	5	0	0	5	0	0	
	PALO ALTO	1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 11	8	0	0	8	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 12	10	0	0	10	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1989 1	24	0	0	24	0	0	
	SAC	1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	6	0	0	6	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WAYNE	1988 11	2	0	0	2	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			297	0	0	297	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ 3-HYDROXYCARBOFURAN	CLAYTON	1981 10,11,12	1	0	0	3	0	0	
		1982 2,3,5 6	1	0	1	5	0	3	0.050-0.150
		1983 3,5 7 10	16	0	0	17	0	0	
		1984 5 6	6	0	0	6	0	0	
	FLOYD	1983 2,4,5 7,8 10,12	39	0	1	40	0	1	0.100
	MITCHELL	1983 2,4,5 7,8,9 10,12	43	0	6	45	0	6	3.300-16.600
TOTAL DISCRETE WELLS OR SAMPLES			28	0	3	116	0	10	0.050-16.600
▶ 3-KETOCARBOFURAN	CLAYTON	1983 3,5 7 10	15	0	0	16	0	0	
		1984 5 6	6	0	0	6	0	0	
	FLOYD	1983 2,4,5 7,8 10,12	39	0	0	40	0	0	
	MITCHELL	1983 2,4,5 7,8,9 10,12	43	0	0	45	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			27	0	0	107	0	0	
▶ 3_HYDROXY CARBOFURAN	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (3_HYDROXY CARBOFURA)	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	1	13	0	1	0.980
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1988 12	8	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE (YEAR MONTH)	WELL RESULTS: TOTAL WELLS SAMPLED	WELL RESULTS: # OF POSITIVE WELLS ≥ MCL	WELL RESULTS: # OF POSITIVE WELLS < MCL	SAMPLE RESULTS: TOTAL # SAMPLES	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES ≥ MCL	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES < MCL	RANGE OF CONCEN-TRATIONS (ug/l)
▶ (3_HYDROXY CARBOFURA)	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	1	7	0	1	0.130
	GRUNDY	1988 10	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (3_HYDROXY CARBOFURA)	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (3_HYDROXY CARBOFURA)	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	1	1	0	1	0.050
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1988 5 6	4	0	0	4	0	0	
	MITCHELL	1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1988 9	3	0	0	3	0	0	
	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1988 9	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (3_HYDROXY CARBOFURA)	PALO ALTO	1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	6	0	0	6	0	0	
	SIOUX	1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (3_HYDROXY CARBOFURA)	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1988 8	9	0	0	9	0	0	
	WOODBURY	1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			686	0	3	686	0	3	0.050-0.980
▶ 3_KETO CARBOFURAN	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (3_KETO CARBOFURAN)	BUENA VISTA	1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	1	6	0	1	0.027
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	1	5	0	1	0.028
	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (3_KETO CARBOFURAN)	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (3_KETO CARBOFURAN)	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	1	1	0	1	0.030
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (3_KETO CARBOFURAN)	MAHASKA	1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1988 5 6	4	0	0	4	0	0	
	MITCHELL	1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1988 9	3	0	0	3	0	0	
	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1988 9	4	0	0	4	0	0	
	PALO ALTO	1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1988 7	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (3_KETO CARBOFURAN)	POTTAWATTAMIE	1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	6	0	0	6	0	0	
	SIOUX	1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1988 8	9	0	0	9	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (3_KETO CARBOFURAN)	WOODBURY	1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			686	0	3	686	0	3	0.027-0.030
▶ ACIFLUORFEN	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ACIFLUORFEN)	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ACIFLUORFEN)	EMMET	1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ACIFLUORFEN)	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	9	0	0	9	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1988 5 6	4	0	0	4	0	0	
	MITCHELL	1989 1	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ACIFLUORFEN)	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1988 9	3	0	0	3	0	0	
	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1988 9	4	0	0	4	0	0	
	PALO ALTO	1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ACIFLUORFEN)	SIOUX	1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	8	0	0	8	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	12	0	0	12	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1988 8	9	0	0	9	0	0	
	WOODBURY	1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			678	0	0	678	0	0	
ALACHLOR	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ALACHLOR)	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1984 5	1	0	0	1	0	0	
		1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	1	0	13	1	0	2.340
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	2	0	0	2	0	0	
		1986 6	3	0	0	3	0	0	
		1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	0	0	3	0	0	
		1986 4,5 6,7	4	0	3	9	0	6	0.100-0.390
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1984 6,8 12	4	0	0	4	0	0	
		1986 6,8	3	0	0	3	0	0	
		1987 1,5 6,7,8	14	0	0	14	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ALACHLOR)	CASS	1988 7	5	0	0	5	0	0	
	CEDAR	1986 6	1	0	1	1	0	1	0.650
		1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 5 10	10	0	1	13	0	1	0.180
		1986 4,5 6,7,8	12	0	1	14	0	1	0.100
		1989 3	4	0	1	4	0	1	0.050
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1984 7 10	6	0	1	6	0	1	0.190
		1985 3,5 10	4	0	0	4	0	0	
		1986 4,5 6,7,8	15	0	2	17	0	2	0.110-0.120
		1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
		1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ALACHLOR)	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
		1988 9	1	0	0	1	0	0	
		1989 4	12	1	1	12	1	1	0.060-4.760
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	1	7	0	1	0.220
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1985 8	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ALACHLOR)	FREMONT	1986 8	5	0	0	5	0	0	
		1987 3,5 6,7,8,9	15	0	0	15	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1986 8	2	0	0	2	0	0	
		1988 6	4	0	0	4	0	0	
	IDA	1986 6,7,8	3	0	0	3	0	0	
		1988 4	4	0	0	4	0	0	
	IOWA	1984 4,5 6,7,8,9 11	29	0	0	47	0	0	
		1985 3,4,5 6,7,8 10,11	101	0	4	174	0	8	0.230-0.650

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ALACHLOR)	IOWA	1986 6	2	0	0	2	0	0	
		1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	1	15	0	1	0.020
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1984 6	1	0	0	1	0	0	
		1985 7	5	0	0	5	0	0	
		1986 5 7,8	8	0	0	8	0	0	
		1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ALACHLOR)	MADISON	1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1985 8	1	0	0	1	0	0	
		1986 6,8	5	0	0	5	0	0	
		1987 5 6,7,9	14	0	0	14	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1986 8	1	0	0	1	0	0	
		1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1984 7 10	5	0	4	5	0	4	0.090-0.320

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ALACHLOR)	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	0	0	4	0	0	
		1986 4 6,7	1	0	1	7	0	2	0.120-0.130
		1989 3	5	0	0	5	0	0	
	OSCEOLA	1985 10	1	0	0	1	0	0	
		1986 5 6,7,8	12	0	0	12	0	0	
		1988 6	3	0	0	3	0	0	
	PAGE	1986 6,8	2	0	0	2	0	0	
		1987 3	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1983 5	1	1	0	1	1	0	11.000
		1984 5	1	1	0	1	1	0	70.000
		1986 5 6,7,8	16	0	2	16	0	2	0.990-1.100
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1986 7	2	0	0	2	0	0	
		1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ALACHLOR)	POTTAWATTAMIE	1985 8	2	0	0	2	0	0	
		1986 6,7,8 12	8	0	0	9	0	0	
		1987 1,2,5 6,7	19	0	1	19	0	1	0.870
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	1	4	0	1	0.068
	SAC	1986 6	2	0	0	2	0	0	
		1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1984 6,8,9	5	0	0	5	0	0	
		1988 12	6	0	0	6	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2 7	4	3	0	5	3	0	2.000-11.000
		1986 7,8	2	0	0	2	0	0	
		1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1984 4,5 6,7	3	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ALACHLOR)	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	1	8	0	1	0.050
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 8	1	0	0	1	0	0	
		1985 1	3	0	0	3	0	0	
		1986 6	2	0	0	2	0	0	
		1988 8	9	0	0	9	0	0	
	WOODBURY	1985 5 10	10	0	0	10	0	0	
		1986 4 6,7,8	6	0	1	6	0	1	0.160
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			886	6	21	1216	7	36	0.020-70.000

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ ALDRIN	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ALDRIN)	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			59	0	0	106	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
ATRAZINE	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	1	4	0	1	0.230
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1984 5	1	0	1	1	0	1	0.100
		1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	2	13	0	2	0.240-1.870
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1984 7	2	0	1	2	0	1	0.330
		1985 1	2	0	2	2	0	2	0.220
		1986 6	3	0	3	3	0	3	0.150-0.280
		1988 8	9	0	1	9	0	1	0.280
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	1	0	2	1	0	4.100
		1986 4,5 6,7	4	2	2	9	4	5	0.200-10.000
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	1	7	0	1	0.440
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ATRAZINE)	CASS	1984 6,8 12	4	0	4	4	0	4	0.100-1.700
		1986 6,8	3	0	0	3	0	0	
		1987 1,5 6,7,8	14	0	0	14	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1986 6	1	1	0	1	1	0	3.200
		1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	1	7	0	1	0.130
	CHEROKEE	1985 5 10	10	1	1	13	1	2	0.500-4.400
		1986 4,5 6,7,8	12	0	6	14	0	8	0.140-2.500
		1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1984 7 10	6	1	2	6	1	2	2.500-3.000
		1985 3,5 10	4	0	1	4	0	1	0.100
		1986 4,5 6,7,8	15	0	7	17	0	9	0.100-2.400
		1988 8	6	0	0	6	0	0	
	CLAYTON	1981 1 10,11,12	1	0	0	4	0	0	
		1982 2,3,5 6,7,8,9 10,11,12	56	0	27	85	0	54	0.040-2.500

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ATRAZINE)	CLAYTON	1983 3,5 7 10	16	0	9	17	0	10	0.100-0.950
		1984 5 6	6	0	4	6	0	4	0.200-0.290
		1988 8	10	0	1	10	0	1	0.480
	CLINTON	1984 8	1	0	1	1	0	1	1.700
		1988 12	8	0	1	8	0	1	0.410
	CRAWFORD	1988 10	6	0	1	6	0	1	0.150
	DALLAS	1988 10	2	0	1	2	0	1	0.170
		1989 3	11	0	2	11	0	2	0.140-0.260
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1984 9	4	0	4	4	0	4	0.100-0.410
		1985 3	1	0	1	1	0	1	0.110
		1986 6	2	0	1	2	0	1	0.140
		1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1984 5	3	0	3	3	0	3	0.100-0.140

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE (YEAR MONTH)	WELL RESULTS: TOTAL WELLS SAMPLED	WELL RESULTS: # OF POSITIVE WELLS ≥ MCL	WELL RESULTS: # OF POSITIVE WELLS < MCL	SAMPLE RESULTS: TOTAL # SAMPLES	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES ≥ MCL	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES < MCL	RANGE OF CONCEN-TRATIONS (ug/l)
(ATRAZINE)	DUBUQUE	1986 6	1	0	1	1	0	1	0.190
		1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	1	2	0	1	0.140
	FAYETTE	1988 4	8	0	1	8	0	1	0.406
	FLOYD	1983 2,4,5 7,8 10,12	39	0	15	40	0	16	0.100-0.850
		1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1985 8	2	0	0	2	0	0	
		1986 8	5	0	0	5	0	0	
		1987 3,5 6,7,8,9	15	0	1	15	0	1	0.880
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ATRAZINE)	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	1	6	0	1	0.280
	HUMBOLDT	1986 8	2	0	0	2	0	0	
		1988 6	4	0	0	4	0	0	
	IDA	1986 6,7,8	3	0	1	3	0	1	0.210
		1988 4	4	0	0	4	0	0	
	IOWA	1984 4,5 6,7,8,9 11	29	0	11	47	0	16	0.100-1.400
		1985 3,4,5 6,7,8 10,11	100	0	33	176	0	57	0.010-2.400
		1986 6	2	0	0	2	0	0	
		1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	2	15	0	2	0.380-0.420
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS: TOTAL WELLS SAMPLED	WELL RESULTS: # OF POSITIVE WELLS		SAMPLE RESULTS: TOTAL # SAMPLES	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES		RANGE OF CONCEN-TRATIONS (ug/l)
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ATRAZINE)	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	1	6	0	1	0.450
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1984 6	1	0	1	1	0	1	0.190
		1985 7	5	0	1	5	0	1	0.240
		1986 5 7,8	8	0	0	8	0	0	
		1988 6,8	5	1	1	5	1	1	0.280-3.410
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1985 8	1	0	0	1	0	0	
		1986 6,8	5	0	1	5	0	1	0.160
		1987 5 6,7,9	14	0	0	14	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ATRAZINE)	MILLS	1988 5 6	4	0	0	4	0	0	
	MITCHELL	1983 2,4,5 7,8,9 10,12	43	0	7	45	0	7	0.100-0.250
		1984 7	1	0	0	1	0	0	
		1986 6	1	0	1	1	0	1	0.190
		1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	1	5	0	1	1.080
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1986 8	1	0	0	1	0	0	
		1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1984 7 10	5	0	1	5	0	1	0.100
		1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	0	1	4	0	2	2.000-2.900
		1986 4 6,7	1	0	1	7	0	7	0.690-2.600
		1989 3	5	0	0	5	0	0	
	OSCEOLA	1985 10	1	0	0	1	0	0	
		1986 5 6,7,8	12	0	0	12	0	0	
		1988 6	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ATRAZINE)	PAGE	1986 6,8	2	0	1	2	0	1	0.480
		1987 3	1	0	0	1	0	0	
		1988 9	4	0	1	4	0	1	0.190
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5 10	3	0	3	3	0	3	0.110-2.800
		1986 5 6,7,8	16	0	6	16	0	6	0.100-0.360
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1986 7	2	0	0	2	0	0	
		1989 1	4	1	0	4	1	0	3.360
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1985 8	2	0	1	2	0	1	0.240
		1986 6,7,8 12	8	0	4	9	0	4	0.180-0.530
		1987 1,2,5 6,7	19	0	5	19	0	5	0.160-0.390
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	1	24	0	1	0.260
	POWESHIEK	1988 6	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ATRAZINE)	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1986 6	2	0	2	2	0	2	1.500-1.700
		1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1984 6,8,9	5	0	5	5	0	5	0.200-2.700
		1988 12	6	0	1	6	0	1	0.420
	SIOUX	1984 3 6,9	3	0	3	3	0	3	0.130-0.650
		1985 2 7	4	3	0	5	4	0	3.900-13.000
		1986 7,8	2	0	1	2	0	1	0.130
		1988 7	10	0	1	10	0	1	0.440
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1984 4,5 6,7	3	0	0	5	0	0	
		1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	1	0	4	1	0	6.610
	WAPELLO	1988 10,11	9	1	1	9	1	1	0.660-4.800
	WARREN	1988 9	17	0	0	17	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ATRAZINE)	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	1	8	0	1	0.885
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 8	1	0	1	1	0	1	1.700
		1985 1	3	0	3	3	0	3	0.210-0.300
		1986 6	2	0	2	2	0	2	0.360-0.590
		1988 8	9	0	0	9	0	0	
	WOODBURY	1985 5 10	10	0	0	10	0	0	
		1986 4 6,7,8	6	0	4	6	0	4	0.250-0.660
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			925	12	128	1416	16	296	0.010-13.000
▶ BHC (α,β,δ)	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (BHC (α,β,δ))	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (BHC (α,β,δ))	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1936 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			59	0	0	106	0	0	
BUTYLATE	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(BUTYLATE)	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1986 4,5 6,7	4	0	0	8	0	0	
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1986 8	2	0	0	2	0	0	
		1987 1,5 6,7,8	14	0	0	14	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 10	2	0	0	2	0	0	
		1986 4,5 6,7,8	11	0	0	13	0	0	
		1989 3	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(BUTYLATE)	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1985 10	1	0	0	1	0	0	
		1986 4,5 6,7,8	10	0	0	12	0	0	
		1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(BUTYLATE)	EMMET	1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1986 8	1	0	0	1	0	0	
		1987 3,5 6,7,8,9	15	0	0	15	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1986 8	2	0	0	2	0	0	
		1988 6	4	0	0	4	0	0	
	IDA	1986 6,7,8	3	0	0	3	0	0	
		1988 4	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(BUTYLATE)	IOWA	1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1985 7	5	0	0	5	0	0	
		1986 5 7,8	8	0	0	8	0	0	
		1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(BUTYLATE)	MAHASKA	1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1986 8	1	0	0	1	0	0	
		1987 5 6,7,9	14	0	0	15	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1986 8	1	0	0	1	0	0	
		1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1986 4 6,7	1	0	0	5	0	0	
		1989 3	5	0	0	5	0	0	
	OSCEOLA	1985 10	1	0	0	1	0	0	
		1986 5 6,7,8	12	0	0	12	0	0	
		1988 6	3	0	0	3	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(BUTYLATE)	PAGE	1987 3	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1986 5 6,7,8	16	0	0	16	0	0	
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1986 7	2	0	0	2	0	0	
		1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1986 8 12	2	0	0	2	0	0	
		1987 1,2,5 6,7	19	0	0	19	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	6	0	0	6	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(BUTYLATE)	SIOUX	1985 7	1	0	0	1	0	0	
		1986 7,8	2	0	0	2	0	0	
		1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1988 8	9	0	0	9	0	0	
	WOODBURY	1985 10	1	0	0	1	0	0	
		1986 4 6,7,8	6	0	0	6	0	0	
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			762	0	0	866	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
CARBOFURAN	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1986 4,5 6,7	4	0	1	9	0	1	1.200
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1987 1	1	0	0	1	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 10	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CARBOFURAN)	CHEROKEE	1986 4,5 6,7,8	12	0	1	14	0	1	0.450
		1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1985 10	1	0	0	1	0	0	
		1986 4,5 6,7,8	11	0	1	13	0	1	0.130
		1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1988 8	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CARBOFURAN)	DUBUQUE	1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1986 8	4	0	0	4	0	0	
		1987 8,9	3	0	0	3	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1986 8	2	0	0	2	0	0	
		1988 6	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CARBOFURAN)	IDA	1986 6,7,8	3	0	0	3	0	0	
		1988 4	4	0	0	4	0	0	
	IOWA	1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1985 7	5	0	0	5	0	0	
		1986 5 7,8	8	0	1	8	0	1	0.100
		1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CARBOFURAN)	MADISON	1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1986 6,8	3	0	0	3	0	0	
		1987 6,9	3	0	0	3	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1988 9	3	0	0	3	0	0	
	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1986 4 6,7	1	0	0	7	0	0	
		1989 3	5	0	0	5	0	0	
	OSCEOLA	1985 10	1	0	0	1	0	0	
		1986 5 6,7,8	12	0	0	12	0	0	
		1988 6	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CARBOFURAN)	PAGE	1986 8	1	0	0	1	0	0	
		1987 3	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1986 5 6,7,8	16	0	0	16	0	0	
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1986 7	2	0	0	2	0	0	
		1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1986 6 12	3	0	0	3	0	0	
		1987 1,2,5 6	4	0	0	4	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CARBOFURAN)	SHELBY	1988 12	6	0	0	6	0	0	
	SIOUX	1985 7	1	0	0	1	0	0	
		1986 7,8	2	0	0	2	0	0	
		1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1988 8	9	0	0	9	0	0	
	WOODBURY	1985 10	1	0	0	1	0	0	
		1986 4 6,7,8	6	0	0	6	0	0	
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CARBOFURAN)	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			754	0	4	814	0	4	0.100-1.200
▶ CARBON TERTACHLORIDE	WINNESHIEK	1984 3	1	0	0	1	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			1	0	0	1	0	0	
▶ CARBON TERTRACHLORIDE	DUBUQUE	1984 5	1	0	0	1	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			1	0	0	1	0	0	
CHLORAMBEN	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
		1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORAMBEN)	BUENA VISTA	1986 4,5 6,7	4	0	0	8	0	0	
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1987 1	1	0	0	1	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
		1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
		1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORAMBEN)	CLAY	1986 4 6,7	3	0	0	6	0	0	
		1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
		1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORAMBEN)	DUBUQUE	1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1986 8	4	0	0	4	0	0	
		1987 8,9	3	0	0	3	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORAMBEN)	IDA	1986 6,7	2	0	0	2	0	0	
		1988 4	4	0	0	4	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
		1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	9	0	0	9	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORAMBEN)	MADISON	1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1986 6,8	3	0	0	3	0	0	
		1987 6,9	3	0	0	3	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1988 9	3	0	0	3	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
		1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORAMBEN)	O'BRIEN	1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1986 6,8	2	0	0	2	0	0	
		1987 3	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1986 6 12	2	0	0	2	0	0	
		1987 1,2,5 6	4	0	0	4	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1986 6	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORAMBEN)	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
		1988 12	5	0	0	5	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
		1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	8	0	0	8	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	12	0	0	12	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE (YEAR MONTH)	WELL RESULTS: TOTAL WELLS SAMPLED	WELL RESULTS: # OF POSITIVE WELLS ≥ MCL	WELL RESULTS: # OF POSITIVE WELLS < MCL	SAMPLE RESULTS: TOTAL # SAMPLES	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES ≥ MCL	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES < MCL	RANGE OF CONCEN-TRATIONS (ug/l)
(CHLORAMBEN)	WINNESHIEK	1985 1 6	2	0	0	3	0	0	
		1988 8	9	0	0	9	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			759	0	0	806	0	0	
CHLORDANE	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1985 5	2	0	0	2	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORDANE)	WOODBURY	1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			26	0	0	55	0	0	
CHLORPYRIFOS	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
		1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORPYRIFOS)	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6,8	2	0	0	2	0	0	
		1987 1,5 6,7	13	0	0	13	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
		1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
		1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
		1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORPYRIFOS)	CLINTON	1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1984 9	3	0	0	3	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORPYRIFOS)	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1986 8	5	0	0	5	0	0	
		1987 3,5 6,7,8,9	15	0	0	15	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	5	0	0	5	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
		1988 4	4	0	0	4	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORPYRIFOS)	IOWA	1986 6	1	0	0	1	0	0	
		1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORPYRIFOS)	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1986 6	2	0	0	2	0	0	
		1987 5 6,7,9	14	0	0	14	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	2	0	0	2	0	0	
	MONTGOMERY	1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
		1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
		1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORPYRIFOS)	PAGE	1986 6,8	2	0	0	2	0	0	
		1987 3	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1986 6 12	3	0	0	3	0	0	
		1987 1,2,5 6,7	19	0	0	19	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1986 6	1	0	0	1	0	0	
		1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CHLORPYRIFOS)	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
		1988 12	6	0	0	6	0	0	
	SIOUX	1984 3 6	2	0	0	2	0	0	
		1985 2	2	0	0	2	0	0	
		1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE (YEAR MONTH)	WELL RESULTS: TOTAL WELLS SAMPLED	WELL RESULTS: # OF POSITIVE WELLS ≥ MCL	WELL RESULTS: # OF POSITIVE WELLS < MCL	SAMPLE RESULTS: TOTAL # SAMPLES	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES ≥ MCL	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES < MCL	RANGE OF CONCEN-TRATIONS (ug/l)
(CHLORPYRIFOS)	WINNESHIEK	1988 8	9	0	0	9	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			783	0	0	871	0	0	
CYANAZINE	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1984 5	1	0	0	1	0	0	
		1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1984 7	2	0	1	2	0	1	0.300
		1985 1	2	0	0	2	0	0	
		1986 6	3	0	0	3	0	0	
		1988 8	9	0	0	9	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CYANAZINE)	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	0	1	2	0	1	0.690
		1986 4,5 6,7	4	2	1	9	4	2	0.700-2.800
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1984 6,8 12	4	0	0	4	0	0	
		1986 6,8	3	0	0	3	0	0	
		1987 1,5 6,7,8	14	0	0	14	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
		1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 5 10	10	0	1	13	0	2	0.260-0.340
		1986 4,5 6,7,8	12	1	3	14	1	5	0.220-1.100
		1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CYANAZINE)	CLAY	1984 7 10	6	1	0	6	1	0	1.000
		1985 3,5 10	4	0	0	4	0	0	
		1986 4,5 6,7,8	15	0	0	17	0	0	
		1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
		1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	1	6	0	1	0.210
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	2	11	0	2	0.270-0.840
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
		1988 9	1	0	0	1	0	0	
		1989 4	12	0	2	12	0	2	0.140-0.230
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CYANAZINE)	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1985 8	2	0	0	2	0	0	
		1986 8	5	0	0	5	0	0	
		1987 3,5 6,7,8,9	15	0	0	15	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CYANAZINE)	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1986 8	2	0	0	2	0	0	
		1988 6	4	0	0	4	0	0	
	IDA	1986 6,7,8	3	0	0	3	0	0	
		1988 4	4	0	0	4	0	0	
	IOWA	1984 4,5 6,7,8,9 11	29	0	0	47	0	0	
		1985 3,4,5 6,7,8 10,11	101	0	3	175	0	6	0.160-0.190
		1986 6	2	0	0	2	0	0	
		1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CYANAZINE)	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	1	12	0	1	0.290
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1984 6	1	1	0	1	1	0	1.400
		1985 7	5	0	0	5	0	0	
		1986 5 7,8	8	0	0	8	0	0	
		1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1985 8	1	0	0	1	0	0	
		1986 6,8	5	0	0	5	0	0	
		1987 5 6,7,9	14	0	0	14	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CYANAZINE)	MILLS	1988 5 6	4	0	0	4	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1986 8	1	0	0	1	0	0	
		1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1984 7 10	5	0	0	5	0	0	
		1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	0	0	4	0	0	
		1986 4 6,7	1	0	1	7	0	1	0.100
		1989 3	5	0	0	5	0	0	
	OSCEOLA	1985 10	1	0	0	1	0	0	
		1986 5 6,7,8	12	0	0	12	0	0	
		1988 6	3	0	0	3	0	0	
	PAGE	1986 6,8	2	0	0	2	0	0	
		1987 3	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CYANAZINE)	PAGE	1988 9	4	0	0	4	0	0	
	PALO ALTO	1983 5	1	1	0	1	1	0	4.000
		1984 5	1	1	0	1	1	0	13.000
		1986 5 6,7,8	16	0	1	16	0	1	0.100
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1986 7	2	0	0	2	0	0	
		1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1985 8	2	0	0	2	0	0	
		1986 6,7,8 12	8	0	0	9	0	0	
		1987 1,2,5 6,7	19	1	0	19	1	0	1.700
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1986 6	2	0	0	2	0	0	
		1988 6	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CYANAZINE)	SAC	1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1984 6,8,9	5	0	1	5	0	1	0.110
		1988 12	6	0	0	6	0	0	
	SIOUX	1984 3 6,9	3	0	1	3	0	1	0.100
		1985 2 7	4	1	1	5	1	2	0.550-1.000
		1986 7,8	2	0	0	2	0	0	
		1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1984 4,5 6,7	3	0	0	5	0	0	
		1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	1	4	0	1	0.660
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	1	8	0	1	0.170
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(CYANAZINE)	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 8	1	0	0	1	0	0	
		1985 1	3	0	0	3	0	0	
		1986 6	2	0	0	2	0	0	
		1988 8	9	0	0	9	0	0	
	WOODBURY	1985 5 10	9	0	0	9	0	0	
		1986 4 6,7,8	6	0	1	6	0	1	0.150
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			885	7	20	1215	11	32	0.100-13.000
DCPA	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DCPA)	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	1	7	0	1	0.030
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1988 9	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DCPA)	DELAWARE	1989 4	12	0	2	12	0	2	0.010
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DCPA)	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DCPA)	NAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1988 5 6	4	0	0	4	0	0	
	MITCHELL	1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1988 9	3	0	0	3	0	0	
	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1988 9	4	0	0	4	0	0	
	PALO ALTO	1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DCPA)	POTTAWATTAMIE	1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	6	0	0	6	0	0	
	SIOUX	1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DCPA)	WINNESHIEK	1988 8	9	0	0	9	0	0	
	WOODBURY	1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			686	0	3	686	0	3	0.010-0.030
▶ DDD	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DDD)	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DDD)	SIOUX	1985 2	2	0	0	2	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			59	0	0	106	0	0	
▶ DDE	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DDE)	CLINTON	1984 8	1	0	0	1	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DDE)	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			59	0	0	106	0	0	
▶ DDT	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1984 7	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DDT)	CLAY	1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DDT)	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			59	0	0	106	0	0	
▶ DES_ETHYL ATRAZINE	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DES_ETHYL ATRAZINE)	BUENA VISTA	1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	1	7	0	1	0.130
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1988 8	6	0	1	6	0	1	0.490
	CLAYTON	1988 8	10	0	1	10	0	1	0.130
	CLINTON	1988 12	8	0	1	8	0	1	0.300
	CRAWFORD	1988 10	6	0	1	6	0	1	0.110
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	1	11	0	1	0.310
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	1	12	0	1	0.860

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DES_ETHYL ATRAZINE)	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DES_ETHYL ATRAZINE)	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	2	15	0	2	0.230-0.250
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	1	12	0	1	0.720
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	1	6	0	1	0.200
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	3	5	0	3	0.160-1.220
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	2	7	0	2	0.180-0.250
	MAHASKA	1988 10	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DES_ETHYL ATRAZINE)	MAHASKA	1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1988 5 6	4	0	0	4	0	0	
	MITCHELL	1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1988 9	3	0	0	3	0	0	
	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1989 3	5	0	3	5	0	3	2.790-2.860
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1988 9	4	0	0	4	0	0	
	PALO ALTO	1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	1	4	0	1	1.300
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1988 7	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DES_ETHYL ATRAZINE)	POTTAWATTAMIE	1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	6	0	0	6	0	0	
	SIOUX	1988 7	10	0	1	10	0	1	0.110
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	2	9	0	2	0.150-0.180
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	1	4	0	1	0.310
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1988 8	9	0	0	9	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DES_ETHYL ATRAZINE)	WOODBURY	1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			686	0	24	686	0	24	0.110-2.860
▶ DES_ISOPROPYL ATRAZIN	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DES_ISOPROPYL ATRAZ)	CERRO GORDO	1988 8	7	0	1	7	0	1	0.110
	CHEROKEE	1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1988 12	8	0	1	8	0	1	0.490
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	1	6	0	1	0.120
	DUBUQUE	1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DES_ISOPROPYL ATRAZ)	EMMET	1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	1	4	0	1	0.130
	FREMONT	1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DES_ISOPROPYL ATRAZ)	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	1	12	0	1	3.100
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	2	5	0	2	0.380-0.670
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	2	7	0	2	0.670-1.020
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1988 5 6	4	0	0	4	0	0	
	MITCHELL	1989 1	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DES_ISOPROPYL ATRAZ)	MONONA	1988 10	5	0	1	5	0	1	0.170
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1988 9	3	0	0	3	0	0	
	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1989 3	5	0	1	5	0	1	3.540
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1988 9	4	0	0	4	0	0	
	PALO ALTO	1989 1	5	0	1	5	0	1	0.100
	PLYMOUTH	1988 6 11	9	0	1	9	0	1	0.130
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	2	11	0	2	0.630-0.920
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1988 7	3	0	0	3	0	0	
		1989 1	24	0	2	24	0	2	0.140-0.290
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	6	0	0	6	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DES_ISOPROPYL ATRAZ)	SIOUX	1988 7	10	0	2	10	0	2	0.110-0.160
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	4	9	0	4	0.110-0.470
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1988 8	9	0	0	9	0	0	
	WOODBURY	1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			686	0	23	686	0	23	0.100-3.540
DIAZINON	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DIAZINON)	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1987 1,5 6,7	13	0	0	15	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DIAZINON)	CLINTON	1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1986 8	1	0	0	1	0	0	
		1987 3,5 6,7,8,9	15	0	0	15	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DIAZINON)	FREMONT	1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	5	0	0	5	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DIAZINON)	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1987 5 6,7,9	14	0	0	15	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DIAZINON)	MONTGOMERY	1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1987 3	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1986 12	1	0	0	1	0	0	
		1987 1,2,5 6,7	19	0	0	25	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1988 6	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DIAZINON)	SAC	1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	6	0	0	6	0	0	
	SIOUX	1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1988 8	9	0	0	9	0	0	
	WOODBURY	1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			717	0	0	766	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
DICAMBA	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
		1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	9	0	0	
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DICAMBA)	CASS	1986 6	1	0	0	1	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
		1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
		1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	4	0	0	7	0	0	
		1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
		1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DICAMBA)	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1985 8	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DICAMBA)	FREMONT	1986 8	4	0	0	4	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
		1988 4	4	0	0	4	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
		1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DICAMBA)	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	9	0	0	9	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1985 8	1	0	0	1	0	0	
		1986 6,8	3	0	0	3	0	0	
		1988 5 6	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DICAMBA)	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1988 9	3	0	0	3	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
		1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	7	0	0	
		1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1986 6,8	2	0	0	2	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DICAMBA)	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1985 8	2	0	0	2	0	0	
		1986 6	2	0	0	3	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1986 6	1	0	0	1	0	0	
		1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
		1988 12	5	0	0	5	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
		1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	8	0	0	8	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(DICAMBA)	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	12	0	0	12	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
		1988 8	9	0	0	9	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			754	0	0	805	0	0	
▶ DIELDRIN	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	2	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DIELDRIN)	BREMER	1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
	CLAYTON	1983 3,5 7 10	16	0	0	19	0	0	
		1984 5 6	6	0	0	6	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DIELDRIN)	DUBUQUE	1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	

PESTICIDE	COUNTY	DATE (YEAR MONTH)	WELL RESULTS: TOTAL WELLS SAMPLED	WELL RESULTS: # OF POSITIVE WELLS ≥ MCL	WELL RESULTS: # OF POSITIVE WELLS < MCL	SAMPLE RESULTS: TOTAL # SAMPLES	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES ≥ MCL	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES < MCL	RANGE OF CONCEN-TRATIONS (ug/l)
▶ (DIELDRIN)	WOODBURY	1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			67	0	0	132	0	0	
▶ DIMETHOATE	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1987 5 6,7	12	0	0	14	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DIMETHOATE)	CHEROKEE	1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DIMETHOATE)	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1987 3,5 6,7	12	0	0	12	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	5	0	0	5	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DIMETHOATE)	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1987 5 6,7	11	0	0	12	0	0	
		1988 5 6	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DIMETHOATE)	MITCHELL	1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	2	0	0	2	0	0	
	MONTGOMERY	1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1988 9	4	0	0	4	0	0	
	PALO ALTO	1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1987 5 6,7	15	0	0	21	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (DIMETHOATE)	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	6	0	0	6	0	0	
	SIOUX	1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1988 8	9	0	0	9	0	0	
	WOODBURY	1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			704	0	0	752	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ ELDRIN	DUBUQUE	1984 5	1	0	0	1	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			1	0	0	1	0	0	
▶ ELDRIN ALDEHYDE	DUBUQUE	1984 5	1	0	0	1	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			1	0	0	1	0	0	
▶ ENDOSULFAN I	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
	DELAWARE	1984 9	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ENDOSULFAN I)	DELAWARE	1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
	SIOUX	1984 3 6	2	0	0	2	0	0	
		1985 2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ENDOSULFAN I)	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			58	0	0	104	0	0	
▶ ENDOSULFAN II	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ENDOSULFAN II)	CLINTON	1984 8	1	0	0	1	0	0	
	DELAWARE	1984 9	3	0	0	3	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ENDOSULFAN II)	SIOUX	1984 3 6	2	0	0	2	0	0	
		1985 2	2	0	0	2	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			58	0	0	104	0	0	
▶ ENDOSULFAN SULFATE	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1984 7	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ENDOSULFAN SULFATE)	CLAY	1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
	DELAWARE	1984 9	3	0	0	3	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ENDOSULFAN SULFATE)	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
	SIOUX	1984 3 6	2	0	0	2	0	0	
		1985 2	2	0	0	2	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			58	0	0	104	0	0	
ENDRIN	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ENDRIN)	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	2	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(ENDRIN)	PALO ALTO	1984 5	1	0	0	1	0	0	
	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			59	0	0	105	0	0	
▶ ENDRIN ALDEHYDE	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ENDRIN ALDEHYDE)	CHEROKEE	1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	2	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ENDRIN ALDEHYDE)	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			59	0	0	105	0	0	
▶ ETHOPROP	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ETHOPROP)	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
		1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6,8	2	0	0	2	0	0	
		1987 1,5 6,7	13	0	0	13	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
		1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ETHOPROP)	CHEROKEE	1986 4,5 6,7	3	0	0	7	0	0	
		1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
		1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
		1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1988 9	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ETHOPROP)	DELAWARE	1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1986 8	5	0	0	5	0	0	
		1987 3,5 6,7,8,9	15	0	0	15	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ETHOPROP)	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	5	0	0	5	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
		1988 4	4	0	0	4	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
		1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ETHOPROP)	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1986 6,8	3	0	0	3	0	0	
		1987 5 6,7,9	14	0	0	14	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ETHOPROP)	MONTGOMERY	1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
		1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
		1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1986 6,8	2	0	0	2	0	0	
		1987 3	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1986 6 12	3	0	0	3	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ETHOPROP)	POTTAWATTANIE	1987 1,2,5 6,7	19	0	0	19	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1986 6	1	0	0	1	0	0	
		1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
		1988 12	6	0	0	6	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
		1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (ETHOPROP)	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
		1988 8	9	0	0	9	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			784	0	0	874	0	0	
FONOFOS	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(FONOFOS)	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	2	0	0	
		1986 6	2	0	0	3	0	0	
		1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1984 6,8 12	3	0	0	4	0	0	
		1986 6	1	0	0	1	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
		1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE (YEAR MONTH)	WELL RESULTS: TOTAL WELLS SAMPLED	WELL RESULTS: # OF POSITIVE WELLS ≥ MCL	WELL RESULTS: # OF POSITIVE WELLS < MCL	SAMPLE RESULTS: TOTAL # SAMPLES	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES ≥ MCL	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES < MCL	RANGE OF CONCEN-TRATIONS (ug/l)
(FONOFOS)	CHEROKEE	1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1984 7 10	5	0	3	6	0	3	0.110-0.900
		1985 3,5	3	0	0	3	0	0	
		1986 6	3	0	0	4	0	0	
		1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
		1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	2	0	0	
		1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(FONOFOS)	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(FONOFOS)	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1984 5 9	1	0	0	3	0	0	
		1986 6	1	0	0	2	0	0	
		1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(FONOFOS)	LYON	1984 6	1	0	0	1	0	0	
		1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1988 5 6	4	0	0	4	0	0	
	MITCHELL	1984 7	1	0	1	1	0	1	0.160
		1986 6	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	2	0	0	2	0	0	
	MONTGOMERY	1988 9	3	0	0	3	0	0	
	MUSCATINE	1984 7 10	4	0	0	5	0	0	
		1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1989 3	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(FONOFOS)	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1986 6	1	0	0	2	0	0	
		1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1984 6,8,9	4	0	0	5	0	0	
		1988 12	6	0	0	6	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(FONOFOS)	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	4	0	0	
		1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 8	1	0	0	1	0	0	
		1985 1	2	0	0	3	0	0	
		1986 6	1	0	0	2	0	0	
		1988 8	9	0	0	9	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1988 4	9	0	0	9	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(FONOFOS)	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			745	0	4	780	0	4	0.110-0.900
HEPTACHLOR	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(HEPTACHLOR)	DELAWARE	1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(HEPTACHLOR)	WINNESHIEK	1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			59	0	0	106	0	0	
HEPTACHLOR EPOXIDE	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(HEPTACHLOR EPOXIDE)	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(HEPTACHLOR EPOXIDE)	SIOUX	1985 2	2	0	0	2	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			59	0	0	106	0	0	
▶ HYDROXYALACHLOR	ADAMS	1988 12	4	0	0	4	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	
	CHEROKEE	1989 3	4	0	0	4	0	0	
	CLINTON	1988 12	8	0	0	8	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DELAWARE	1989 4	12	0	0	12	0	0	
	DES MOINES	1989 5	6	0	0	6	0	0	
	DUBUQUE	1989 6	11	0	0	11	0	0	
	EMMET	1989 1	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (HYDROXYALACHLOR)	FRANKLIN	1989 1	4	0	0	4	0	0	
	GREENE	1988 10	6	0	0	6	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	IOWA	1989 5	6	0	1	6	0	1	0.910
	JASPER	1988 12	14	0	0	14	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 11	1	0	0	1	0	0	
	KOSSUTH	1988 10	5	0	0	5	0	0	
	LEE	1988 11	2	0	0	2	0	0	
	MADISON	1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MITCHELL	1989 1	7	0	0	7	0	0	
	O'BRIEN	1989 3	5	0	0	5	0	0	
	PALO ALTO	1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 11	8	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (HYDROXYALACHLOR)	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 12	10	0	0	10	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1989 1	24	0	0	24	0	0	
	SAC	1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	6	0	0	6	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WAYNE	1988 11	2	0	0	2	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			297	0	1	297	0	1	0.910
▶ KPHORATE	DELAWARE	1986 6	1	0	0	1	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			1	0	0	1	0	0	
LINDANE	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(LINDANE)	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(LINDANE)	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			59	0	0	106	0	0	
MALATHION	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(MALATHION)	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1987 5 6,7	12	0	0	14	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1988 12	8	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(MALATHION)	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1987 3,5 6,7	12	0	0	12	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(MALATHION)	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	5	0	0	5	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(MALATHION)	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1987 5 6,7	11	0	0	12	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	2	0	0	2	0	0	
	MONTGOMERY	1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(MALATHION)	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1988 9	4	0	0	4	0	0	
	PALO ALTO	1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1987 5 6,7	15	0	0	21	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	6	0	0	6	0	0	
	SIOUX	1988 7	10	0	0	10	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(MALATHION)	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1988 8	9	0	0	9	0	0	
	WOODBURY	1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			704	0	0	752	0	0	
METOLACHLOR	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METOLACHLOR)	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1984 5	1	0	0	1	0	0	
		1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	2	0	0	2	0	0	
		1986 6	3	0	0	3	0	0	
		1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	0	0	3	0	0	
		1986 4,5 6,7	4	0	3	9	0	6	0.310-2.000
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1984 6,8 12	4	0	0	4	0	0	
		1986 6,8	3	0	0	3	0	0	
		1987 1,5 6,7,8	14	0	0	14	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METOLACHLOR)	CASS	1988 7	5	0	0	5	0	0	
	CEDAR	1986 6	1	0	1	1	0	1	2.500
		1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 5 10	10	0	1	13	0	2	4.500-7.300
		1986 4,5 6,7,8	12	0	4	14	0	6	0.390-11.000
		1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1984 7 10	6	0	0	6	0	0	
		1985 3,5 10	4	0	0	4	0	0	
		1986 4,5 6,7,8	15	0	1	17	0	1	0.100
		1988 8	6	0	0	6	0	0	
	CLAYTON	1983 3,5 7 10	16	0	0	17	0	0	
		1984 5 6	6	0	0	6	0	0	
		1988 8	10	0	0	10	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
		1988 12	8	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METOLACHLOR)	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
		1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	1	6	0	1	0.090
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METOLACHLOR)	FLOYD	1983 2,4,5 7,8 10,12	39	0	0	40	0	0	
		1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1985 8	2	0	0	2	0	0	
		1986 8	5	0	0	5	0	0	
		1987 3,5 6,7,8,9	15	0	0	15	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1986 8	2	0	0	2	0	0	
		1988 6	4	0	0	4	0	0	
	IDA	1986 6,7,8	3	0	1	3	0	1	0.150

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METOLACHLOR)	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1984 4,5 6,7,8,9 11	29	0	0	47	0	0	
		1985 3,4,5 6,7,8 10,11	101	0	0	174	0	0	
		1986 6	2	0	0	2	0	0	
		1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	1	7	0	1	0.040
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	1	6	0	1	1.370
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1984 6	1	0	0	1	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METOLACHLOR)	LYON	1985 7	5	0	0	5	0	0	
		1986 5 7,8	8	0	0	8	0	0	
		1988 6,8	5	0	1	5	0	1	0.310
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1985 8	1	0	0	1	0	0	
		1986 6,8	5	0	0	5	0	0	
		1987 5 6,7,9	14	0	0	14	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1983 2,4,5 7,8,9 10,12	43	0	1	45	0	1	0.110
		1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METOLACHLOR)	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1986 8	1	0	0	1	0	0	
		1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1984 7 10	5	0	0	5	0	0	
		1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	0	1	4	0	2	5.600-6.300
		1986 4 6,7	1	0	1	7	0	7	1.200-8.700
		1989 3	5	0	0	5	0	0	
	OSCEOLA	1985 10	1	0	0	1	0	0	
		1986 5 6,7,8	12	0	3	12	0	3	0.190-0.250
		1988 6	3	0	0	3	0	0	
	PAGE	1986 6,8	2	0	0	2	0	0	
		1987 3	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1983 5	1	0	1	1	0	1	9.000
		1984 5	1	0	1	1	0	1	22.000
		1986 5 6,7,8	16	0	0	16	0	0	
		1989 1	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METOLACHLOR)	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1986 7	2	0	0	2	0	0	
		1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1985 8	2	0	0	2	0	0	
		1986 6,8 12	8	0	1	8	0	1	0.100
		1987 1,2,5 6,7	19	0	1	19	0	1	0.640
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	1	24	0	1	0.250
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1986 6	2	0	0	2	0	0	
		1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1984 6,8,9	5	0	0	5	0	0	
		1988 12	6	0	0	6	0	0	
	SIOUX	1984 3 6,9	3	0	2	3	0	2	0.320-0.800

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METOLACHLOR)	SIOUX	1985 2 7	4	0	3	5	0	4	2.100-7.800
		1986 7,8	2	0	0	2	0	0	
		1988 7	10	0	1	10	0	1	9.900
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1984 4,5 6,7	3	0	0	5	0	0	
		1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	1	4	0	1	0.270
	WAPELLO	1988 10,11	9	0	1	9	0	1	0.040
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	1	8	0	1	0.150
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	1	8	0	1	0.052
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 8	1	0	0	1	0	0	
		1985 1	3	0	0	3	0	0	
		1986 6	2	0	0	2	0	0	
		1988 8	9	0	0	9	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METOLACHLOR)	WOODBURY	1985 5 10	10	0	0	10	0	0	
		1986 4 6,7,8	6	0	1	6	0	1	0.440
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			913	0	28	1323	0	51	0.040-22.000
▶ METRIBIZIN	IOWA	1985 5	2	0	0	2	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			2	0	0	2	0	0	
METRIBUZIN	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1984 5	1	0	0	1	0	0	
		1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	1	13	0	1	0.200
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	2	0	0	2	0	0	
		1986 6	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METRIBUZIN)	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	0	1	2	0	1	1.100
		1986 4,5 6,7	4	0	2	9	0	5	0.900-3.700
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	1	7	0	1	0.080
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1984 6,8 12	4	0	0	4	0	0	
		1986 6,8	3	0	0	3	0	0	
		1987 1,5 6,7,8	14	0	0	14	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
		1989 4	7	0	2	7	0	2	0.020-0.070
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 5 10	10	0	1	13	0	2	0.440-0.750
		1986 4,5 6,7,8	12	0	1	14	0	1	0.120
		1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METRIBUZIN)	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1984 7 10	6	0	0	6	0	0	
		1985 3,5 10	4	0	0	4	0	0	
		1986 4,5 6,7,8	15	0	0	17	0	0	
		1988 8	6	0	1	6	0	1	0.720
	CLAYTON	1983 3,5 7 10	16	0	0	17	0	0	
		1984 5 6	6	0	0	6	0	0	
		1988 8	10	0	0	10	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
		1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	1	6	0	1	0.020
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	1	11	0	1	0.120
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METRIBUZIN)	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	1	12	0	1	0.060
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1983 2,4,5 7,8 10,12	39	0	2	40	0	2	0.090-0.150
		1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1985 8	2	0	0	2	0	0	
		1986 8	5	0	0	5	0	0	
		1987 3,5 6,7,8,9	15	0	0	15	0	0	
		1988 6	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METRIBUZIN)	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1986 8	2	0	0	2	0	0	
		1988 6	4	0	0	4	0	0	
	IDA	1986 6,7,8	3	0	0	3	0	0	
		1988 4	4	0	0	4	0	0	
	IOWA	1984 4,5 6,7,8,9 11	29	0	0	47	0	0	
		1985 3,4,5 6,7,8 10,11	101	0	5	172	0	10	0.100-8.100
		1986 6	2	0	0	2	0	0	
		1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METRIBUZIN)	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	1	6	0	1	0.430
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1984 6	1	0	0	1	0	0	
		1985 7	5	0	0	5	0	0	
		1986 5 7,8	8	0	0	8	0	0	
		1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METRIBUZIN)	MARION	1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1985 8	1	0	0	1	0	0	
		1986 6,8	5	0	0	5	0	0	
		1987 5 6,7,9	14	0	0	14	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1983 2,4,5 7,8,9 10,12	43	0	11	45	0	12	0.170-4.350
		1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1986 8	1	0	0	1	0	0	
		1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1984 7 10	5	0	0	5	0	0	
		1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	0	0	4	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METRIBUZIN)	O'BRIEN	1986 4 6,7	1	0	1	7	0	5	0.170-0.300
		1989 3	5	0	0	5	0	0	
	OSCEOLA	1985 10	1	0	0	1	0	0	
		1986 5 6,7,8	12	0	0	12	0	0	
		1988 6	3	0	0	3	0	0	
	PAGE	1986 6,8	2	0	0	2	0	0	
		1987 3	1	0	0	1	0	0	
		1988 9	4	0	2	4	0	2	0.110-0.300
	PALO ALTO	1983 5	1	0	1	1	0	1	1.000
		1984 5	1	0	1	1	0	1	0.700
		1986 5 6,7,8	16	0	0	16	0	0	
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1986 7	2	0	0	2	0	0	
		1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1985 8	2	0	0	2	0	0	
		1986 6,7,8 12	8	0	0	9	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE (YEAR MONTH)	WELL RESULTS: TOTAL WELLS SAMPLED	WELL RESULTS: # OF POSITIVE WELLS ≥ MCL	WELL RESULTS: # OF POSITIVE WELLS < MCL	SAMPLE RESULTS: TOTAL # SAMPLES	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES ≥ MCL	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES < MCL	RANGE OF CONCEN-TRATIONS (ug/l)
(METRIBUZIN)	POTTAWATTAMIE	1987 1,2,5 6,7	19	0	0	19	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	1	24	0	1	0.020
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1986 6	2	0	0	2	0	0	
		1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1984 6,8,9	5	0	0	5	0	0	
		1988 12	6	0	0	6	0	0	
	SIOUX	1984 3 6,9	3	0	1	3	0	1	0.290
		1985 2 7	4	0	3	5	0	3	0.400-1.100
		1986 7,8	2	0	0	2	0	0	
		1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1984 4,5 6,7	3	0	0	5	0	0	
		1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(METRIBUZIN)	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	1	8	0	1	0.044
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 8	1	0	0	1	0	0	
		1985 1	3	0	0	3	0	0	
		1986 6	2	0	0	2	0	0	
		1988 8	9	0	0	9	0	0	
	WOODBURY	1985 5 10	10	0	0	10	0	0	
		1986 4 6,7,8	6	0	0	6	0	0	
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			913	0	27	1321	0	57	0.020-8.100
▶ METHYLENE CHLORIDE	CASS	1986 6	1	0	0	1	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (METHYLENE CHLORIDE)	CLINTON	1984 8	1	0	0	1	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			2	0	0	2	0	0	
▶ PARATHION,ETHYL	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1987 5 6,7	12	0	0	14	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PARATHION,ETHYL)	CHEROKEE	1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PARATHION,ETHYL)	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1987 3,5 6,7	12	0	0	12	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	5	0	0	5	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PARATHION,ETHYL)	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1987 5 6,7	11	0	0	12	0	0	
		1988 5 6	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PARATHION,ETHYL)	MITCHELL	1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	2	0	0	2	0	0	
	MONTGOMERY	1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1988 9	4	0	0	4	0	0	
	PALO ALTO	1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1987 5 6,7	15	0	0	21	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PARATHION,ETHYL)	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	6	0	0	6	0	0	
	SIOUX	1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1988 8	9	0	0	9	0	0	
	WOODBURY	1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			704	0	0	752	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
PARATHION,METHYL	BUENA VISTA	1985 5	2	0	0	3	0	0	
	CHEROKEE	1985 5	8	0	0	11	0	0	
	CLAY	1985 5	2	0	0	2	0	0	
	O'BRIEN	1985 5	3	0	0	4	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			24	0	0	29	0	0	
► PENDIMETHALIN	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	1	8	0	1	0.190
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
		1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PENDIMETHALIN)	BUENA VISTA	1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6,8	2	0	0	2	0	0	
		1987 1,5 6,7	13	0	0	15	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
		1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PENDIMETHALIN)	CLINTON	1984 8	1	0	0	1	0	0	
		1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	2	11	0	2	0.020-0.060
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1988 9	1	0	0	1	0	0	
		1989 4	12	0	1	12	0	1	0.900
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PENDIMETHALIN)	EMMET	1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1987 3,5 6,7,8,9	15	0	0	15	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PENDIMETHALIN)	IOWA	1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PENDIMETHALIN)	MARION	1989 4	11	0	1	11	0	1	0.660
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1986 8	1	0	0	1	0	0	
		1987 5 6,7,9	14	0	0	15	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1986 8	1	0	0	1	0	0	
		1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
		1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1989 3	5	0	1	5	0	1	0.040
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1986 6	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PENDIMETHALIN)	PAGE	1987 3	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1986 8 12	2	0	0	3	0	0	
		1987 1,2,5 6,7	19	0	0	25	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1986 6	1	0	0	1	0	0	
		1988 6	1	0	0	1	0	0	
		1989 3	3	0	1	3	0	1	0.030
	SCOTT	1989 6	10	0	0	10	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PENDIMETHALIN)	SHELBY	1984 6,8,9	4	0	0	4	0	0	
		1988 12	6	0	0	6	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
		1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	1	9	0	1	0.020
	TAYLOR	1989 1	4	0	2	4	0	2	0.020-0.070
	UNION	1989 1	3	0	1	3	0	1	0.020
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	1	8	0	1	0.120
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
		1988 8	9	0	0	9	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PENDIMETHALIN)	WOODBURY	1985 5	9	0	0	9	0	0	
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			776	0	12	847	0	12	0.020-0.900
▶ PHORATE	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	2	0	0	
		1986 6	2	0	0	2	0	0	
		1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PHORATE)	BUENA VISTA	1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6,8	2	0	0	2	0	0	
		1987 1,5 6,7	13	0	0	13	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
		1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
		1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PHORATE)	CLAY	1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
		1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PHORATE)	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1985 8	2	0	0	2	0	0	
		1986 8	5	0	0	5	0	0	
		1987 3,5 6,7,8,9	15	0	0	15	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	5	0	0	5	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PHORATE)	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
		1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PHORATE)	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1985 8	1	0	0	1	0	0	
		1986 6,8	3	0	0	3	0	0	
		1987 5 6,7,9	14	0	0	14	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	2	0	0	2	0	0	
	MONTGOMERY	1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
		1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PHORATE)	O'BRIEN	1986 4 6,7	1	0	0	5	0	0	
		1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1986 6,8	2	0	0	2	0	0	
		1987 3	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1985 8	2	0	0	2	0	0	
		1986 6 12	3	0	0	3	0	0	
		1987 1,2,5 6,7	19	0	0	19	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PHORATE)	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1986 6	1	0	0	1	0	0	
		1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
		1988 12	6	0	0	6	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
		1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS: TOTAL WELLS SAMPLED	WELL RESULTS: # OF POSITIVE WELLS		SAMPLE RESULTS: TOTAL # SAMPLES	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES		RANGE OF CONCEN-TRATIONS (ug/L)
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (PHORATE)	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
		1988 8	9	0	0	9	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			788	0	0	879	0	0	
PICLORAM	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(PICLORAM)	BUENA VISTA	1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1988 12	8	0	1	8	0	1	0.100
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	1	5	0	1	2.000
	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(PICLORAM)	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(PICLORAM)	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	9	0	0	9	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	1	3	0	1	0.100
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(PICLORAM)	MAHASKA	1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1988 5 6	4	0	0	4	0	0	
	MITCHELL	1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1988 9	3	0	0	3	0	0	
	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1988 9	4	0	0	4	0	0	
	PALO ALTO	1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1988 7	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(PICLORAM)	POTTAWATTAMIE	1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	5	0	0	5	0	0	
	SIOUX	1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	8	0	0	8	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	12	0	1	12	0	1	0.260
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1988 8	9	0	0	9	0	0	

PESTICIDE	COUNTY	DATE (YEAR MONTH)	WELL RESULTS: TOTAL WELLS SAMPLED	WELL RESULTS: # OF POSITIVE WELLS ≥ MCL	WELL RESULTS: # OF POSITIVE WELLS < MCL	SAMPLE RESULTS: TOTAL # SAMPLES	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES ≥ MCL	SAMPLE RESULTS: NUMBER OF POSITIVE SAMPLES < MCL	RANGE OF CONCEN-TRATIONS (ug/l)
(PICLORAM)	WOODBURY	1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			678	0	4	678	0	4	0.100-2.000
PROPACHLOR	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1986 8	1	0	0	1	0	0	
		1987 1,5 6,7	13	0	0	13	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(PROPACHLOR)	CASS	1988 7	5	0	0	5	0	0	
	CEDAR	1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	1	6	0	1	0.050
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1988 8	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(PROPACHLOR)	DUBUQUE	1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1987 3,5 6,7,8,9	15	0	0	15	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	
	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1988 4	4	0	0	4	0	0	
	IOWA	1988 9	1	0	0	1	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(PROPACHLOR)	IOWA	1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(PROPACHLOR)	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1986 8	2	0	0	2	0	0	
		1987 5 6,7,9	14	0	0	14	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1986 8	1	0	0	1	0	0	
		1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1987 3	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(PROPACHLOR)	POLK	1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1986 7,8 12	7	0	0	7	0	0	
		1987 1,2,5 6,7	19	0	0	19	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1988 12	6	0	0	6	0	0	
	SIOUX	1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1988 8	9	0	1	9	0	1	0.280
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(PROPACHLOR)	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	1	8	0	1	0.020
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1988 8	9	0	0	9	0	0	
	WOODBURY	1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			724	0	3	768	0	3	0.020-0.280
SIMAZINE	POTTAWATTAMIE	1987 6	1	0	1	1	0	1	0.980
TOTAL DISCRETE WELLS OR SAMPLES			1	0	1	1	0	1	0.980
► SULPROFOS	BUENA VISTA	1985 5	2	0	1	3	0	2	1.300-1.400
		1986 4,5 6,7	4	0	0	8	0	0	
	CASS	1986 8	1	0	0	1	0	0	
		1987 1,5 6,7	13	0	0	13	0	0	
	CHEROKEE	1985 5	8	0	0	11	0	0	
		1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1985 5	2	0	0	2	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	FREMONT	1987 3,5 6,7,8,9	15	0	0	15	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ (SULPROFOS)	IDA	1986 6,7	2	0	0	2	0	0	
	MILLS	1986 8	1	0	0	1	0	0	
		1987 5 6,7,9	14	0	0	15	0	0	
	MONTGOMERY	1986 8	1	0	0	1	0	0	
		1987 5 6,7	9	0	0	9	0	0	
	O'BRIEN	1985 5	3	0	0	4	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1987 3	1	0	0	1	0	0	
	POTTAWATTAMIE	1986 8 12	2	0	0	2	0	0	
		1987 1,2,5 6,7	19	0	0	19	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			59	0	1	137	0	2	1.300-1.400
TERBUFOS	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TERBUFOS)	BENTON	1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	
	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	2	0	0	
		1986 6	2	0	0	2	0	0	
		1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	1	1	3	2	1	0.300-12.000
		1986 4,5 6,7	4	0	0	9	0	0	
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6,8	2	0	0	2	0	0	
		1987 1,5 6,7	13	0	0	13	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TERBUFOS)	CEDAR	1989 4	7	0	0	7	0	0	
	CERRO GORDO	1988 8	7	0	0	7	0	0	
	CHEROKEE	1985 5	8	1	0	11	1	0	11.000
		1986 4,5 6,7	4	0	0	8	0	0	
		1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	1	0	3	1	0	1.200
		1986 4 6,7	4	0	0	7	0	0	
		1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
		1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TERBUFOS)	DELAWARE	1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1986 8	5	0	0	5	0	0	
		1987 3,5 6,7,8,9	15	0	0	15	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TERBUFOS)	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	5	0	0	5	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1988 6	4	0	0	4	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
		1988 4	4	0	0	4	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
		1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	
	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TERBUFOS)	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	
	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1986 6,8	3	0	0	3	0	0	
		1987 5 6,7,9	14	0	0	14	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TERBUFOS)	MITCHELL	1986 6	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	2	0	0	2	0	0	
	MONTGOMERY	1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
		1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	1	0	4	2	0	4.800-5.900
		1986 4 6,7	1	0	0	7	0	0	
		1989 3	5	0	0	5	0	0	
	OSCEOLA	1988 6	3	0	0	3	0	0	
	PAGE	1986 6,8	2	0	0	2	0	0	
		1987 3	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TERBUFOS)	POCAHONTAS	1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1986 6 12	3	0	0	3	0	0	
		1987 1,2,5 6,7	19	0	0	19	0	0	
		1988 7	3	0	0	3	0	0	
		1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1986 6	1	0	0	1	0	0	
		1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
		1988 12	6	0	0	6	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
		1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TERBUFOS)	TAMA	1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	
	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
		1988 8	9	0	0	9	0	0	
	WOODBURY	1985 5	9	2	0	9	2	0	1.700-2.100
		1986 4 6	4	0	0	4	0	0	
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			787	6	1	885	8	1	0.300-12.000

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
▶ TERBUFOS SULFONE	BUENA VISTA	1986 4,5 6,7	4	0	0	9	0	0	
	CHEROKEE	1986 4,5 6,7	4	0	0	8	0	0	
	CLAY	1986 4 6,7	2	0	0	6	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	O'BRIEN	1986 4 6,7	1	0	0	7	0	0	
	WOODBURY	1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			13	0	0	36	0	0	
▶ TICHLOROETHENE	DUBUQUE	1984 5	1	0	0	1	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			1	0	0	1	0	0	
TOXAPHENE	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	1	0	0	1	0	0	
		1986 6	2	0	0	2	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
	CASS	1984 6,8 12	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
	CHEROKEE	1985 5	8	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TOXAPHENE)	CHEROKEE	1986 4,5 6,7	3	0	0	7	0	0	
	CLAY	1984 7	2	0	0	2	0	0	
		1985 3,5	3	0	0	3	0	0	
		1986 4 6,7	3	0	0	6	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
	IDA	1986 6,7	2	0	0	2	0	0	
	IOWA	1984 5 9	1	0	0	2	0	0	
		1986 6	1	0	0	1	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
	MUSCATINE	1984 7 10	4	0	0	4	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
	PAGE	1986 6	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TOXAPHENE)	PALO ALTO	1983 5	1	0	0	1	0	0	
		1984 5	1	0	0	1	0	0	
	SAC	1986 6	1	0	0	1	0	0	
	SHELBY	1984 6,8,9	4	0	0	4	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2	2	0	0	2	0	0	
	WINNESHIEK	1984 3	1	0	0	1	0	0	
		1985 1 6	2	0	0	3	0	0	
	WOODBURY	1985 5	9	0	0	9	0	0	
		1986 4 6	4	0	0	4	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			59	0	0	106	0	0	
TRIFLURALIN	ADAIR	1988 6	6	0	0	6	0	0	
	ADAMS	1988 12	4	0	0	4	0	0	
	ALLAMAKEE	1988 8	10	0	0	10	0	0	
	APPANOOSE	1988 9	5	0	0	5	0	0	
	AUDUBON	1988 6	3	0	0	3	0	0	
	BENTON	1984 5	1	0	0	1	0	0	
		1989 4	8	0	0	8	0	0	
	BLACK HAWK	1989 1,2	13	0	0	13	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TRIFLURALIN)	BOONE	1988 5	5	0	0	5	0	0	
	BREMER	1984 7	2	0	0	2	0	0	
		1985 1	2	0	0	2	0	0	
		1986 6	3	0	0	3	0	0	
		1988 8	9	0	0	9	0	0	
	BUCHANAN	1989 2,5	11	0	0	11	0	0	
	BUENA VISTA	1985 5	2	0	0	2	0	0	
		1986 4,5 6,7	4	0	0	8	0	0	
		1988 6	7	0	0	7	0	0	
	BUTLER	1988 5	7	0	0	7	0	0	
	CALHOUN	1988 6	4	0	0	4	0	0	
	CARROLL	1989 3	7	0	0	7	0	0	
	CASS	1984 6,8 12	4	0	0	4	0	0	
		1986 6,8	3	0	0	3	0	0	
		1987 1,5 6,7,8	14	0	0	14	0	0	
		1988 7	5	0	0	5	0	0	
	CEDAR	1986 6	1	0	0	1	0	0	
		1989 4	7	0	2	7	0	2	0.040
	CERRO GORDO	1988 8	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TRIFLURALIN)	CHEROKEE	1985 5 10	10	0	0	10	0	0	
		1986 4,5 6,7,8	11	0	0	13	0	0	
		1989 3	4	0	0	4	0	0	
	CHICKASAW	1988 4	6	0	0	6	0	0	
	CLARKE	1988 5	4	0	0	4	0	0	
	CLAY	1984 7 10	6	0	0	6	0	0	
		1985 3,5 10	4	0	0	4	0	0	
		1986 4,5 6,7,8	14	0	0	16	0	0	
		1988 8	6	0	0	6	0	0	
	CLAYTON	1988 8	10	0	0	10	0	0	
	CLINTON	1984 8	1	0	0	1	0	0	
		1988 12	8	0	0	8	0	0	
	CRAWFORD	1988 10	6	0	0	6	0	0	
	DALLAS	1988 10	2	0	0	2	0	0	
		1989 3	11	0	0	11	0	0	
	DAVIS	1988 5	4	0	0	4	0	0	
	DECATUR	1988 5	5	0	0	5	0	0	
	DELAWARE	1984 9	4	0	0	4	0	0	
		1985 3	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TRIFLURALIN)	DELAWARE	1986 6	2	0	0	2	0	0	
		1988 9	1	0	0	1	0	0	
		1989 4	12	0	0	12	0	0	
	DES MOINES	1988 8	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	DICKINSON	1988 8	6	0	0	6	0	0	
	DUBUQUE	1984 5	3	0	0	3	0	0	
		1986 6	1	0	0	1	0	0	
		1988 8	1	0	0	1	0	0	
		1989 6	11	0	0	11	0	0	
	EMMET	1988 8	1	0	0	1	0	0	
		1989 1	2	0	0	2	0	0	
	FAYETTE	1988 4	8	0	0	8	0	0	
	FLOYD	1988 8	7	0	0	7	0	0	
	FRANKLIN	1989 1	4	0	0	4	0	0	
	FREMONT	1985 8	2	0	0	2	0	0	
		1986 8	5	0	0	5	0	0	
		1987 3,5 6,7,8,9	15	0	0	15	0	0	
		1988 6	4	0	0	4	0	0	
	GREENE	1988 6 10	7	0	0	7	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TRIFLURALIN)	GRUNDY	1988 10	5	0	0	5	0	0	
	GUTHRIE	1988 9	5	0	0	5	0	0	
	HAMILTON	1988 7	5	0	0	5	0	0	
	HANCOCK	1988 5	6	0	0	6	0	0	
	HARDIN	1989 3	6	0	0	6	0	0	
	HARRISON	1988 6	6	0	0	6	0	0	
	HENRY	1988 8	5	0	0	5	0	0	
	HOWARD	1989 1	6	0	0	6	0	0	
	HUMBOLDT	1986 8	2	0	0	2	0	0	
		1988 6	4	0	0	4	0	0	
	IDA	1986 6,7,8	3	0	0	3	0	0	
		1988 4	4	0	0	4	0	0	
	IOWA	1984 4,5 6,7,8,9 11	29	0	0	47	0	0	
		1985 3,4,5 6,7,8 10,11	100	0	0	178	0	0	
		1986 6	2	0	0	2	0	0	
		1988 9	1	0	0	1	0	0	
		1989 5	6	0	0	6	0	0	
	JACKSON	1988 5	7	0	0	7	0	0	
	JASPER	1988 7 12	15	0	0	15	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TRIFLURALIN)	JEFFERSON	1989 6	4	0	0	4	0	0	
	JOHNSON	1988 9 11	11	0	0	11	0	0	
	JONES	1988 9	7	0	0	7	0	0	
	KEOKUK	1988 7	4	0	0	4	0	0	
	KOSSUTH	1988 7 10	10	0	0	10	0	0	
	LEE	1988 10,11	12	0	0	12	0	0	
	LINN	1988 6	13	0	0	13	0	0	
	LOUISA	1988 4	6	0	0	6	0	0	
	LUCAS	1988 7	3	0	0	3	0	0	
	LYON	1984 6	1	0	0	1	0	0	
		1985 7	5	0	0	5	0	0	
		1986 5 7,8	8	0	0	8	0	0	
		1988 6,8	5	0	0	5	0	0	
	MADISON	1988 9	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MAHASKA	1988 10	1	0	0	1	0	0	
		1989 4	6	0	0	6	0	0	
	MARION	1988 10	1	0	0	1	0	0	
		1989 4	11	0	0	11	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TRIFLURALIN)	MARSHALL	1988 7	6	0	0	6	0	0	
	MILLS	1985 8	1	0	0	1	0	0	
		1986 6,8	5	0	0	5	0	0	
		1987 5 6,7,9	14	0	0	14	0	0	
		1988 5 6	4	0	0	4	0	0	
	MITCHELL	1984 7	1	0	0	1	0	0	
		1986 6	1	0	0	1	0	0	
		1989 1	7	0	0	7	0	0	
	MONONA	1988 10	5	0	0	5	0	0	
	MONROE	1988 7	3	0	0	3	0	0	
	MONTGOMERY	1986 8	1	0	0	1	0	0	
		1987 5 6,7	9	0	0	9	0	0	
		1988 9	3	0	0	3	0	0	
	MUSCATINE	1984 7 10	5	0	0	5	0	0	
		1988 4,5	10	0	0	10	0	0	
	O'BRIEN	1985 5	3	0	0	3	0	0	
		1986 4 6,7	1	0	0	5	0	0	
		1989 3	5	0	0	5	0	0	
	OSCEOLA	1985 10	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TRIFLURALIN)	OSCEOLA	1986 5 6,7,8	12	0	0	12	0	0	
		1988 6	3	1	0	3	1	0	14.890
	PAGE	1986 6,8	2	0	0	2	0	0	
		1987 3	1	0	0	1	0	0	
		1988 9	4	0	0	4	0	0	
	PALO ALTO	1983 5	1	0	1	1	0	1	0.200
		1984 5	1	0	0	1	0	0	
		1986 5 6,7,8	16	0	0	16	0	0	
		1989 1	5	0	0	5	0	0	
	PLYMOUTH	1988 6 11	9	0	0	9	0	0	
	POCAHONTAS	1986 7	2	0	0	2	0	0	
		1989 1	4	0	0	4	0	0	
	POLK	1988 9 12	11	0	0	11	0	0	
		1989 1	1	0	0	1	0	0	
	POTTAWATTAMIE	1985 8	2	0	0	2	0	0	
		1986 6,7,8 12	8	0	0	9	0	0	
		1987 1,2,5 6,7	19	0	0	19	0	0	
		1988 7	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TRIFLURALIN)	POTTAWATTAMIE	1989 1	24	0	0	24	0	0	
	POWESHIEK	1988 6	4	0	0	4	0	0	
	RINGGOLD	1988 5	4	0	0	4	0	0	
	SAC	1986 6	2	0	0	2	0	0	
		1988 6	1	0	0	1	0	0	
		1989 3	3	0	0	3	0	0	
	SCOTT	1989 6	10	0	0	10	0	0	
	SHELBY	1984 6,8,9	5	0	0	5	0	0	
		1988 12	6	0	0	6	0	0	
	SIOUX	1984 3 6,9	3	0	0	3	0	0	
		1985 2 7	4	0	0	5	0	0	
		1986 7,8	2	0	0	2	0	0	
		1988 7	10	0	0	10	0	0	
	STORY	1988 9	7	0	0	7	0	0	
	TAMA	1984 4,5 6,7	3	0	0	5	0	0	
		1988 8	9	0	0	9	0	0	
	TAYLOR	1989 1	4	0	0	4	0	0	
	UNION	1989 1	3	0	0	3	0	0	
	VAN BUREN	1988 5	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF IOWA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (ug/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	NUMBER OF POSITIVE SAMPLES		
		(YEAR MONTH)		≥ MCL	< MCL		≥ MCL	< MCL	
(TRIFLURALIN)	WAPELLO	1988 10,11	9	0	0	9	0	0	
	WARREN	1988 9	17	0	0	17	0	0	
	WASHINGTON	1988 7	8	0	0	8	0	0	
	WAYNE	1988 9 11	3	0	0	3	0	0	
	WEBSTER	1988 5	8	0	0	8	0	0	
	WINNEBAGO	1988 5	5	0	0	5	0	0	
	WINNESHIEK	1984 8	1	0	0	1	0	0	
		1985 1	3	0	0	3	0	0	
		1986 6	2	0	0	2	0	0	
		1988 8	9	0	0	9	0	0	
	WOODBURY	1985 5 10	10	0	0	10	0	0	
		1986 4 6,7,8	6	0	0	6	0	0	
		1988 4	9	0	0	9	0	0	
	WORTH	1988 8	3	0	0	3	0	0	
	WRIGHT	1989 3	5	0	0	5	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			883	1	3	1210	1	3	0.040-14.890
▶ TRIFLURAZIN	IOWA	1985 5	1	0	0	1	0	0	
TOTAL DISCRETE WELLS OR SAMPLES			1	0	0	1	0	0	
GRAND TOTAL DISCRETE WELLS OR SAMPLES			**926**	**23**	**193**				

▶ NO MCL OR LIFETIME HEALTH ADVISORY AVAILABLE.

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STATE OF IOWA
WELLS BY COUNTY

COUNTY	TYPES OF WELLS									SOURCE OF CONTAMINATION (NUMBER OF WELLS)		
	DRINKING WATER			MONITORING			OTHER					
	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	NFU*	PS*	UNK*
Adair	6	0	0	0	0	0	0	0	0	0	0	0
Adams	4	0	1	0	0	0	0	0	0	1	0	0
Allamakee	10	0	0	0	0	0	0	0	0	0	0	0
Appanoose	5	0	0	0	0	0	0	0	0	0	0	0
Audubon	3	0	0	0	0	0	0	0	0	0	0	0
Benton	9	0	2	0	0	0	0	0	0	2	0	0
Black Hawk	13	1	1	0	0	0	0	0	0	2	0	0
Boone	5	0	0	0	0	0	0	0	0	0	0	0
Bremer	13	0	5	0	0	0	0	0	0	5	0	0
Buchanan	11	0	0	0	0	0	0	0	0	0	0	0
Buena Vista	10	2	1	0	0	0	0	0	0	3	0	0
Butler	7	0	1	0	0	0	0	0	0	1	0	0
Calhoun	4	0	0	0	0	0	0	0	0	0	0	0
Carroll	7	0	0	0	0	0	0	0	0	0	0	0
Cass	7	0	2	4	0	0	2	0	1	3	0	0
Cedar	8	1	2	0	0	0	0	0	0	3	0	0
Cerro Gordo	7	0	2	0	0	0	0	0	0	2	0	0
Cherokee	13	1	1	3	0	1	0	0	0	3	0	0
Chickasaw	6	0	0	0	0	0	0	0	0	0	0	0
Clarke	4	0	0	0	0	0	0	0	0	0	0	0
Clay	16	2	5	6	0	1	0	0	0	8	0	0
Clayton	29	0	16	0	0	0	1	0	1	17	0	0
Clinton	9	0	3	0	0	0	0	0	0	3	0	0
Crawford	6	0	3	0	0	0	0	0	0	3	0	0
Dallas	13	0	7	0	0	0	0	0	0	7	0	0
Davis	4	0	0	0	0	0	0	0	0	0	0	0
Decatur	5	0	2	0	0	0	0	0	0	2	0	0
Delaware	18	1	9	0	0	0	0	0	0	10	0	0
Des Moines	7	0	0	0	0	0	0	0	0	0	0	0
Dickinson	6	0	2	0	0	0	0	0	0	2	0	0
Dubuque	15	0	3	0	0	0	0	0	0	3	0	0

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STATE OF IOWA
WELLS BY COUNTY

COUNTY	TYPES OF WELLS									SOURCE OF CONTAMINATION (NUMBER OF WELLS)		
	DRINKING WATER			MONITORING			OTHER					
	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	NFU*	PS*	UNK*
Emmet	3	0	1	0	0	0	0	0	0	1	0	0
Fayette	8	0	1	0	0	0	0	0	0	1	0	0
Floyd	15	0	5	0	0	0	0	0	0	5	0	0
Franklin	4	0	1	0	0	0	0	0	0	1	0	0
Fremont	7	0	0	2	0	0	7	0	1	1	0	0
Greene	7	0	1	0	0	0	0	0	0	1	0	0
Grundy	5	0	0	0	0	0	0	0	0	0	0	0
Guthrie	5	0	0	0	0	0	0	0	0	0	0	0
Hamilton	5	0	0	0	0	0	0	0	0	0	0	0
Hancock	6	0	0	0	0	0	0	0	0	0	0	0
Hardin	6	0	0	0	0	0	0	0	0	0	0	0
Harrison	6	0	0	0	0	0	0	0	0	0	0	0
Henry	5	0	0	0	0	0	0	0	0	0	0	0
Howard	6	0	1	0	0	0	0	0	0	1	0	0
Humbolt	4	0	0	2	0	0	0	0	0	0	0	0
Ida	6	0	2	0	0	0	0	0	0	2	0	0
Iowa	21	0	8	31	0	16	0	0	0	24	0	0
Jackson	7	0	1	0	0	0	0	0	0	1	0	0
Jasper	15	0	2	0	0	0	0	0	0	2	0	0
Jefferson	4	0	0	0	0	0	0	0	0	0	0	0
Johnson	11	0	0	0	0	0	0	0	0	0	0	0
Jones	7	0	0	0	0	0	0	0	0	0	0	0
Keokuk	4	0	0	0	0	0	0	0	0	0	0	0
Kossuth	10	0	2	0	0	0	0	0	0	2	0	0
Lee	12	0	1	0	0	0	0	0	0	1	0	0
Linn	13	0	0	0	0	0	0	0	0	0	0	0
Louisa	6	0	2	0	0	0	0	0	0	2	0	0
Lucas	3	0	1	0	0	0	0	0	0	1	0	0
Lyon	6	2	2	5	0	2	0	0	0	6	0	0
Madison	8	0	3	0	0	0	0	0	0	3	0	0
Mahaska	7	0	0	0	0	0	0	0	0	0	0	0

STATE OF IOWA
WELLS BY COUNTY

COUNTY	TYPES OF WELLS									SOURCE OF CONTAMINATION (NUMBER OF WELLS)		
	DRINKING WATER			MONITORING			OTHER					
	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	NFU*	PS*	UNK*
Marion	12	0	1	0	0	0	0	0	0	1	0	0
Marshall	6	0	0	0	0	0	0	0	0	0	0	0
Mills	7	0	1	2	0	0	4	0	0	1	0	0
Mitchell	19	1	7	0	0	0	0	0	0	8	0	0
Monona	5	0	1	0	0	0	0	0	0	1	0	0
Monroe	3	0	0	0	0	0	0	0	0	0	0	0
Montgomery	4	0	0	2	0	0	0	0	0	0	0	0
Muscatine	13	0	2	0	0	0	0	0	0	2	0	0
O'Brien	8	1	3	0	0	0	0	0	0	4	0	0
Osceola	3	1	0	5	0	1	0	0	0	2	0	0
Page	6	0	3	0	0	0	1	0	0	3	0	0
Palo Alto	6	1	1	5	0	4	0	0	0	6	0	0
Plymouth	9	0	1	0	0	0	0	0	0	1	0	0
Pocahontas	4	1	0	2	0	0	0	0	0	1	0	0
Polk	12	0	2	0	0	0	0	0	0	2	0	0
Pottawattamie	32	1	7	2	0	0	9	0	5	13	0	0
Poweshiek	4	0	0	0	0	0	0	0	0	0	0	0
Ringgold	4	0	1	0	0	0	0	0	0	1	0	0
Sac	6	0	3	0	0	0	0	0	0	3	0	0
Scott	10	0	0	0	0	0	0	0	0	0	0	0
Shelby	9	0	4	0	0	0	0	0	0	4	0	0
Sioux	16	3	5	2	0	1	0	0	0	9	0	0
Story	7	0	0	0	0	0	0	0	0	0	0	0
Tama	11	0	4	0	0	0	0	0	0	4	0	0
Taylor	4	0	2	0	0	0	0	0	0	2	0	0
Union	3	0	1	0	0	0	0	0	0	1	0	0
Van Buren	4	1	0	0	0	0	0	0	0	1	0	0
Wapello	9	1	1	0	0	0	0	0	0	2	0	0
Warren	17	0	1	0	0	0	0	0	0	1	0	0
Washington	8	0	1	0	0	0	0	0	0	1	0	0
Wayne	3	0	0	0	0	0	0	0	0	0	0	0

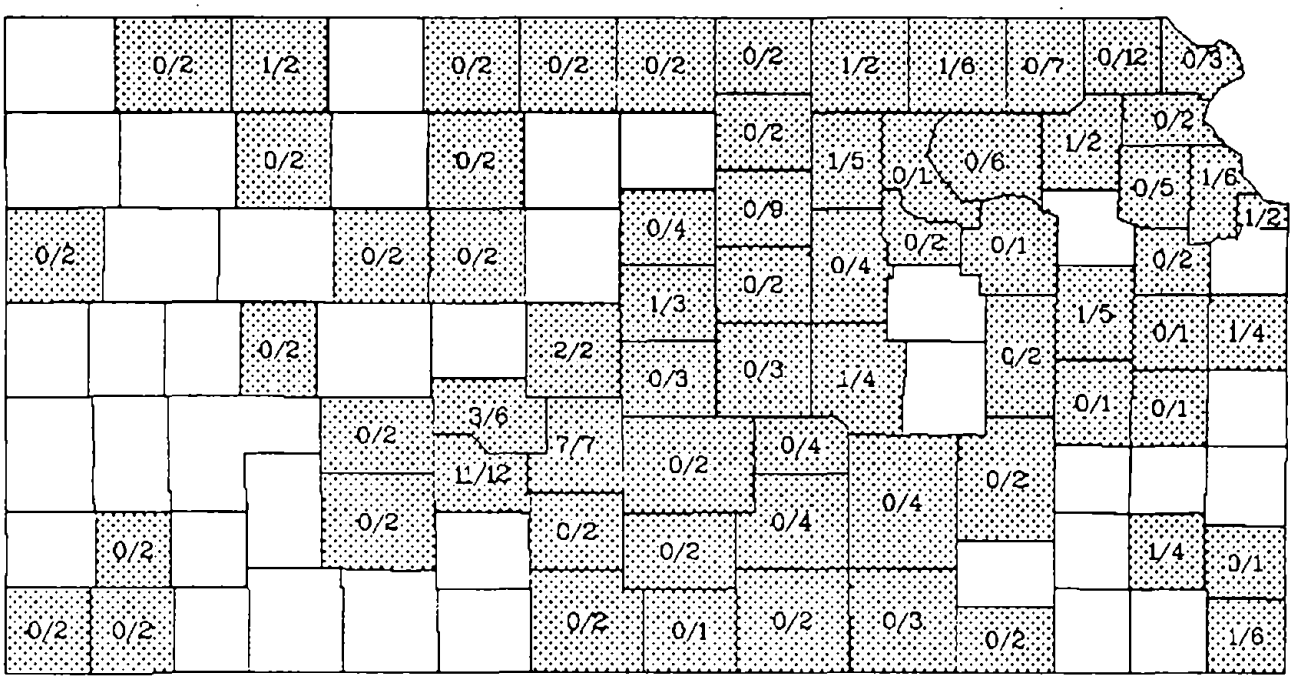
STATE OF IOWA
WELLS BY COUNTY

COUNTY	TYPES OF WELLS									SOURCE OF CONTAMINATION (NUMBER OF WELLS)		
	DRINKING WATER			MONITORING			OTHER					
	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	NFU*	PS*	UNK*
Webster	8	0	2	0	0	0	0	0	0	2	0	0
Winnebago	5	0	0	0	0	0	0	0	0	0	0	0
Winneshiek	12	0	3	0	0	0	0	0	0	3	0	0
Woodbury	18	2	0	2	0	0	0	0	0	2	0	0
Worth	3	0	0	0	0	0	0	0	0	0	0	0
Wright	5	0	0	0	0	0	0	0	0	0	0	0
TOTAL DISCRETE WELLS/SAMPLES	827	23	159	75	0	26	24	0	8	216	0	0

* NFU = Known or Suspected Normal Field Use
PS = Known or Suspected Point Source
UNK = Unknown

Well Sampling by County

(Total Number of Wells with Pesticide Detections / Total Number of Wells Sampled)



Pesticides Detected

Alachlor	Endosulfan I
Atrazine	Endosulfan II
Chlordane	Heptachlor Epoxide
2, 4–D	Metribuzin
2, 4, 5–T	Picloram
Dieldrin	Propazine

Total Wells Sampled per County

- > 1000
- 501 to 1000
- 101 to 500
- 51 to 100
- 1 to 50
- No wells sampled

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OVERVIEW OF STATE LEGISLATIVE AND ENVIRONMENTAL POLICIES REGARDING PESTICIDES IN GROUND WATER

Ground water forms the cornerstone of Kansas water supply. Approximately 85% of all water used in Kansas is supplied from ground water. Irrigation continues to be the largest user of ground water. However, in rural areas, ground water supplies 85% of the drinking water. Ground water resources are abundant in the western two-thirds of the state and limited in the eastern one-third. Ground water in storage in Kansas has been estimated to be 385 million acre-feet. This amount equals roughly 2 to 7 years of normal precipitation, or 35 times the amount of water present in the state's surface water reservoirs.

The Kansas Groundwater Quality Monitoring Network, established in 1976, is a cooperative program between the Kansas Department of Health and Environment (KDHE) and the United States Geological Survey (USGS). It is the principal statewide monitoring effort. The primary goal of the network is to establish and track regional ground-water quality. Between 1976 and 1982 1000 wells were sampled. The current network of 250 wells consists of 72% public supply wells, 18% irrigation wells, 8% private domestic wells, 2% livestock watering wells, and 1% industrial supply wells.

In July of 1985 the Kansas Legislature passed the Kansas Chemigation Safety Law. The law, administered by the Kansas State Board of Agriculture (KSBA), requires that all chemigators register with KSBA annually, install all proper anti-pollution devices on their irrigation systems, monitor the chemigating system and keep the necessary records pertaining to the chemical applications made through the irrigation systems. In 1989, the Kansas Legislature passed the Pesticide Management Areas Act. This legislation empowers the Secretary of Agriculture to designate pesticide management areas after receiving notification from the USEPA or the Kansas Department of Heath that a pesticide poses a serious threat to the public health, safety, or welfare of the natural resources of the state. All pesticide management ares will have pesticide management plans with provisions for the handling or release of pesticides and guidelines for best management practices.

Kansas has established a Ground Water Contaminant Cleanup Target Concentrations List that is used as guidance when dealing with contaminated ground water. The target concentrations include two levels:

1. Kansas Notification Level (KNL) or Alternate Kansas Notification Level (AKNL) is the concentration at which ground water is administratively defined to be contaminated. When ground water cleanup activities are required the "target" concentration is the KNL/AKNL.

2. Kansas Action Level (KAL) or Alternate Kansas Action Level (AKAL) is the concentration at which long-term exposure to the contaminant is unacceptable. An expeditious clean-up plan must be initiated at this concentration. As currently practiced, ground water clean-up activities must provide concentrations less than the KAL/AKAL.

The KNL/KAL is applicable to fresh, usable water aquifers. The AKNL/AKAL apply to alluvial aquifers and/or aquifers which surface through springs or seeps and contribute to surface waters of the State. This list contains over 200 chemicals, including pesticides, acid extractables, base neutral compounds, volatile organics, general chemical/physical parameters and metals. This list changes as information becomes available.

REPORTED STUDIES OF PESTICIDES IN GROUND WATER

Steichen, James; James Koelliker, Doris Grosh, Alan Heiman, Robert Yearout, Victor Robbins. Kansas Department of Health and Environment, Bureau of Water Protection, Water Quality Assessment Section, Topeka, KS 66612, Tel: 913-296-5570. **Contamination of Farmstead Wells by Pesticides, Volatile Organics, and Inorganic Chemicals in Kansas (Phase I).** Study conducted December 1985 through February 1986. (Study reported summer 1988)

Primary Objective

The purpose of this study was to determine, statistically from a random survey, the extent of contamination of rural Kansas farmstead wells by pesticides, volatile organic compounds, and inorganic constituents. A second goal was to determine relationships, if any, between agricultural practices around the wells and the water quality from the wells.

Design

Wells sampled in this study were selected randomly by county based on the farmstead well density as reported in the 1980 census data for farm housing. Two subject farms were selected from each of 48 counties and four were picked from two counties because of the large number of wells in those counties. The counties selected tended to be clustered in the central and northern parts of the State, which mirrored the distribution of all farmstead wells across the State.

Because information about the nature of activities around the well and about the well itself were also needed, four criteria were set forth that had to be met before a well was enrolled the program:

1. the well had to be at a farmstead performing farming operations
2. residents must be familiar with the activities near the well for the past ten years,
3. resident must be willing to cooperate,
4. residents must use water from the well in their home.

After all of the wells selected were evaluated through communication with owners, 103 wells were selected for study. This provided a sampling ratio of about 1 in 400.

The water samples taken included only raw, untreated water collected as close to the well as possible. The wells were purged for 5 minutes before samples were collected. All samples were kept chilled during transport and storage until analytical tests were conducted. All samples were analyzed by the KDHE laboratory for pesticides using EPA-approved methods (U.S. EPA Method 608 and methods for organochlorine pesticides and chlorophenoxy acid herbicides). The procedure for pesticides included extraction and preparation followed by gas chromatography and detection by electron capture.

Results and Conclusions

Eight wells in seven counties had detectable levels of pesticides. The herbicide atrazine was the only pesticide found more than once. It was detected in four wells at concentrations greater than U.S. EPA's lifetime health advisory level of 3 ug/L. All wells with pesticide detections except one were resampled. The well that was not resampled had a broken pump. The initial samples were taken in the winter months and the confirmatory samples were taken in May or June. Resampling confirmed the presence of pesticides in all cases usually with higher concentrations that the original samples.

While the presence of pesticides in farmstead wells can certainly attributed to human activities, the actual source could not be determined. The low concentrations found indicated that most farmstead wells were not grossly contaminated by pesticides at the time of sampling.

Results from the random sample of 103 wells provided a statistical estimate that water from about 1,200 to 6,000 of the 40,000 farmstead wells in Kansas have detectable levels of pesticide in them.

Robbins, Victor; Snethen, Don. Department of Health and Environment, Bureau of Water Protection, Water Quality Assessment Section, Topeka, KS 66612, Tel: 913-296-5570. **Farmstead Well Contamination Factor Study (Phase II)**. Study conducted November 1986 through December 1987.

Primary Objective

This study is the second phase of an ongoing project to determine the extent of contamination of farmstead well water, determine the factors that contribute to the contamination of these wells, and institute an educational program to increase the awareness of the situation and provide ways to reduce the risk of contamination. Findings from this study will be used by investigators and Kansas State University to develop a predictive model.

Design

Approximately 100 wells were selected according to a predetermined strategy, rather than a random selection process as in Phase I. Eighty-four of the wells sampled were located in the eastern half of Kansas. Twenty wells used during the Phase I survey were also sampled. The wells were selected to provide a wide range of a number of factors that could influence well-water quality, such as depth to water, type of well, construction, proximity of the well to potential contamination sources, and soil characteristics. Wells selected for this phase of the study were both older and shallower, on average, than those randomly selected for sampling in the first phase of the study.

The samples were analyzed by the KDHE laboratory for pesticides using EPA-approved methods (U.S. EPA Method 608 and methods for organochlorine pesticides and chlorophenoxy acid herbicides). Where pesticides were detected, wells were resampled 4 months after the initial detection.

Results and Conclusions

It should be noted that the wells selected for this study were selected on the basis of their potential to be contaminated. Eleven of the wells sampled contained synthetic chemicals. Nine wells from six counties contained one or more pesticides. Eight pesticides were detected: alachlor; chlordane; dieldrin; endosulfan I & II; metribuzin; 2,4-D; and trifluralin (Treflan). The most commonly found synthetic chemical was the herbicide trifluralin, detected in three wells. Next most often found were the insecticides chlordane and dieldrin, each found in two wells.

Four pesticides were detected at concentrations above which the Kansas Department of Health and the Environment (KDHE) considers the water contaminated, the Kansas Notification Level. Three pesticides (chlordane, dieldrin, and trifluralin) exceeded the Kansas Action Level, the level at which KDHE considers the water unacceptable as a drinking water supply.

Sixty percent of the wells selected for sampling were drilled, 38% dug and 2% driven. The average age of all wells was 45 years (range 1-110 yrs.) and the average depth to water was 25 feet (range 0-100 ft.). In contrast the average age of the wells with synthetic contaminants was 72 years and the average depth to water was only 12 feet. Nine of the eleven wells with synthetic chemicals were hand dug and rock walled. These comparisons suggest that age, type of construction and depth to the water table are factors that influence the likelihood of a well being contaminated. The findings from this study, along with several other factors, will be statistically analyzed and utilized to develop a predictive model.

Seamer, John, USGS, 1950 Constant Avenue, Lawrence, KS 66046, Tel: 913-842-9969;
Stullken, Lloyd E., et al. 1987. **Reconnaissance of Water Quality in the High Plains Aquifer Beneath Agricultural Lands, South-Central Kansas.** Study conducted August-September 1984. (Study reported 1987, 25 pp.)

Primary Objective

The specific objective of this reconnaissance study was to evaluate the effects of land used for agriculture (i.e., irrigated cropland and nonirrigated rangeland) on water quality of the High Plains aquifer.

Design

The central part of the Great Bend Prairie, an area of about 1,800 square miles overlying the High Plains aquifer in south-central Kansas, was selected for the study because it has sandy soils, a shallow water table, relatively large annual precipitation, and includes large areas that are exclusively irrigated cropland or nonirrigated rangeland. These characteristics may allow for a greater potential for ground-water contamination than may be found in the High Plains aquifer as a whole.

The design of the Kansas study paralleled that of the U.S. Geological Survey's Toxic Waste - Groundwater Contamination Program in that conceptual inferences of the contaminant flow system were developed, a data-collection plan was formulated, and data were collected and analyzed according to that plan.

The data-collection network in this study consisted of 27 wells in Barton, Edwards, Pawnee, and Stafford Counties. Water samples were collected from the 27 wells during August and September 1984. Of the 27 wells, 13 were located on irrigated cropland and the remaining 14 wells were situated on nonirrigated rangeland. Factors considered during the selection of well sites were that there be no obvious point source contamination and that the well be surrounded by sufficient land of the same use to ensure that the water quality in the aquifer be representative of the overlying land use.

Prior to sample collection and onsite measurements, at least two well volumes of water were pumped. Water samples were collected and preserved using U.S. Geological Survey standard procedures.

Results and Conclusions

Of the 42 organic compounds for which analyses were conducted, only 2,4-D, atrazine, and propazine were detected. The most prevalent pesticide was the herbicide 2,4-D, which was detected in 23 samples. Atrazine was the next most common pesticide detected, occurring in 2 samples, followed by propazine which was detected in 1 sample. Of the three pesticides detected, none were found in concentrations exceeding the U.S. EPA's Drinking Water Standards and Health Advisories.

A statistical summary of data collected supported the concept that ground water beneath nonirrigated land is affected less by the overlying land use than ground water beneath irrigated land. This was the case for every constituent analyzed for, except 2,4-D and ammonia. Concentrations of atrazine and sodium found in samples from an irrigation well supported the premise that water-level drawdown develops under irrigated fields, diverting the natural ground-water flow patterns and that water well pumpage may cause recycling and a subsequent concentration of leachates from the land surface.

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PESTICIDE SAMPLING IN THE STATE OF KANSAS
2,4-D to Cyprazine

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
2,4-D	ANDERSON	1986/2	1	0	0	1	0	0	
	ATCHISON	1987/12	2	0	0	2	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BARTON	1984/9	2	0	2	2	0	2	0.01
	BROWN	1986/2	2	0	0	2	0	0	
		1987/12	10	0	0	10	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	CHAUTAUQUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
		1987/12	4	0	0	4	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
		1987/12	3	0	0	3	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COFFEE	1987/12	1	0	0	1	0	0	
	COWLEY	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	CRAWFORD	1987/12	1	0	0	1	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	DONIPHAN	1987/12	3	0	0	3	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	11	12	0	11	0.01-0.05
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	FRANKLIN	1987/12	1	0	0	1	0	0	

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PESTICIDE SAMPLING IN THE STATE OF KANSAS
2,4-D to Cyprazine

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4-D)	BEARY	1986/2	2	0	0	2	0	0	
	BRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARPER	1987/12	1	0	0	1	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEFFERSON	1987/12	5	0	0	5	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LEAVENWORTH	1987/12	6	0	0	6	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	2	
		1987/12	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	0	4	0	0	
		1987/12	2	0	0	2	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	MIAMI	1987/12	4	0	0	4	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEMAHA	1987/12	7	0	0	7	0	0	
	NEOSHO	1986/2	2	0	2	2	0	0	
		1987/12	2	0	0	2	0	0	
	OSAGE	1986/2	2	0	0	2	0	0	
		1987/12	3	0	0	3	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
2,4-D to Cyprazine

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4-D)	OTTAWA	1986/2	2	0	0	2	0	0	
		1987/12	7	0	0	7	0	0	
	PAWNEE	1984/9	6	0	3	6	0	3	0.02-0.04
	PHILLIPS	1986/2	2	0	0	2	0	0	
	POTTAWATOMIE	1987/12	6	0	0	6	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	RILEY	1987/12	1	0	0	1	0	0	
	ROOKS	1986/2	2	0	.0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	2	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WABAUNSEE	1987/12	1	0	0	1	0	0	
	WALLACE	1987/12	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	1	2	0	1	1.3
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			214	0	24	214	0	24	0.01-1.3
2,4,5-T	ANDERSON	1986/2	1	0	0	1	0	0	
	BARBER	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
2,4-D to Cyprazine

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4,5-T)	BARTON	1984/9	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
	CHAUTAUQUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COWLEY	1986/2	2	0	0	2	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	0	4	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
2,4-D to Cyprazine

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4,5-T)	MORTON	1986/2	2	0	0	2	0	0	
	NEOSHO	1986/2	2	0	0	2	0	0	
	OSAGE	1986/2	2	0	0	2	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
	ROOKS	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	4	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	1	2	0	1	1.1
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			107	0	1	107	0	1	1.1
2,4,5-TP (silvex)	Anderson	1986/2	1	0	0	1	0	0	
	Barber	1986/2	2	0	0	2	0	0	
	Barton	1984/9	2	0	0	2	0	0	
	Brown	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
2,4-D to Cyprazine

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4,5-TP)	Butler	1986/2	2	0	0	2	0	0	
	Chautauqua	1986/2	2	0	0	2	0	0	
	Cherokee	1986/2	2	0	0	2	0	0	
	Clay	1986/2	2	0	0	2	0	0	
	Cloud	1986/2	2	0	0	2	0	0	
	Cowley	1986/2	2	0	0	2	0	0	
	Decatur	1986/2	2	0	0	2	0	0	
	Dickinson	1986/2	2	0	0	2	0	0	
	Douglas	1986/2	2	0	0	2	0	0	
	Edwards	1984/9	12	0	0	12	0	0	
	Ellis	1986/2	2	0	0	2	0	0	
	Ellsworth	1986/2	2	0	0	2	0	0	
	Ford	1986/2	2	0	0	2	0	0	
	Geary	1986/2	2	0	0	2	0	0	
	Grant	1986/2	2	0	0	2	0	0	
	Greenwood	1986/2	2	0	0	2	0	0	
	Harvey	1986/2	2	0	0	2	0	0	
	Hodgeman	1986/2	2	0	0	2	0	0	
	Jackson	1986/2	2	0	0	2	0	0	
	Jewell	1986/2	2	0	0	2	0	0	
	Kingman	1986/2	2	0	0	2	0	0	
	Lane	1986/2	2	0	0	2	0	0	
	Lincoln	1986/2	2	0	0	2	0	0	
	Lyon	1986/2	2	0	0	2	0	0	
	Marion	1986/2	2	0	0	2	0	0	
	Marshall	1986/2	4	0	0	4	0	0	
	McPherson	1986/2	2	0	0	2	0	0	
	Morton	1986/2	2	0	0	2	0	0	
	Neosho	1986/2	2	0	0	2	0	0	
	Osage	1986/2	2	0	0	2	0	0	
	Ottawa	1986/2	2	0	0	2	0	0	
	Pawnee	1984/9	6	0	0	6	0	0	
	Phillips	1986/2	2	0	0	2	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4,5-TP)	Pratt	1986/2	2	0	0	2	0	0	
	Rawlins	1986/2	2	0	0	2	0	0	
	Reno	1986/2	2	0	0	2	0	0	
	Republic	1986/2	2	0	0	2	0	0	
	Rice	1986/2	2	0	0	2	0	0	
	Rook's	1986/2	2	0	0	2	0	0	
	Saline	1986/2	2	0	0	2	0	0	
	Sedgwick	1986/2	4	0	0	2	0	0	
	Sheridan	1986/2	2	0	0	2	0	0	
	Smith	1986/2	2	0	0	2	0	0	
	Stafford	1984/9	7	0	0	7	0	0	
	Stevens	1986/2	2	0	0	2	0	0	
	Sumner	1986/2	2	0	0	2	0	0	
	Trego	1986/2	2	0	0	2	0	0	
	Wallace	1986/2	2	0	0	2	0	0	
	Washington	1986/2	2	0	0	2	0	0	
	Wyandotte	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			107	0	0	107	0	0	
Alachlor	ANDERSON	1986/2	2	0	0	2	0	0	
	ATCHISON	1987/12	2	0	0	2	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BARTON	1984/9	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
		1987/12	10	0	0	10	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	CHAUTAUQUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
		1987/12	4	0	0	4	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
		1987/12	3	0	0	3	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
2,4-D to Cyprazine

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Alachlor)	COFFEE	1987/12	1	0	0	1	0	0	
	COWLEY	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	CRAWFORD	1987/12	1	0	0	1	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	DONIPHAN	1987/12	3	0	0	3	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	ELLIS	1986/9	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1987/12	1	0	0	1	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	FRANKLIN	1987/12	1	0	0	1	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARPER	1987/12	1	0	0	1	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEFFERSON	1987/12	5	0	0	5	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LEAVENWORTH	1987/12	6	1	0	6	1	0	2.4
	LINCOLN	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Alachlor)	MARSHALL	1986/2	4	0	0	4	0	0	
		1987/12	2	0	0	2	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	MIAMI	1987/12	4	0	0	4	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEMAHA	1987/12	7	0	0	7	0	0	
	NEOSHO	1986/2	2	0	1	2	0	1	0.88
		1987/12	2	1	0	2	1	0	2.4
	OSAGE	1986/2	2	0	0	2	0	0	
		1987/12	3	0	0	3	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
		1987/12	7	0	0	7	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	POTTAWATOMIE	1987/12	6	0	0	6	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	RILEY	1987/12	1	0	0	1	0	0	
	ROOKS	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	4	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WABAUNSEE	1987/12	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
2,4-D to Cyprazine

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Alachlor)	WALLACE	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			214	2	1	214	2	1	0.88-2.4
Aldrin	ANDERSON	1986/2	2	0	0	2	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BARTON	1984/2	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
	CHAUTAUGUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COWLEY	1986/2	2	0	0	2	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
2,4-D to Cyprazine

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Aldrin)	MARION	1986/2	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	0	4	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEOSHO	1986/2	2	0	0	2	0	0	
	OSAGE	1986/2	2	0	0	2	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
	ROOKS	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	4	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			130	0	0	130	0	0	
Ametryn	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
2,4-D to Cyprazine

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
Atraton	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Atrazine	ANDERSON	1986/2	1	0	0	1	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BARTON	1984/9	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
	CHAUTAUGUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
	CLAY	1986/2	2	1	0	2	1	0	3.4
	CLOUD	1986/2	2	0	0	2	0	0	
	COWLEY	1986/2	2	0	0	2	0	0	
	DECATUR	1986/2	2	1	0	2	1	0	7.4
	DICKINSON	1986/2	2	0	0	2	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	EDWARDS	1986/9	12	0	0	12	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	1	0	2	1	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
2,4-D to Cyprazine

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Atrazine)	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	1	4	0	1	1.5
	MCPHERSON	1986/2	2	0	0	2	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEOSHO	1986/2	2	0	0	2	0	0	
	OSAGE	1986/2	2	0	0	2	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	1	0	0	1	0	0	
	REPUBLIC	1986/9	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
	ROOKS	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	4	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STAFFORD	1984/9	7	0	2	7	0	2	0.1-0.2
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			130	3	3	130	3	3	0.1-7.4
Carbofuran	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Carbofuran)	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Carbophenothion	Barton	84/9	2	0	0	2	0	0	
	Edwards	84/9	12	0	0	12	0	0	
	Pawnee	84/9	6	0	0	6	0	0	
	Stafford	84/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Carbophenothion, methyl	Barton	1984/9	2	0	0	2	0	0	
	Edwards	1984/9	12	0	0	12	0	0	
	Pawnee	1984/9	6	0	0	6	0	0	
	Stafford	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Chlordane	ANDERSON	1986/2	1	0	0	1	0	0	
	ATCHISON	1986/12	2	0	0	2	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BARTON	1984/9	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
		1987/12	10	0	0	10	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	CHAUTAUGUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
		1987/12	4	0	0	4	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
		1987/12	3	0	0	3	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COFFEY	1987/12	1	0	0	1	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Chlordane)	COWLEY	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	CRAWFORD	1987/12	1	0	0	1	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	DONIPHAN	1987/12	3	0	0	3	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
		1987/2	1	0	0	1	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	FRANKLIN	1987/12	1	0	0	1	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARPER	1987/12	1	0	0	1	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEFFERSON	1987/12	5	0	0	5	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LEAVENWORTH	1987/12	6	0	0	6	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	0	4	0	0	
		1987/12	2	0	0	2	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Chlordane)	MCPHERSON	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	MIAMI	1987/12	4	1	0	4	1	0	7.9
	MORTON	1986/2	2	0	0	2	0	0	
	NEMAHA	1987/12	7	0	0	7	0	0	
	NEOSHO	1986/2	2	0	1	2	0	1	0.47
		1987/12	2	1	0	2	1	0	7.9
	OSAGE	1986/2	2	0	0	2	0	0	
		1987/12	3	1	0	3	1	0	7.9
	OTTAWA	1986/2	2	0	0	2	0	0	
		1987/12	7	0	0	7	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	POTTAWATOMIE	1987/12	6	0	0	6	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	RILEY	1987/12	1	0	0	1	0	0	
	ROOKS	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	4	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WABAUNSEE	1987/12	1	0	0	1	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Chlordane)	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			214	3	1	214	3	1	0.47-7.9
Cyanazine	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Cyprazine	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
DCPA to Heptachlor Epoxide

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
DCPA	ANDERSON	1986/2	1	0	0	1	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
	CHAUTAUQUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COWLEY	1986/2	2	0	0	2	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	0	4	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
DCPA to Heptachlor Epoxide

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(DCPA)	MORTON	1986/2	2	0	0	2	0	0	
	NEOSHO	1986/2	2	0	0	2	0	0	
	OSAGE	1986/2	2	0	0	2	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
	ROOKS	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	4	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			103	0	0	103	0	0	
DDT[A]	ANDERSON	1986/2	1	0	0	1	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BARTON	1984/9	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
	CHAUTAUQUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COWLER	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
DCPA to Heptachlor Epoxide

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(DDT)	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	0	4	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEOSHO	1986/2	2	0	0	2	0	0	
	OSAGE	1986/2	2	0	0	2	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
	ROOK'S	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
DCPA to Heptachlor Epoxide

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(DDT)	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	2	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			130	0	0	130	0	0	
DDD	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
DDE	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Diazinon	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Dichlorprop	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
DCPA to Heptachlor Epoxide

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Dichlorprop)	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Dieldrin	ANDERSON	1986/2	1	0	0	1	0	0	
	ATCHISON	1987/12	2	0	0	2	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BARTON	1984/9	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
		1987/12	10	0	0	10	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	CHAUTAUGUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
		1987/12	4	0	0	4	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
		1987/12	3	0	0	3	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COFFEY	1987/12	1	0	0	1	0	0	
	COWLEY	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	CRAWFORD	1987/12	1	0	0	1	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	DONIPHAN	1987/12	3	0	0	3	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1987/12	1	0	0	1	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	FRANKLIN	1987/12	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
DCPA to Heptachlor Epoxide

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Dieldrin)	BEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARPER	1987/12	1	0	0	1	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEFFERSON	1987/12	5	0	0	5	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LEAVENWORTH	1987/12	6	0	0	6	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	
		1987/12	2	0	1	2	0	1	0.26
	MARSHALL	1986/2	4	0	0	4	0	0	
		1987/12	2	0	0	2	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	MIAMI	1987/12	4	0	0	4	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEMAHA	1987/12	7	0	0	7	0	0	
	NEOSHO	1986/2	2	0	0	2	0	0	
		1987/12	2	0	1	2	0	1	0.26
	OSAGE	1986/2	2	0	0	2	0	0	
		1987/12	3	0	0	3	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
		1987/12	7	0	0	7	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
DCPA to Heptachlor Epoxide

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Dieldrin)	POTTAWATOMIE	1987/12	6	0	0	6	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	RILEY	1987/12	1	0	0	1	0	0	
	ROOKS	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	2	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WABAUNSEE	1987/12	1	0	0	1	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			214	0	2	214	0	2	0.26
Endosulfan	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/12	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
▸Endosulfan I	ATCHISON	1987/12	2	0	0	2	0	0	
	BROWN	1987/12	10	0	0	10	0	0	
	BUTLER	1987/12	2	0	0	2	0	0	
	CHEROKEE	1987/12	4	0	1	4	0	1	0.062

PESTICIDE SAMPLING IN THE STATE OF KANSAS
DCPA to Heptachlor Epoxide

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Endosulfan I)	CLAY	1987/12	3	0	0	3	0	0	
	COFFEE	1987/12	1	0	0	1	0	0	
	COWLEY	1987/12	1	0	0	1	0	0	
	CRAWFORD	1987/12	1	0	0	1	0	0	
	DICKINSON	1987/12	2	0	0	2	0	0	
	DONIPHAN	1987/12	3	0	0	3	0	0	
	ELLSWORTH	1987/12	1	0	0	1	0	0	
	FRANKLIN	1987/12	1	0	0	1	0	0	
	HARPER	1987/12	1	0	0	1	0	0	
	HARVEY	1987/12	2	0	0	2	0	0	
	JEFFERSON	1987/12	5	0	0	5	0	0	
	LEAVENWORTH	1987/12	6	0	0	6	0	0	
	LINCOLN	1987/12	2	0	0	2	0	0	
	MARION	1987/12	2	0	0	2	0	0	
	MARSHALL	1987/12	2	0	0	2	0	0	
	MCPHERSON	1987/12	1	0	0	1	0	0	
	MIAMI	1987/12	4	0	0	4	0	0	
	NEMAHA	1987/12	7	0	0	7	0	0	
	NEOSHO	1987/12	2	0	0	2	0	0	
	OSAGE	1987/12	3	0	0	3	0	0	
	OTTAWA	1987/12	7	0	0	7	0	0	
	POTTAWATOMIE	1987/12	6	0	0	6	0	0	
	RICE	1987/12	1	0	0	1	0	0	
	RILEY	1987/12	1	0	0	1	0	0	
	WABAUNSEE	1987/12	1	0	0	1	0	0	
TOTAL DISCRETE WELLS/SAMPLES			84	0	1	84	0	1	0.062
▸Endosulfan II	ATCHISON	1987/12	2	0	0	2	0	0	
	BROWN	1987/12	10	0	0	10	0	0	
	BUTLER	1987/12	2	0	0	2	0	0	
	CHEROKEE	1987/12	4	0	1	4	0	1	0.031
	CLAY	1987/12	3	0	0	3	0	0	
	COFFEY	1987/12	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
DCPA to Heptachlor Epoxide

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Endosulfan II)	COWLEY	1987/12	1	0	0	1	0	0	
	CRAWFOD	1987/12	1	0	0	1	0	0	
	DICKINSON	1987/12	2	0	0	2	0	0	
	DONIPHAN	1987/12	3	0	0	3	0	0	
	ELLSWORTH	1987/12	1	0	0	1	0	0	
	FRANKLIN	1987/12	1	0	0	1	0	0	
	HARPER	1987/12	1	0	0	1	0	0	
	HARVEY	1987/12	2	0	0	2	0	0	
	JEFFERSON	1987/12	5	0	0	5	0	0	
	LEAVENWORTH	1987/12	6	0	0	6	0	0	
	LINCOLN	1987/12	2	0	0	2	0	0	
	MARION	1987/12	2	0	0	2	0	0	
	MARSHALL	1987/12	2	0	0	2	0	0	
	MCPHERSON	1987/12	1	0	0	1	0	0	
	MIAMI	1987/12	4	0	0	4	0	0	
	NEMAHA	1987/12	7	0	0	7	0	0	
	NEOSHO	1987/12	2	0	0	2	0	0	
	OSAGE	1987/12	3	0	0	3	0	0	
	OTTAWA	1987/12	7	0	0	7	0	0	
	POTTAWATOMIE	1987/12	6	0	0	6	0	0	
	RICE	1987/12	1	0	0	1	0	0	
	RILEY	1987/12	1	0	0	1	0	0	
	WABAUNSEE	1987/12	1	0	0	1	0	0	
TOTAL DISCRETE WELLS/SAMPLES			84	0	1	84	0	1	0.031
Endrin	ANDERSON	1986/2	1	0	0	1	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BARTON	1984/9	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
	CHAUTAUQUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
DCPA to Heptachlor Epoxide

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Endrin)	CLAY	1986/2	2	0	0	2	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COWLEY	1986/2	2	0	0	2	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	0	4	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEOSHO	1986/2	2	0	0	2	0	0	
	OSAGE	1986/2	2	0	0	2	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
DCPA to Heptachlor Epoxide

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Endrin)	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
	ROOKS	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	2	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			107	0	0	107	0	0	
Ethion	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Ethylan	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Fonofos	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
DCPA to Heptachlor Epoxide

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
Heptachlor	BARTON	1984/9	2	0	0	2	0	0	
	EDWARD	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Heptachlor epoxide	ANDERSON	1986/2	1	0	0	1	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BARTON	1984/9	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
	CHAUTAUGUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COWLEY	1986/2	2	0	0	2	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
DCPA to Heptachlor Epoxide

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Heptachlor epoxide)	LINCOLN	1986/2	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	0	4	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEOSHO	1986/2	2	0	1	2	0	1	0.026
	OSAGE	1986/2	2	0	0	2	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
	ROOKS	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	4	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			107	0	1	107	0	1	0.026

PESTICIDE SAMPLING IN THE STATE OF KANSAS
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
Lindane (gamma-BHC)	ANDERSON	1986/2	1	0	0	1	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BARTON	1984/9	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
	CHAUTAUQUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COWLEY	1986/2	2	0	0	2	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Lindane)	MARSHALL	1986/2	4	0	0	4	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEOSHO	1986/2	2	0	0	2	0	0	
	OSAGE	1986/2	2	0	0	2	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
	ROOKS	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	2	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			107	0	0	107	0	0	
Malathion	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Malathion)	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Metolachlor	ANDERSON	1986/2	1	0	0	1	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
	CHAUTAUQUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COWLER	1986/2	2	0	0	2	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Metolachlor)	MARION	1986/2	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	0	4	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEOSHO	1986/2	2	0	0	2	0	0	
	OSAGE	1986/2	2	0	0	2	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLIUS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
	ROOKS	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	2	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			103	0	0	103	0	0	
Methoxychlor	ANDERSON	1986/2	1	0	0	1	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BARTON	1984/9	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Methoxychlor)	BUTLER	1986/2	2	0	0	2	0	0	
	CHAUTAUQUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COWLER	1986/2	2	0	0	2	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	0	4	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEOSHO	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Methoxychlor)	OSAGE	1986/2	2	0	0	2	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
	PAWNE	1984/9	6	0	0	6	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLTUS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
	ROOK'S	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	2	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			107	0	0	107	0	0	
Metribuzin	ANDERSON	1986/2	1	0	0	1	0	0	
	ATCHISON	1987/12	2	0	0	2	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
		1987/12	10	0	0	10	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	CHAUTAUQUA	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Metribuzin)	CHEROKEE	1986/2	2	0	0	2	0	0	
		1987/12	4	0	0	4	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
		1987/12	3	0	0	3	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COFFEY	1987/12	1	0	0	1	0	0	
	COWLEY	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	CRAWFORD	1987/12	1	0	0	1	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	DONIPHAN	1987/12	3	0	0	3	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	FRANKLIN	1987/12	1	0	0	1	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARPER	1987/12	1	0	0	1	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEFFERSON	1987/12	5	0	0	5	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Metribuzin)	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LEAVENWORTH	1987/12	6	0	1	6	0	1	0.15
	LINCOLN	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	0	4	0	0	
		1987/12	2	0	0	2	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	
	MIAMI	1987/12	4	0	0	4	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEMAHA	1987/12	7	0	0	7	0	0	
	NEOSHO	1986/2	2	0	0	2	0	0	
		1987/12	2	0	0	2	0	0	
	OSAGE	1986/2	2	0	0	2	0	0	
		1987/12	3	0	0	3	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
		1987/12	7	0	0	7	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	POTTAWATOMIE	1987/12	6	0	0	6	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
		1987/12	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Metribuzin)	RILEY	1987/12	1	0	0	1	0	0	
	ROOKS	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	2	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WABAUNSEE	1987/12	1	0	0	1	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCHARGE WELLS/SAMPLES			187	0	1	187	0	1	0.15
Mirex	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Parathion, ethyl	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Parathion, methyl	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Parathion, methyl)	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Phorate	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Picloram	ANDERSON	1986/2	1	0	0	1	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
	CHAUTAUQUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COWLER	1986/2	2	0	0	2	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	5.6
	FORD	1986/2	2	0	0	2	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Picloram)	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	0	4	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEOSHO	1986/2	2	0	0	2	0	0	
	OSAGE	1986/2	2	0	0	2	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
	ROOK'S	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	2	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
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PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Picloram)	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			103	0	1	103	0	1	5.6
Prometon	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Prometryn	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Propachlor	ANDERSON	1986/2	1	0	0	1	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
	CHAUTAUQUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COWLER	1986/2	2	0	0	2	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	

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Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Propachlor)	FORD	1986/2	2	0	0	2	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	0	4	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEOSHO	1986/2	2	0	0	2	0	0	
	OSAGE	1986/2	2	0	0	2	0	0	
	OTTAWA	1986/2	2	0	0	2	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLINS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
	ROOKS	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	2	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Propachlor)	SMITH	1986/2	2	0	0	2	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			103	0	0	103	0	0	
Propazine	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	1	12	0	1	0.01
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	1	27	0	1	0.01
Simazine	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Simetone	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	
Simetryn	BARTON	1984/9	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			27	0	0	27	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
Toxaphene	ANDERSON	1986/2	1	0	0	1	0	0	
	BARBER	1986/2	2	0	0	2	0	0	
	BARTON	1984/9	2	0	0	2	0	0	
	BROWN	1986/2	2	0	0	2	0	0	
	BUTLER	1986/2	2	0	0	2	0	0	
	CHAUTAUQUA	1986/2	2	0	0	2	0	0	
	CHEROKEE	1986/2	2	0	0	2	0	0	
	CLAY	1986/2	2	0	0	2	0	0	
	CLOUD	1986/2	2	0	0	2	0	0	
	COWLEY	1986/2	2	0	0	2	0	0	
	DECATUR	1986/2	2	0	0	2	0	0	
	DICKINSON	1986/2	2	0	0	2	0	0	
	DOUGLAS	1986/2	2	0	0	2	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	
	ELLIS	1986/2	2	0	0	2	0	0	
	ELLSWORTH	1986/2	2	0	0	2	0	0	
	FORD	1986/2	2	0	0	2	0	0	
	GEARY	1986/2	2	0	0	2	0	0	
	GRANT	1986/2	2	0	0	2	0	0	
	GREENWOOD	1986/2	2	0	0	2	0	0	
	HARVEY	1986/2	2	0	0	2	0	0	
	HODGEMAN	1986/2	2	0	0	2	0	0	
	JACKSON	1986/2	2	0	0	2	0	0	
	JEWELL	1986/2	2	0	0	2	0	0	
	KINGMAN	1986/2	2	0	0	2	0	0	
	LANE	1986/2	2	0	0	2	0	0	
	LINCOLN	1986/2	2	0	0	2	0	0	
	LYON	1986/2	2	0	0	2	0	0	
	MARION	1986/2	2	0	0	2	0	0	
	MARSHALL	1986/2	4	0	0	4	0	0	
	MCPHERSON	1986/2	2	0	0	2	0	0	
	MORTON	1986/2	2	0	0	2	0	0	
	NEOSHO	1986/2	2	0	0	2	0	0	
	OSAGE	1986/2	2	0	0	2	0	0	

PESTICIDE SAMPLING IN THE STATE OF KANSAS
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Toxaphene)	OTTAWA	1986/2	2	0	0	2	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	PHILLIPS	1986/2	2	0	0	2	0	0	
	PRATT	1986/2	2	0	0	2	0	0	
	RAWLIUS	1986/2	2	0	0	2	0	0	
	RENO	1986/2	2	0	0	2	0	0	
	REPUBLIC	1986/2	2	0	0	2	0	0	
	RICE	1986/2	2	0	0	2	0	0	
	ROOK'S	1986/2	2	0	0	2	0	0	
	SALINE	1986/2	2	0	0	2	0	0	
	SEDGWICK	1986/2	4	0	0	2	0	0	
	SHERIDAN	1986/2	2	0	0	2	0	0	
	SMITH	1986/2	2	0	0	2	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
	STEVENS	1986/2	2	0	0	2	0	0	
	SUMNER	1986/2	2	0	0	2	0	0	
	TREGO	1986/2	2	0	0	2	0	0	
	WALLACE	1986/2	2	0	0	2	0	0	
	WASHINGTON	1986/2	2	0	0	2	0	0	
	WYANDOTTE	1986/2	2	0	0	2	0	0	
TOTAL DISCRETE WELLS/SAMPLES			107	0	0	107	0	0	
Trifluralin	ATCHISON	1987/12	2	0	0	2	0	0	
	BARTON	1984/9	2	0	0	2	0	0	
	BROWN	1987/12	10	0	0	10	0	0	
	BUTLER	1987/12	2	0	0	2	0	0	
	CHEROKEE	1987/12	4	0	0	4	0	0	
	CLAY	1987/12	3	0	0	3	0	0	
	COFFEY	1987/12	1	0	0	1	0	0	
	COWLEY	1987/12	1	0	0	1	0	0	
	CRAWFORD	1987/12	1	0	0	1	0	0	
	DICKINSON	1987/12	2	0	0	2	0	0	
	DONIPHAN	1987/12	3	0	0	3	0	0	
	EDWARDS	1984/9	12	0	0	12	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/ MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Trifluralin)	ELLSWORTH	1987/12	1	0	0	1	0	0	
	FRANKLIN	1987/12	1	0	0	1	0	0	
	HARPER	1987/12	1	0	0	1	0	0	
	HARVEY	1987/12	2	0	0	2	0	0	
	JEFFERSON	1987/12	5	0	0	5	0	0	
	LEAVENWORTH	1987/12	6	0	0	6	0	0	
	LINCOLN	1987/12	2	0	0	2	0	0	
	MARION	1987/12	2	0	0	2	0	0	
	MARSHALL	1987/12	2	0	0	2	0	0	
	MCPHERSON	1987/12	1	0	0	1	0	0	
	MIAMI	1987/12	4	0	0	4	0	0	
	NEOSHO	1987/12	2	0	0	2	0	0	
	OSAGE	1987/12	3	0	0	3	0	0	
	OTTAWA	1987/12	7	0	0	7	0	0	
	PAWNEE	1984/9	6	0	0	6	0	0	
	POTTAWATOMIE	1987/12	6	0	0	6	0	0	
	RICE	1987/12	1	0	0	1	0	0	
	RILEY	1987/12	1	0	0	1	0	0	
	STAFFORD	1984/9	7	0	0	7	0	0	
	WABAUNSEE	1987/12	1	0	0	1	0	0	
TOTAL DISCRETE WELLS/SAMPLES			88	0	0	88	0	0	
GRAND TOTAL DISCRETE WELLS/SAMPLES			214	7	29	214	7	29	

NOTE: Some wells were resampled for 2,4-D, 2,4,5-T, alachlor, aldrin, atrazine, chlordane, dieldrin, endosulfan II, heptachlor epoxide and metribuzin. As individual wells results were not given for the resamples, these results are not included in the tables.

▸ No MCL or Lifetime HA available.

A Includes o-p' DDT and p-p' DDT.

STATE OF KANSAS
WELLS BY COUNTY

COUNTY	TYPES OF WELLS									SOURCE OF CONTAMINATION (NUMBER OF WELLS)		
	DRINKING WATER			MONITORING			OTHER					
	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	NFU*	PS*	UNK*
Anderson	1	0	0	0	0	0	0	0	0	0	0	0
Atchison	2	0	0	0	0	0	0	0	0	0	0	0
Barber	2	0	0	0	0	0	0	0	0	0	0	0
Barton	2	0	2	0	0	0	0	0	0	0	0	2
Brown	12	0	0	0	0	0	0	0	0	0	0	0
Butler	4	0	0	0	0	0	0	0	0	0	0	0
Chautauqua	2	0	0	0	0	0	0	0	0	0	0	0
Cherokee	6	0	1	0	0	0	0	0	0	0	0	1
Clay	5	1	0	0	0	0	0	0	0	0	0	1
Cloud	2	0	0	0	0	0	0	0	0	0	0	0
Coffey	1	0	0	0	0	0	0	0	0	0	0	0
Cowley	3	0	0	0	0	0	0	0	0	0	0	0
Crawford	1	0	0	0	0	0	0	0	0	0	0	0
Decatur	2	1	0	0	0	0	0	0	0	0	0	1
Dickinson	4	0	0	0	0	0	0	0	0	0	0	0
Doniphan	3	0	0	0	0	0	0	0	0	0	0	0
Douglas	2	0	0	0	0	0	0	0	0	0	0	0
Edwards	11	0	10	0	0	0	1	0	1	0	0	11
Ellis	2	0	0	0	0	0	0	0	0	0	0	0
Ellsworth	3	0	1	0	0	0	0	0	0	0	0	1
Ford	2	0	0	0	0	0	0	0	0	0	0	0
Franklin	1	0	0	0	0	0	0	0	0	0	0	0
Geary	2	0	0	0	0	0	0	0	0	0	0	0
Grant	2	0	0	0	0	0	0	0	0	0	0	0
Greenwood	2	0	0	0	0	0	0	0	0	0	0	0
Harper	1	0	0	0	0	0	0	0	0	0	0	0
Harvey	4	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	2	0	0	0	0	0	0	0	0	0	0	0
Jackson	2	1	0	0	0	0	0	0	0	0	0	1
Jefferson	5	0	0	0	0	0	0	0	0	0	0	0
Jewell	2	0	0	0	0	0	0	0	0	0	0	0

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STATE OF KANSAS
WELLS BY COUNTY

COUNTY	TYPES OF WELLS									SOURCE OF CONTAMINATION (NUMBER OF WELLS)		
	DRINKING WATER			MONITORING			OTHER					
	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	NFU*	PS*	UNK*
Kingman	2	0	0	0	0	0	0	0	0	0	0	0
Lane	2	0	0	0	0	0	0	0	0	0	0	0
Leavenworth	6	1	0	0	0	0	0	0	0	0	0	1
Lincoln	4	0	0	0	0	0	0	0	0	0	0	0
Lyon	2	0	0	0	0	0	0	0	0	0	0	0
Marion	4	0	1	0	0	0	0	0	0	0	0	1
Marshall	6	0	1	0	0	0	0	0	0	0	0	1
McPherson	3	0	0	0	0	0	0	0	0	0	0	0
Miami	4	1	0	0	0	0	0	0	0	0	0	1
Morton	2	0	0	0	0	0	0	0	0	0	0	0
Nemaha	7	0	0	0	0	0	0	0	0	0	0	0
Neosho	4	1	0	0	0	0	0	0	0	0	0	1
Osage	5	1	0	0	0	0	0	0	0	0	0	1
Ottawa	9	0	0	0	0	0	0	0	0	0	0	0
Pawnee	5	0	2	0	0	0	1	0	1	0	0	3
Phillips	2	0	0	0	0	0	0	0	0	0	0	0
Pottawatomie	6	0	0	0	0	0	0	0	0	0	0	0
Pratt	2	0	0	0	0	0	0	0	0	0	0	0
Rawlins	2	0	0	0	0	0	0	0	0	0	0	0
Reno	2	0	0	0	0	0	0	0	0	0	0	0
Republic	2	0	0	0	0	0	0	0	0	0	0	0
Rice	3	0	0	0	0	0	0	0	0	0	0	0
Riley	1	0	0	0	0	0	0	0	0	0	0	0
Rooks	2	0	0	0	0	0	0	0	0	0	0	0
Saline	2	0	0	0	0	0	0	0	0	0	0	0
Sedgwick	4	0	0	0	0	0	0	0	0	0	0	0
Sheridan	2	0	0	0	0	0	0	0	0	0	0	0
Smith	2	0	0	0	0	0	0	0	0	0	0	0
Stafford	6	0	6	0	0	0	1	0	1	0	0	7
Stevens	2	0	0	0	0	0	0	0	0	0	0	0
Sumner	2	0	0	0	0	0	0	0	0	0	0	0

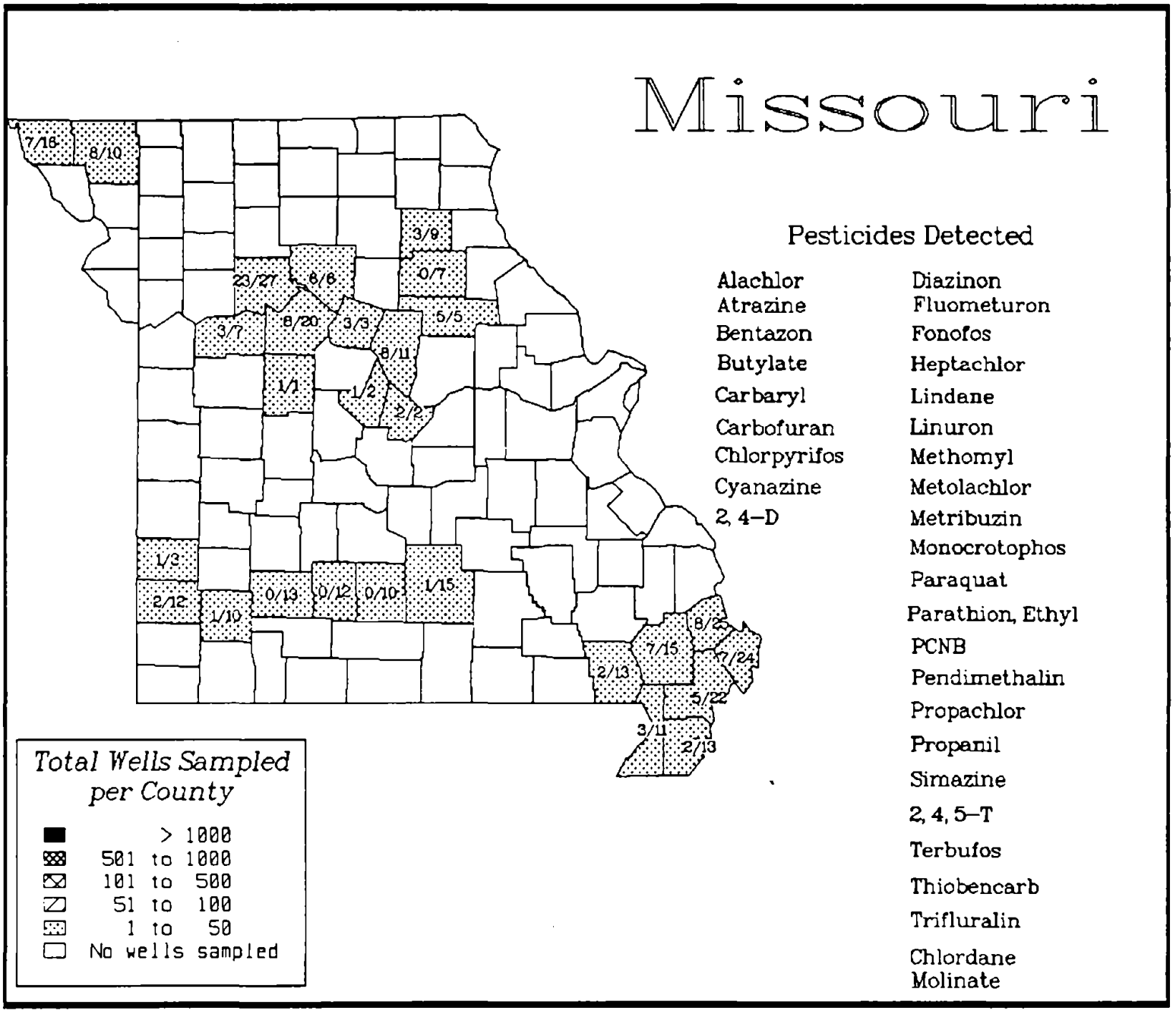
STATE OF KANSAS
WELLS BY COUNTY

COUNTY	TYPES OF WELLS									SOURCE OF CONTAMINATION (NUMBER OF WELLS)		
	DRINKING WATER			MONITORING			OTHER					
	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	NFU*	PS*	UNK*
Trego	2	0	0	0	0	0	0	0	0	0	0	0
Wabaunsee	1	0	0	0	0	0	0	0	0	0	0	0
Wallace	2	0	0	0	0	0	0	0	0	0	0	0
Washington	2	0	1	0	0	0	0	0	0	0	0	1
Wyandotte	2	0	1	0	0	0	0	0	0	0	0	1
TOTAL	211	7	26	0	0	0	3	0	3	0	0	36

* NFU = Known or Suspected Normal Field Use
PS = Known or Suspected Point Source
UNK = Unknown

Well Sampling by County

(Total Number of Wells with Pesticide Detections / Total Number of Wells Sampled)



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OVERVIEW OF STATE LEGISLATIVE AND ENVIRONMENTAL POLICIES REGARDING PESTICIDES IN GROUND WATER

Land in southeastern Missouri has been intensively developed for agricultural production. Large-scale production of cotton, rice, grain sorghum, wheat, soybeans, and corn is associated with use of pesticides. Based on 1984 crop acreage and the average rate of pesticide application for the most commonly used pesticides, an estimated 1 million gallons of liquid and one-half million pounds of dry pesticides were applied to agricultural land in the southeastern Missouri area. Pesticides widely used were atrazine, alachlor, cyanazine, metolachlor, trifluralin, propanil, 2,4-D, and 2,4,5-T. Missouri's Department of Natural Resources, Division of Environmental Quality, is concerned that the increased and prolonged use of these pesticides can affect shallow ground- and surface-water supplies used as sources of domestic, public, and irrigation supplies. The geohydrology and water quality of southeastern Missouri and the northern Mississippi alluvial plain have been studied in detail, but sparse information is available on the occurrence of organic chemicals in ground or surface water. The 1988 investigations are part of the Gulf Coast Regional Aquifer-Systems Analysis (Grubb, 1984). The cretaceous, tertiary, and younger sediments are being studied to evaluate the major aquifer systems in the Gulf Coastal Plain.

REPORTED STUDIES OF PESTICIDES IN GROUND WATER

Mesko, Thomas O. and Gale M. Carlson, **Occurrence of Pesticides, Nitrates, Organic Compounds, and Trace Elements in Ground Water and Streams, Southeastern Missouri, 1986-87,** U.S. Geological Survey Open-File Report 88-495. Prepared in Cooperation With the Missouri Department of Health and the Missouri Department of Natural Resources (presented 1988, 73 pp.). For further information, contact John L. Howland, Chief Missouri Dept. of Natural Resources Planning Section - Water Pollution, (314) 775-7143.

Primary Objective

The purpose of this study is to analyze the quality of ground water from domestic, irrigation, and public-supply wells, and surface water and streambed sediment. Samples were collected in June-July and November 1986, and July and September 1987, analyzing specifically for contamination by 55 pesticides.

Design

The Mississippi River Valley alluvial aquifer is the surficial unit in the area chosen for study. The aquifer is a significant source of water for domestic, irrigation, and public-supply use. During 1986-87, 129 sites were samples. These included 74 domestic wells, 25 irrigation wells, 25 public-supply wells, and 5 streams that drain the 5 major drainage basins in the

region. Personnel from the U.S. Geological Survey, Missouri Department of Health, Missouri Department of Natural Resources, and county health officials collected the samples. The University of Missouri Environmental Trace Substances Laboratory performed the analyses for pesticides in samples collected from June through July, and November 1986. The Missouri Department of Health Laboratory analyzed samples collected during 1986 for physical properties, common constituents, nitrate, trace elements, and duplicate pesticide samples. Samples collected in July 1987 were analyzed for pesticides by the University of Iowa Hygienic Laboratory. Samples collected in September 1987 were analyzed for pesticides by both the University of Iowa Hygienic and Missouri Department of Health Laboratories. All pesticide analyses are considered total recoverable concentrations from unfiltered water samples.

Well selection was based on a wide spatial distribution in rural agricultural areas. Most domestic wells in the area are shallow, averaging less than 35 ft in depth. Wells with known contamination or locations near agricultural chemical storage and distribution facilities were NOT selected for sampling. Information was obtained from the owner concerning crop types grown near the well in recent years and if pesticides had been used at or near the well recently.

The following is a list of minimum detection limits (ug/L) used at the individual laboratories. The analytical methods used for the determination of the pesticide chemicals were not included.

University of Missouri Environmental Trace Substances Laboratory
Columbia, Missouri (June-July 1986)

Alachlor	0.01	Fluometuron	1.0	Paraquat	500
Atrazine	0.5	Glyphosate	5.0	PCNB	0.005
Bentazon	5.0	Linuron	1.0	Pendimethalin	0.01
Carbaryl	1.0	Malathion	0.05	Permethrin	5.0
Carbofuran	1.0	Methomyl	1.0	Propanil	0.02
Chlordane	0.01	Methyl parathion	0.05	Sethoxydim	5.0
Chlorpyrifos	0.05	Metolachlor	5.0	Terbufos	0.05
Cyanazine	0.5	Metribuzin	0.5	Toxaphene	0.1
Cypermethrin	5.0	Molinate	0.5	Trifluralin	0.005
Diazinon	0.05	Monocrotophos	0.05	Tunic	5.0
Dimethoate	0.05	Napatalam	5.0	2,4-D	0.01
				2,4,5-T	0.01

Missouri Department of Health Laboratory, Jefferson City, Missouri (June 1986)							
Alachlor	0.05	DDE	0.05	Lindane	0.1	Propachlor	0.1
Aldrin	0.05	DDT	0.05	Malathion	0.5	Propanil	0.2
Atrazine	0.5	Diazinon	0.05	Methoxychlor	0.5	Toxaphene	1.0
Chlordane	0.1	Dieldrin	0.1	Methyl parathion	0.05	Trifluralin	0.05
Chlorpyrifos	0.1	Endrin	0.1	Metolachlor	0.5	2,4-D	0.1
DDD	0.05	Heptachlor	0.1	Picloram	0.1	2,4,5-T	0.05

University of Missouri Environmental Trace Substances Laboratory, Columbia, Missouri (November 1986)					
Alachlor	0.02	Linuron	0.2	Propanil	0.04
Atrazine	0.1	Malathion	0.2	Sethoxydim	0.2
Bentazon	2.0	Methomyl	5.0	Terbufos	0.2
Carbaryl	0.2	Methyl parathion	0.2	Thiobencarb	0.2
Carbofuran	0.1	Metolachlor	0.05	Toxaphene	0.1
Chlordane	0.04	Metribuzin	0.2	Trifluralin	0.05
Chlorpyrifos	0.2	Molinate	0.1	2,4-D	0.05
Cyanazine	0.2	Monocrotophos	0.2	2,4,5-T	0.05
Diazinon	0.2	Paraquat	100		
Dimethoate	0.2	PCNB	0.005		
Dimethoate	0.05	Pendimethalin	0.02		

University of Iowa Hygienic Laboratory, Iowa City, Iowa (July 1987)			
Alachlor	0.1	Metolachlor	0.1
Atrazine	0.1	Metribuzin	0.1
Butylate	0.1	Pendimethalin	0.1
Carbaryl	0.1	Phorate	0.1
Carbofuran	0.1	Propachlor	0.1
Chlorpyrifos	0.1	Propanil	0.1
Cyanazine	0.1	Terbufos	0.1
Diazinon	0.1	Trifluralin	0.1
Ethoprop	0.1		
Fonophos	0.1		

University of Iowa Hygienic Laboratory, Iowa City, Iowa (September 1987)	
Chloramben	0.1
Dicamba	0.1
Silvex [2,4,5-TP]	0.1
2,4-D	0.1
2,4,5-T	0.1

Missouri Department of Health Laboratory, Jefferson City, Missouri (September 1987)	
Silvex	0.017
2,4-D	0.03
2,4,5-T	0.04

Results and Conclusions

One or more pesticides were detected at 38 of the 124 well sites sampled during the study. Pesticides detected include the following: alachlor, atrazine, carbaryl, carbofuran, chlordane, cyanazine, diazinon, fluometuron, linuron, methomyl, metolachlor, metribuzin, molinate, monocrotophos, paraquat, PCNB, pendimethalin, propachlor, propanil, terbufos, trifluralin, 2,4-D, and 2,4,5,-T. Three wells/5 samples had levels of atrazine greater than the MCL, 1 well/sample had levels of alachlor greater than the MCL, 1 well/sample had levels of metolachlor greater than the MCL, and one well had a level of cyanazine greater than the MCL. The suspected source of contamination was normal field use.

Sievers, Dennis M., and Charles D. Fulhage, **Quality of Rural Well Water North Missouri.** Study conducted from December 1987 through September 1988 (Reported September 1989, 32 pp.). **Quality of Missouri's Agricultural Groundwater Region II Sampling.** Study conducted December 1989 through September 1990 (Reported June 1991, 70 pp.). Dr. Dennis M. Sievers, Univ. of Missouri, (314) 882-7855. Dr. Charles D. Fulhage, Univ. of Missouri, Tel: (314) 882-2731.

Primary Objective

The Missouri Department of Natural Resources conducted this two year sampling survey provide a data base on the general quality of water from private rural wells in agricultural areas.

Design

The State was divided into two sampling Regions. Region I is the Norther portion of the State and included the counties of Atchison, Audrian, Boone, Carrol, Chariton, Cole, Monroe, Moniteau, Nodaway, Saline, Shelby. Region II consisted of counties in the central and more Southern portion of the State including Barton, Jasper, Greene, Lafayette,

Lawrence, Pettis, Saline, Texas, Webster, and Wright. Region I samples were collected from 101 well sites in December 1987, March 1988, May 1988, and December 1988. Region II samples were collected from 100 well sites in December 1989, March 1990, May 1990, and September 1990.

The laboratory monitored day-to-day, batch-to-batch sample collection techniques and general laboratory performance by spiking and analyzing a minimum of 10% of all samples. In addition, 10% of all samples were analyzed in duplicate (both field and laboratory). Blanks were analyzed at a rate of 5% of all samples. Analyses were conducted for the following pesticides.

Pesticide	Minimum Detection Limit (ug/L)
Alachlor	0.2
Atrazine	0.2
Bentazon	0.6
Butylate	0.2
Carbaryl	0.2
Carbofuran	0.2
Chlordane	0.6
Chlorpyrifos	0.2
Cyanazine	0.2
2,4-D	0.3
Diazinon	0.3
Ethoprop	0.2
Fonophos [fonofos]	0.3
Heptachlor	0.2
Lindane	0.3
Linuron	0.2
Malathion	0.2
Parathion	0.2
Propachlor	0.2
Simazine	0.2
2,4,5-T	0.2
Terbufos	0.3
Toxaphene	0.2
Trifluralin	0.2

Results and Conclusions

Over the two year sampling period 804 samples were collected from 201 wells. One-hundred twenty- six (126) samples from 80 wells contained one or more of the pesticide analytes. The following pesticides were detected: alachlor, atrazine, bentazon, butylate, carbaryl, carbofuran, chlorpyrifos, cyanazine, fonophos, heptachlor, lindane, linuron, metribuzin, parathion, propachlor, and simazine.

The most frequently detected pesticides were herbicides. The most frequently detected herbicides were triazines (atrazine, cyanazine, metribuzin). The majority of wells were single detections of each herbicide. The single most frequently found pesticide was atrazine.

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
2,4-D	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6,11; 87/9	8	0	1	16	0	1	0.2
	CARROLL	87/12; 88/3,5,9	27	0	2	108	0	2	0.4-1.0
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11; 87/9	6	0	0	17	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11; 87/9	10	0	2	21	0	2	0.03-0.1
	MISSISSIPPI (POWP)[A]	86/11	9	0	0	9	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11	6	0	0	15	0	0	
	NEW MADRID (POWP)	86/11	5	0	0	5	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PEMISCOT	86/6,7,11; 87/9	7	0	0	14	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6,7,11; 87/9	16	0	0	29	0	0	
	SCOTT (POWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4-D)	STODDARD	86/6,7,11; 87/9	12	0	1	22	0	2	0.07-0.30
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			282	0	6	962	0	7	0.03-1.0
2,4,5-T	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6,11; 87/9	8	0	1	16	0	1	0.01
	CARROLL	87/12; 88/3,5,9	27	0	0	108	0	0	
	CHARITON	87/12; 88/3,5,9	6	0	4	24	0	4	0.3-1.0
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11; 87/9	6	0	3	17	0	3	0.02-0.41
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11; 87/9	10	0	1	21	0	1	0.52
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11	6	0	0	15	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(2,4,5-T)	PEMISCOT	86/6,7,11; 87/9	7	0	1	14	0	1	0.02
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6,7,11; 87/9	16	0	5	29	0	5	0.02-0.16
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	STODDARD	86/6,7,11; 87/9	12	0	4	22	0	4	0.03-0.11
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			282	0	19	962	0	19	0.01-0.52
2,4,5-TP (Silvex)	BUTLER	87/9	4	0	0	4	0	0	
	DUNKLIN	87/9	5	0	0	5	0	0	
	MISSISSIPPI	87/9	5	0	0	5	0	0	
	PEMISCOT	87/9	2	0	0	2	0	0	
	SCOTT	87/9	13	0	0	13	0	0	
	STODDARD	87/9	8	0	0	8	0	0	
TOTAL DISCRETE WELLS/SAMPLES			37	0	0	37	0	0	
Alachlor	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	2	20	0	3	0.3-0.6
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	1	44	0	2	0.55-1.0
	BUTLER	86/6,11; 87/7	13	0	1	24	0	1	0.01
	CARROLL	87/12; 88/3,5,9	27	0	3	108	0	3	0.4-0.7
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Alachlor)	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11; 87/7	11	0	0	24	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11; 87/7	16	1	0	32	1	0	22.0
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11; 87/7	17	0	2	33	0	2	0.03-0.08
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PEMISCOT	86/6,7,11; 87/7	13	0	1	22	0	1	0.02
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6,7,11; 87/7	14	0	2	29	0	2	0.3
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	1	0	36	1	0	2.2
	STODDARD	86/6,7,11; 87/7	15	0	1	27	0	1	0.1
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			325	2	13	1,019	2	15	0.01-22.0

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
Aldrin	BUTLER	86/6	1	0	0	1	0	0	
	DUNKLIN	86/6	1	0	0	1	0	0	
	NEW MADRID	86/6	1	0	0	1	0	0	
	SCOTT	86/6	1	0	0	1	0	0	
TOTAL DISCRETE WELLS/SAMPLES			4	0	0	4	0	0	
Atrazine	ATCHISON	87/12; 88/3,5,9	16	1	2	64	1	5	0.4-7.2
	AUDRIAN	87/12; 88/3,5,9	5	1	3	20	1	6	0.3-15.8
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6,11; 87/7	13	3	0	24	3	0	6.0-22.5
	CARROLL	87/12; 88/3,5,9	27	1	2	108	4	4	0.3-10.0
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11; 87/7	11	0	3	24	0	3	0.2-0.8
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	2	48	0	2	0.2-0.4
	LAFAYETTE	89/12; 90/3,5,9	7	1	2	28	1	2	0.3-4.1
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11; 87/7	16	1	1	32	1	1	0.1-150.0
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11; 87/7	17	0	0	33	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	NODAWAY	87/12; 88/3,5,9	10	1	2	40	2	2	0.2-3.3
	PEMISCOT	86/6,7,11; 87/7	13	0	0	22	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	1	4	0	1	0.2

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Atrazine)	SALINE	87/12; 88/3,5,9 89/12; 90/3,5,9	20	0	1	80	0	2	1.6-1.7
	SCOTT	86/6,7,11; 87/7	14	0	0	21	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	1	36	0	1	0.3
	STODDARD	86/6,7,11; 87/7	15	0	1	27	0	1	0.6
	TEXAS	89/12; 90/3,5,9	15	0	1	60	0	1	1.4
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			325	9	22	1,019	13	31	0.1-150.0
Bentazon	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6,11	5	0	0	11	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	1	108	0	2	0.6-0.8
	CHARITON	87/12; 88/3,5,9	6	0	3	24	0	3	0.9
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11	5	0	0	11	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11	7	0	0	16	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11	6	0	0	14	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Bentazon)	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	1	40	0	1	1.0
	PEMISCOT	86/6,11	5	0	0	11	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6,11	6	0	0	14	0	0	
	SCOTT(PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	STODDARD	86/6,11	6	0	0	13	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			266	0	5	918	0	6	0.6-1.0
Butylate	ATCHISON	87/12; 88/3,5,9	16	0	0	32	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	10	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	22	0	0	
	BUTLER	87/7	12	0	0	12	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	0	54	0	0	
	CHARITON	87/12; 88/3,5,9	6	0	0	12	0	0	
	COLE	87/12; 88/3,5,9	2	0	0	3	0	0	
	DUNKLIN	87/7	11	0	0	12	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	6	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	87/7	16	0	0	16	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Butylate)	MONROE	87/12; 88/3,5,9	7	0	0	14	0	0	
	NEW MADRID	87/7	17	0	0	18	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	1	20	0	1	0.87
	PEMISCOT	87/7	10	0	0	10	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	74	0	0	
	SCOTT	87/7	13	0	0	13	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	18	0	0	
	STODDARD	87/7	13	0	0	13	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			293	0	1	697	0	1	0.87
Carbaryl	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	1	20	0	2	0.27-0.4
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6,11; 87/7	13	0	0	23	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	3	108	0	3	0.4-1.1
	CHARITON	87/12; 88/3,5,9	6	0	2	24	0	2	0.3
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11; 87/7	11	0	0	22	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	1	12	0	1	0.2
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	1	28	0	1	1.0
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11; 87/7	16	0	1	32	0	1	0.3
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Carbaryl)	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11; 87/7	17	0	0	32	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PEMISCOT	86/6,7,11; 87/7	13	0	0	22	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	2	80	0	2	1.25-1.7
	SCOTT	86/6,7,11; 87/7	14	0	0	28	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	STODDARD	86/6,7,11; 87/7	15	0	0	27	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLE			325	0	11	1,015	0	12	0.2-1.7
Carbofuran	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6,11; 87/7	13	0	1	23	0	1	13.3
	CARROLL	87/12; 88/3,5,9	27	0	3	108	0	3	0.2-0.6
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11; 87/7	11	0	1	22	0	1	2.0
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Carbofuran)	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11; 87/7	16	0	0	32	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11; 87/7	17	0	1	32	0	1	2.0
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PEMISCOT	86/6,7,11; 87/7	13	0	0	22	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6,7,11; 87/7	14	0	0	28	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	1	36	0	1	0.5
	STODDARD	86/6,7,11; 87/7	15	0	0	27	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			325	0	7	1,015	0	7	0.2-13.3
Chloramben	BUTLER	87/9	1	0	0	1	0	0	
	DUNKLIN	87/9	4	0	0	4	0	0	
	MISSISSIPPI	87/9	4	0	0	4	0	0	
	PEMISCOT	87/9	1	0	0	1	0	0	
	SCOTT	87/9	5	0	0	5	0	0	
	STODDARD	87/9	4	0	0	4	0	0	
TOTAL DISCRETE WELLS/SAMPLES			19	0	0	19	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
Chlordane	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6,11	5	0	1	12	0	1	0.02
	CARROLL	87/12; 88/3,5,9	27	0	0	108	0	0	
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11	5	0	1	12	0	1	0.07
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11	7	0	0	16	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11	6	0	0	15	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PENISCOT	86/6,7,11	6	0	0	12	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6,7,11	7	0	0	16	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	STODDARD	86/6,7,11	7	0	1	14	0	1	0.09
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Chlordane)	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			269	0	3	925	0	3	0.02-0.09
Chlorpyrifos	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6,11; 87/7	13	0	0	24	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	0	108	0	0	
	CHARITON	87/12; 88/3,5,9	6	0	1	24	0	1	0.2
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11; 87/7	11	0	0	24	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11; 87/7	16	0	0	32	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11; 87/7	17	0	0	33	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PEMISCOT	86/6,7,11; 87/7	13	0	0	22	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6,7,11; 87/7	14	0	0	29	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Chlorpyrifos)	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	STODDARD	86/6,7,11; 87/7	15	0	0	27	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			325	0	1	1,019	0	1	0.2
Cyanazine	ATCHISON	87/12; 88/3,5,9	16	0	1	64	0	1	0.6
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	1	5	44	1	8	0.26-1.0
	BUTLER	86/6,11; 87/7	13	0	0	23	0	0	
	CARROLL	87/12; 88/3,5,9	27	2	8	108	2	9	0.3-1.1
	CHARITON	87/12; 88/3,5,9	6	0	3	24	0	3	0.3
	COLE	87/12; 88/3,5,9	2	0	2	7	0	2	0.3
	DUNKLIN	86/6,11; 87/7	11	0	0	22	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	3	12	0	3	0.3-0.6
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11; 87/7	16	1	1	32	1	2	0.5-1.2
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11; 87/7	17	0	2	32	0	2	0.2-0.8
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	NODAWAY	87/12; 88/3,5,9	10	1	1	40	1	1	0.24-1.0
	PEMISCOT	86/6,7,11; 87/7	13	0	0	22	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Cyanazine)	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	1	4	80	1	4	0.3-1.2
	SCOTT	86/6,7,11; 87/7	14	0	0	28	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	1	36	0	1	0.28
	STODDARD	86/6,7,11; 87/7	15	0	0	27	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			325	6	31	1,015	6	36	0.2-1.2
Cypermethrin	BUTLER	86/6	5	0	0	5	0	0	
	DUNKLIN	86/6	5	0	0	5	0	0	
	MISSISSIPPI	86/6	7	0	0	8	0	0	
	NEW MADRID	86/6	6	0	0	7	0	0	
	PEMISCOT	86/6	5	0	0	6	0	0	
	SCOTT	86/6	6	0	0	7	0	0	
	STODDARD	86/6	6	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			40	0	0	45	0	0	
DDT	BUTLER	86/6	1	0	0	1	0	0	
	DUNKLIN	86/6	1	0	0	1	0	0	
	NEW MADRID	86/6	1	0	0	1	0	0	
	SCOTT	86/6	1	0	0	1	0	0	
TOTAL DISCRETE WELLS/SAMPLES			4	0	0	4	0	0	
DDD	BUTLER	86/6	1	0	0	1	0	0	
	DUNKLIN	86/6	1	0	0	1	0	0	
	NEW MADRID	86/6	1	0	0	1	0	0	
	SCOTT	86/6	1	0	0	1	0	0	
TOTAL DISCRETE WELLS/SAMPLES			4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
DDE	BUTLER	86/6	1	0	0	1	0	0	
	DUNKLIN	86/6	1	0	0	1	0	0	
	NEW MADRID	86/6	1	0	0	1	0	0	
	SCOTT	86/6	1	0	0	1	0	0	
TOTAL DISCRETE WELLS/SAMPLES			4	0	0	4	0	0	
Dicamba	BUTLER	87/9	1	0	0	1	0	0	
	DUNKLIN	87/9	4	0	0	4	0	0	
	MISSISSIPPI	87/9	4	0	0	4	0	0	
	PEMISCOT	87/9	1	0	0	1	0	0	
	SCOTT	87/9	5	0	0	5	0	0	
	STODDARD	87/9	4	0	0	4	0	0	
TOTAL DISCRETE WELLS/SAMPLES			19	0	0	19	0	0	
Diazinon	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	1	44	0	1	0.3
	BUTLER	86/6,11; 87/7	13	0	0	24	0	0	
	CARROLL	87/12; 88/3,5,9	27	1	1	108	1	1	0.4-0.7
	CHARITON	87/12; 88/3,5,9	6	1	1	24	1	1	0.3-1.0
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11; 87/7	11	0	2	24	0	3	0.2-0.3
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11; 87/7	16	0	0	32	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Diazinon)	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11; 87/7	17	0	0	33	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PEMISCOT	86/6,7,11; 87/7	13	0	0	22	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6,7,11; 87/7	14	0	0	29	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	STODDARD	86/6,7,11; 87/7	15	0	0	27	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			325	0	7	1,019	0	8	0.2-1.0
Dieldrin	BUTLER	86/6	1	0	0	1	0	0	
	DUNKLIN	86/6	1	0	0	1	0	0	
	NEW MADRID	86/6	1	0	0	1	0	0	
	SCOTT	86/6	1	0	0	1	0	0	
TOTAL DISCRETE WELLS/SAMPLES			4	0	0	4	0	0	
Dimethoate	BUTLER	86/6,11	5	0	0	11	0	0	
	DUNKLIN	86/6,11	5	0	0	11	0	0	
	MISSISSIPPI	86/6,11	7	0	0	16	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	NEW MADRID	86/6,11	6	0	0	14	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Dimethoate)	SCOTT	86/6,7,11	7	0	0	15	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	STODDARD	86/6,7,11	7	0	0	14	0	0	
TOTAL DISCRETE WELLS/SAMPLES			68	0	0	118	0	0	
Endrin	BUTLER	86/6	1	0	0	1	0	0	
	DUNKLIN	86/6	1	0	0	1	0	0	
	NEW MADRID	86/6	1	0	0	1	0	0	
	SCOTT	86/6	1	0	0	1	0	0	
TOTAL DISCRETE WELLS/SAMPLES			4	0	0	4	0	0	
Ethoprop	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	87/7	12	0	0	12	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	0	108	0	0	
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	87/7	11	0	0	12	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	87/7	16	0	0	16	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	87/7	17	0	0	18	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PEMISCOT	87/7	10	0	0	10	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Ethoprop)	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	87/7	13	0	0	13	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	STODDARD	87/7	13	0	0	13	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			293	0	0	897	0	0	
Fluometuron	BUTLER	86/6,11	5	0	0	11	0	0	
	DUNKLIN	86/6,11	5	0	1	11	0	1	0.8
	MISSISSIPPI	86/6,11	7	0	0	16	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	NEW MADRID	86/6,11	6	0	0	14	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	PEMISCOT	86/6,7,11	6	0	0	12	0	0	
	SCOTT	86/6,7,11	7	0	0	15	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	STODDARD	86/6,7,11	7	0	0	14	0	0	
TOTAL DISCRETE WELLS/SAMPLES			68	0	1	118	0	1	0.8
Fonofos	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	87/7	12	0	0	12	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	1	108	0	1	0.43
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Fonofos)	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	87/7	11	0	0	12	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	87/7	16	0	0	16	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	87/7	17	0	0	18	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PEMISCOT	87/7	10	0	0	10	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	40	0	0	
	SCOTT	87/7	13	0	0	13	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	STODDARD	87/7	13	0	0	13	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			293	0	1	897	0	1	0.43
Glyphosate	BUTLER	86/6	5	0	0	5	0	0	
	DUNKLIN	86/6	5	0	0	5	0	0	
	MISSISSIPPI	86/6	7	0	0	8	0	0	
	NEW MADRID	86/6	6	0	0	7	0	0	
	PEMISCOT	86/6	5	0	0	6	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
2,4-D to Heptachlor

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Glyphosate)	SCOTT	86/6	6	0	0	7	0	0	
	STODDARD	86/6	6	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			40	0	0	45	0	0	
Heptachlor	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6	1	0	0	1	0	0	
	CARROLL	87/12; 88/3,5,9	27	1	0	108	1	0	0.5
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6	1	0	0	1	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6	1	0	0	1	0	0	
	NODAWAY	87/12; 88/3,5,9	10	1	0	40	1	0	0.4
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6	1	0	0	1	0	0	
	SHELBY	87/12; 88/3,5,9	9	1	0	36	1	0	0.8
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			205	3	0	807	3	0	0.4-0.8

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
Lindane	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6	1	0	0	1	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	0	108	0	0	
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6	1	0	0	1	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	1	0	28	1	0	0.5
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6	1	0	0	1	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6	1	0	0	1	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			205	1	0	645	1	0	0.5
►Linuron	ATCHISON	87/12; 88/3,5,9	16	0	4	64	0	4	0.48-0.6
	AUDRIAN	87/12; 88/3,5,9	5	0	1	20	0	1	0.6

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Linuron)	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	6	44	0	6	0.5-0.6
	BUTLER	86/6,11	5	0	1	11	0	1	0.2
	CARROLL	87/12; 88/3,5,9	27	0	11	108	0	13	0.5-0.7
	CHARITON	87/12; 88/3,5,9	6	0	4	24	0	5	0.3
	COLE	87/12; 88/3,5,9	2	0	1	7	0	1	0.5
	DUNKLIN	86/6,11	5	0	0	11	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	1	28	0	1	1.9
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11	7	0	0	16	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	1	8	0	1	0.5
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11	6	0	0	14	0	0	
	NEW MADRID (PDWP)	86/6,11	6	0	0	14	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	6	40	0	6	0.5-0.6
	PEMISCOT	86/6,7,11	6	0	0	12	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	2	80	0	2	0.5-1.8
	SCOTT	86/6,7,11	7	0	0	15	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	STODDARD	86/6,7,11	7	0	0	14	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Linuron)	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			269	0	38	921	0	41	0.2-1.9
Malathion	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6,11	5	0	0	11	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	0	108	0	0	
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11	5	0	0	11	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11	7	0	0	16	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11	6	0	0	14	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PEMISCOT	86/6,7,11	6	0	0	12	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9 89/12; 90/3,5,9	20	0	0	80	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Malathion)	SCOTT	86/6,7,11	7	0	0	15	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	STODDARD	86/6,7,11	7	0	0	14	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			269	0	0	921	0	0	
Methazole	BUTLER	86/6	5	0	0	5	0	0	
	DUNKLIN	86/6	5	0	0	5	0	0	
	MISSISSIPPI	86/6	7	0	0	8	0	0	
	NEW MADRID	86/6	6	0	0	7	0	0	
	PEMISCOT	86/6	5	0	0	6	0	0	
	SCOTT	86/6	6	0	0	7	0	0	
	STODDARD	86/6	6	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			40	0	0	45	0	0	
Methomyl	BUTLER	86/6,11	5	0	0	11	0	0	
	DUNKLIN	86/6,11	5	0	0	11	0	0	
	MISSISSIPPI	86/6,11	7	0	0	16	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	NEW MADRID	86/6,11	6	0	0	14	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	PEMISCOT	86/6,7,11	6	0	0	12	0	0	
	SCOTT	86/6,7,11	7	0	0	15	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	STODDARD	86/6,7,11	7	0	1	14	0	1	8.1
TOTAL DISCRETE WELLS/SAMPLES			68	0	1	118	0	1	8.1

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/L)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
Methoxychlor	BUTLER	86/6	1	0	0	1	0	0	
	DUNKLIN	86/6	1	0	0	1	0	0	
	NEW MADRID	86/6	1	0	0	1	0	0	
	SCOTT	86/6	1	0	0	1	0	0	
TOTAL DISCRETE WELLS/SAMPLES			4	0	0	4	0	0	
Metolachor	BUTLER	86/6,11; 87/7	13	0	0	24	0	0	
	DUNKLIN	86/6,11; 87/7	11	0	0	24	0	0	
	MISSISSIPPI	86/6,11; 87/7	16	1	0	32	1	0	120.0
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	NEW MADRID	86/6,11; 87/7	17	0	0	33	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	PENISCOT	86/6,11; 87/7	12	0	0	21	0	0	
	SCOTT	86/6,11; 87/7	13	0	0	28	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	STODDARD	86/6,11; 87/7	14	0	0	26	0	0	
TOTAL DISCRETE WELLS/SAMPLES			121	1	0	213	1	0	120.0
Metribuzin	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	1	12	0	1	0.2
	BOONE	87/12; 88/3,5,9	11	0	2	44	0	2	0.5-0.6
	BUTLER	86/6,11; 87/7	13	0	0	23	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	5	108	0	8	0.2-0.8
	CHARITON	87/12; 88/3,5,9	6	0	3	24	0	3	0.3-0.6
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11; 87/7	11	0	3	22	0	3	0.2
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Metribuzin)	LAFAYETTE	89/12; 90/3,5,9	7	0	2	28	0	2	0.2-0.3
	LAWRENCE	89/12; 90/3,5,9	10	0	1	40	0	1	0.2
	MISSISSIPPI	86/6,11; 87/7	16	0	0	32	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	2	9	0	2	7.0-14.0
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11; 87/7	17	0	0	32	0	0	
	NEW MADRID (PDWP)	86/11	5	0	1	5	0	1	2.0
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PEMISCOT	86/6,7,11; 87/7	13	0	0	22	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6,7,11; 87/7	14	0	1	28	0	1	0.4
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	1	36	0	1	0.2
	STODDARD	86/6,7,11; 87/7	15	0	1	22	0	1	0.4
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			325	0	23	1,015	0	26	0.2-14.0
▸Molinate	BUTLER	86/6,11	5	0	0	11	0	0	
	DUNKLIN	86/6,11	5	0	0	11	0	0	
	MISSISSIPPI	86/6,11	7	0	0	16	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	NEW MADRID	86/6,11	6	0	0	14	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	PEMISCOT	86/6,7,11	6	0	0	12	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Molinate)	SCOTT	86/6,7,11	7	0	0	15	0	0	
	SCOTT (PDWP)	86/11	11	0	1	11	0	1	1.5
	STODDARD	86/6,7,11	7	0	0	14	0	0	
TOTAL DISCRETE WELLS/SAMPLES			68	0	1	118	0	1	1.5
▸Monocrotophos	BUTLER	86/6,11	5	0	0	11	0	0	
	DUNKLIN	86/6,11	5	0	1	11	0	1	0.4
	MISSISSIPPI	86/6,11	5	0	0	16	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	NEW MADRID	86/6,11	6	0	0	14	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	PEMISCOT	86/6,7,11	6	0	0	12	0	0	
	SCOTT	86/6,7,11	7	0	0	15	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	STODDARD	86/6,7,11	7	0	0	14	0	0	
TOTAL DISCRETE WELLS/SAMPLES			68	0	1	118	0	1	0.4
Naptalam	BUTLER	86/6	5	0	0	5	0	0	
	DUNKLIN	86/6	5	0	0	5	0	0	
	MISSISSIPPI	86/6	7	0	0	8	0	0	
	NEW MADRID	86/6	6	0	0	7	0	0	
	PEMISCOT	86/6	5	0	0	6	0	0	
	SCOTT	86/6	6	0	0	7	0	0	
	STODDARD	86/6	6	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			40	0	0	45	0	0	
Paraquat	BUTLER	86/6,11	5	0	0	11	0	0	
	DUNKLIN	86/6,11	5	0	0	11	0	0	
	MISSISSIPPI	86/6,11	7	0	0	16	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Paraquat)	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	NEW MADRID	86/6,11	6	1	0	13	1	0	100.0
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	PEMISCOT	86/6,11	5	0	0	11	0	0	
	SCOTT	86/6,11	6	0	0	14	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	STODDARD	86/6,11	6	1	0	13	1	0	100.0
TOTAL DISCRETE WELLS/SAMPLES			65	2	0	114	2	0	100.0
*Parathion, ethyl	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	0	108	0	0	
	CHARITON	87/12; 88/3,5,9	6	0	1	24	0	1	0.2
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Parathion, ethyl)	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			200	0	1	803	0	1	0.2
Parathion, methyl	BUTLER	86/6,11	5	0	0	11	0	0	
	DUNKLIN	86/6,11	5	0	0	12	0	0	
	MISSISSIPPI	86/6,11	7	0	0	16	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	NEW MADRID	86/6,11	6	0	0	15	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	PEMISCOT	86/6,7,11	6	0	0	12	0	0	
	SCOTT	86/6,7,11	7	0	0	16	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	STODDARD	86/6,7,11	7	0	0	14	0	0	
TOTAL DISCRETE WELLS/SAMPLE			68	0	0	122	0	0	
▸PCNB	BUTLER	86/6,11	5	0	1	11	0	1	0.275
	DUNKLIN	86/6,11	5	0	0	11	0	0	
	MISSISSIPPI	86/6,11	7	0	1	16	0	1	0.014
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	NEW MADRID	86/6,11	6	0	0	14	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	PEMISCOT	86/6,7,11	6	0	0	12	0	0	
	SCOTT	86/6,7,11	7	0	0	15	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	STODDARD	86/6,7,11	7	0	1	14	0	1	0.008
TOTAL DISCRETE WELLS/SAMPLES			68	0	3	118	0	3	0.008-0.275

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
Permethrin	BUTLER	86/6	5	0	0	5	0	0	
	DUNKLIN	86/6	5	0	0	5	0	0	
	MISSISSIPPI	86/6	7	0	0	8	0	0	
	NEW MADRID	86/6	6	0	0	7	0	0	
	PEMISCOT	86/6	5	0	0	6	0	0	
	SCOTT	86/6	6	0	0	7	0	0	
	STODDARD	86/6	6	0	0	7	0	0	
TOTAL DISCRETE WELLS/SAMPLES			40	0	0	45	0	0	
▸Pendimethalin	BUTLER	86/6,11; 87/7	13	0	0	23	0	0	
	DUNKLIN	86/6,11; 87/7	11	0	0	22	0	0	
	MISSISSIPPI	86/6,11; 87/7	16	0	1	32	0	1	0.02
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	NEW MADRID	86/6,11; 87/7	17	0	0	32	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	PEMISCOT	86/6,7,11; 87/7	13	0	0	22	0	0	
	SCOTT	86/6,7,11; 87/7	14	0	1	28	0	1	0.05
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	STODDARD	86/6,7,11; 87/7	15	0	0	27	0	0	
TOTAL DISCRETE WELLS/SAMPLES			124	0	2	212	0	2	0.02-0.05
Phorate	BUTLER	87/7	12	0	0	12	0	0	
	DUNKLIN	87/7	11	0	0	12	0	0	
	MISSISSIPPI	87/7	16	0	0	16	0	0	
	NEW MADRID	87/7	17	0	0	18	0	0	
	PEMISCOT	87/7	10	0	0	10	0	0	
	SCOTT	87/7	13	0	0	13	0	0	
	STODDARD	87/7	13	0	0	13	0	0	
TOTAL DISCRETE WELLS/SAMPLES			92	0	0	94	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
Picloram	BUTLER	86/6	1	0	0	1	0	0	
	DUNKLIN	86/6	1	0	0	1	0	0	
	NEW MADRID	86/6	1	0	0	1	0	0	
	SCOTT	86/6	1	0	0	1	0	0	
TOTAL DISCRETE WELLS/SAMPLES			4	0	0	4	0	0	
Propachlor	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	1	20	0	1	1.94
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6; 87/7	13	0	0	13	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	0	108	0	0	
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6; 87/7	12	0	0	13	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	87/7	16	0	1	16	0	1	0.4
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6; 87/7	18	0	0	19	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PEMISCOT	87/7	10	0	0	10	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6; 87/7	14	0	0	14	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Picloram)	STODDARD	87/7	13	0	1	13	0	1	0.1
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			297	0	3	901	0	3	0.1-1.94
*Propanil	BUTLER	86/6,11; 87/7	13	0	0	24	0	0	
	DUNKLIN	86/6,11; 87/7	11	0	0	24	0	0	
	MISSISSIPPI	86/6,11; 87/7	16	0	1	32	0	1	0.06
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	NEW MADRID	86/6,11; 87/7	17	0	0	32	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	PEMISCOT	86/6,7,11; 87/7	13	0	0	22	0	0	
	SCOTT	86/6,7,11; 87/7	14	0	0	29	0	0	
	SCOTT (PDWP)	86/11	6	0	0	7	0	0	
	STODDARD	86/6,7,11; 87/7	15	0	1	27	0	1	0.07
TOTAL DISCRETE WELLS/SAMPLES			124	0	2	216	0	2	0.06-0.07
Sethoxydim	BUTLER	86/6,11	5	0	0	11	0	0	
	DUNKLIN	86/6,11	5	0	0	11	0	0	
	MISSISSIPPI	86/6,11	7	0	0	16	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	NEW MADRID	86/6,11	6	0	0	14	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	PEMISCOT	86/6,11	5	0	0	11	0	0	
	SCOTT	86/6,11	6	0	0	14	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	STODDARD	86/6,11	6	0	0	13	0	0	
TOTAL DISCRETE WELLS/SAMPLES			65	0	0	115	0	0	

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Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
Simazine	ATCHISON	87/12; 88/3,5,9	16	0	1	64	0	1	0.45
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	1	108	0	2	0.2
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	1	28	0	1	0.65
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	1	80	0	2	0.3-0.4
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			200	0	4	803	0	6	0.2-0.65
Terbufos	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6,11; 87/7	13	0	0	23	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	0	108	0	0	
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Terbufos)	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11; 87/7	11	0	0	27	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11; 87/7	16	0	0	32	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11; 87/7	17	0	0	32	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PEMISCOT	86/6,7,11; 87/7	13	0	0	22	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6,7,11; 87/7	14	0	1	28	0	1	0.06
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	STODDARD	86/6,7,11; 87/7	15	0	0	27	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			325	0	1	1,015	0	1	0.06
▸Thiobencarb	BUTLER	11	5	0	0	6	0	0	
	DUNKLIN	86/11	5	0	2	6	0	3	0.2-0.3
	MISSISSIPPI	86/11	7	0	0	8	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Thiobencarb)	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	NEW MADRID	86/11	6	0	0	7	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	PENISCOT	86/11	5	0	0	5	0	0	
	SCOTT	86/11	6	0	0	7	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	STODDARD	86/11	6	0	0	6	0	0	
TOTAL DISCRETE WELLS/SAMPLES			65	0	2	70	0	3	0.2-0.3
Toxaphene	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6,7,11	5	0	0	12	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	0	108	0	0	
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11	5	0	0	12	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11	7	0	0	16	0	0	
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	
	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11	6	0	0	15	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Toxaphene)	MODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PEMISCOT	86/6,7,11	6	0	0	12	0	0	
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6,7,11	7	0	0	16	0	0	
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	STODDARD	86/6,7,11	7	0	0	14	0	0	
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			269	0	0	925	0	0	
Trifluralin	ATCHISON	87/12; 88/3,5,9	16	0	0	64	0	0	
	AUDRIAN	87/12; 88/3,5,9	5	0	0	20	0	0	
	BARTON	89/12; 90/3,5,9	3	0	0	12	0	0	
	BOONE	87/12; 88/3,5,9	11	0	0	44	0	0	
	BUTLER	86/6,11; 87/7	13	0	0	24	0	0	
	CARROLL	87/12; 88/3,5,9	27	0	0	108	0	0	
	CHARITON	87/12; 88/3,5,9	6	0	0	24	0	0	
	COLE	87/12; 88/3,5,9	2	0	0	7	0	0	
	DUNKLIN	86/6,11; 87/7	11	0	0	24	0	0	
	GREENE	89/12; 90/3,5,9	13	0	0	52	0	0	
	HOWARD	87/12; 88/3,5,9	3	0	0	12	0	0	
	JASPER	89/12; 90/3,5,9	12	0	0	48	0	0	
	LAFAYETTE	89/12; 90/3,5,9	7	0	0	28	0	0	
	LAWRENCE	89/12; 90/3,5,9	10	0	0	40	0	0	
	MISSISSIPPI	86/6,11; 87/7	16	0	4	32	0	4	0.143-0.3
	MISSISSIPPI (PDWP)	86/11	9	0	0	9	0	0	

PESTICIDE SAMPLING IN THE STATE OF MISSOURI
Lindane to Trifluralin

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Trifluralin)	MONITEAU	87/12; 88/3,5,9	2	0	0	8	0	0	
	MONROE	87/12; 88/3,5,9	7	0	0	28	0	0	
	NEW MADRID	86/6,11; 87/7	17	0	0	33	0	0	
	NEW MADRID (PDWP)	86/11	5	0	0	5	0	0	
	NODAWAY	87/12; 88/3,5,9	10	0	0	40	0	0	
	PEMISCOT	86/6,7,11; 87/7	13	0	1	22	0	1	0.006
	PETTIS	89/12; 90/3,5,9	1	0	0	4	0	0	
	SALINE	87/12; 88/3,5,9; 89/12; 90/3,5,9	20	0	0	80	0	0	
	SCOTT	86/6,7,11; 87/7	14	0	2	29	0	2	0.009-0.015
	SCOTT (PDWP)	86/11	11	0	0	11	0	0	
	SHELBY	87/12; 88/3,5,9	9	0	0	36	0	0	
	STODDARD	86/6,7,11; 87/7	15	0	3	27	0	3	0.007-0.024
	TEXAS	89/12; 90/3,5,9	15	0	0	60	0	0	
	WEBSTER	89/12; 90/3,5,9	12	0	0	48	0	0	
	WRIGHT	89/12; 90/3,5,9	10	0	0	40	0	0	
TOTAL DISCRETE WELLS/SAMPLES			324	0	10	1,019	0	10	0.006-0.143
GRAND TOTAL DISCRETE WELLS/SAMPLES			325	17	99	1,056	27	145	

► No MCL or Lifetime HA available.

[A] (PDWP) - Public Drinking Water Program

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STATE OF MISSOURI
WELLS BY COUNTY

COUNTY	TYPES OF WELLS									SOURCE OF CONTAMINATION (NUMBER OF WELLS)		
	DRINKING WATER			MONITORING			OTHER					
	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	NFU*	PS*	UNK*
Atchison	16	1	6	0	0	0	0	0	0	7	0	0
Audrian	5	1	4	0	0	0	0	0	0	5	0	0
Barton	3	0	1	0	0	0	0	0	0	1	0	0
Boone	11	1	7	0	0	0	0	0	0	8	0	0
Butler	11	1	1	0	0	0	2	0	0	2	0	0
Carroll	27	5	18	0	0	0	0	0	0	23	0	0
Chariton	6	1	5	0	0	0	0	0	0	6	0	0
Cole	2	0	2	0	0	0	0	0	0	2	0	0
Dunklin	8	0	3	0	0	0	3	0	0	3	0	0
Greene	13	0	0	0	0	0	0	0	0	0	0	0
Howard	3	0	3	0	0	0	0	0	0	3	0	0
Jasper	12	0	2	0	0	0	0	0	0	2	0	0
Lafayette	7	1	2	0	0	0	0	0	0	3	0	0
Lawrence	10	0	1	0	0	0	0	0	0	1	0	0
Mississippi	19	1	4	0	0	0	5	1	1	7	0	0
Moniteau	2	0	1	0	0	0	0	0	0	1	0	0
Monroe	7	0	0	0	0	0	0	0	0	0	0	0
New Madrid	17	1	4	0	0	0	5	0	0	5	0	0
Nodaway	10	1	7	0	0	0	0	0	0	8	0	0
Pemiscot	8	0	1	0	0	0	5	0	1	2	0	0
Pettis	1	0	1	0	0	0	0	0	0	1	0	0
Saline	20	1	7	0	0	0	0	0	0	8	0	0
Scott	23	0	7	0	0	0	2	0	1	8	0	0
Shelby	9	1	2	0	0	0	0	0	0	3	0	0
Stoddard	12	1	5	0	0	0	3	0	1	7	0	0
Texas	15	0	1	0	0	0	0	0	0	1	0	0
Webster	12	0	0	0	0	0	0	0	0	0	0	0
Wright	10	0	0	0	0	0	0	0	0	0	0	0
TOTAL	300	17	95	0	0	0	25	1	4	117	0	0

* NFU=Known or Suspected Normal Field Use
PS =Known or Suspected Point Source
UNK=Unknown

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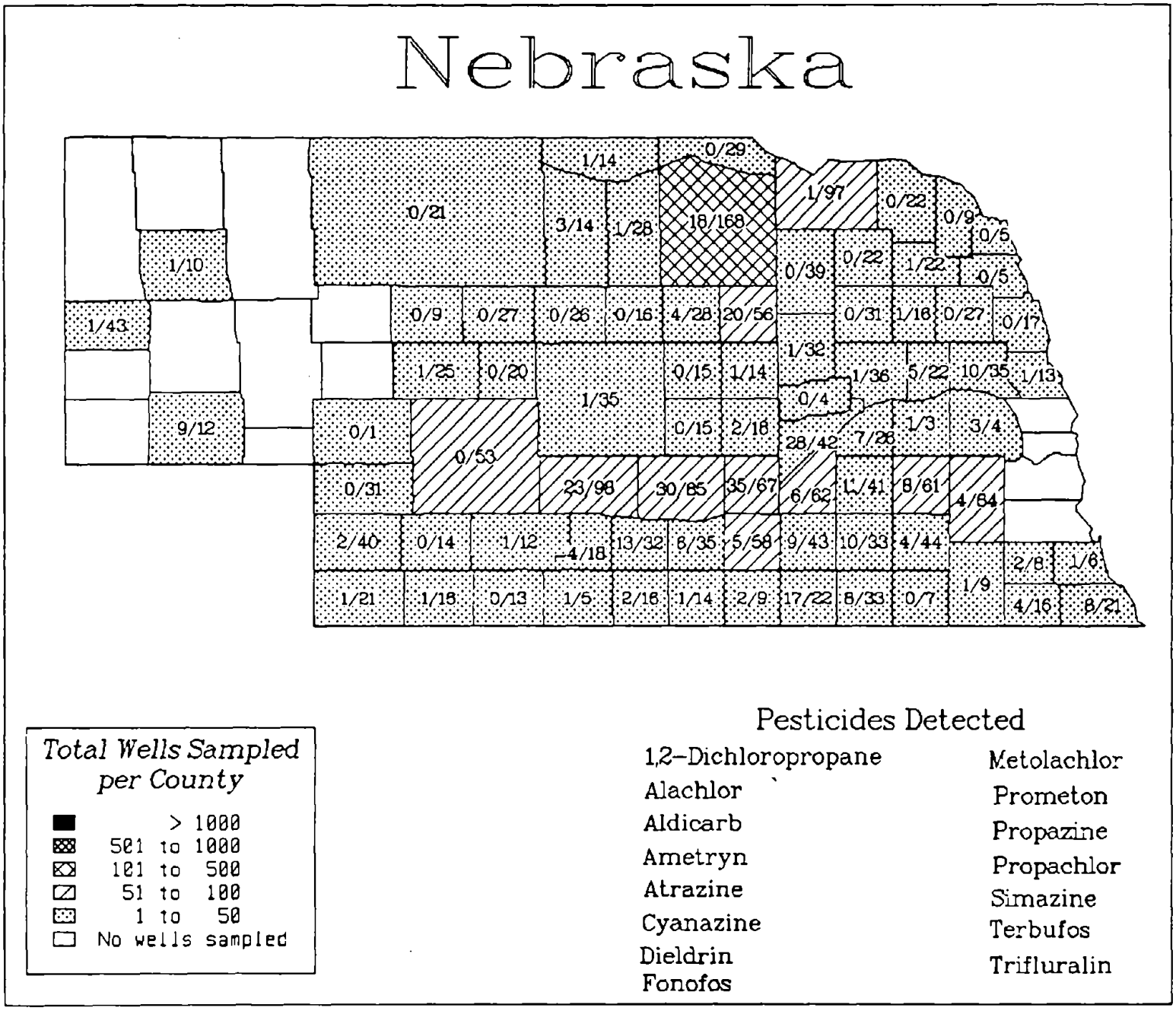
Well Sampling by County

(Total Number of Wells with Pesticide Detections / Total Number of Wells Sampled)



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OVERVIEW OF STATE LEGISLATURE AND ENVIRONMENTAL POLICIES REGARDING PESTICIDES IN GROUND WATER

Most of Nebraska's 330,000 rural households and 84% of the state's public water supplies rely on ground water to meet drinking water needs. For this reason ground water is considered to be Nebraska's most vital natural resource and is, therefore, formally protected under the Nebraska Groundwater Protection Act.

Potential pesticide contamination of ground water is of particular concern because Nebraska ranked seventh nationally in pesticide usage and second in number of irrigated acres. An estimated 33 million pounds of pesticides were used on major crops in Nebraska (1987). Atrazine is the most heavily used pesticide followed by alachlor and propachlor.

Concern about ground-water contamination in Nebraska is particularly pronounced in the central Platte River valley, where intensive cultivation and irrigation, a shallow water table, and soil of low water-holding capacity all combine to maximize the probability of leachates infiltrating local ground-water sources. An additional problem in this region is the fact that most residents living outside of organized cities and towns draw water for domestic use from a well located on their property. Such wells are likely to be less deep and of less sound construction than their municipal counterparts, thus increasing the possibility of exposure to potential harmful ground-water contaminants by rural dwellers.

The extent of the problem of contamination of rural private well water resulting from the use of agricultural chemicals had not been extensively studied in Nebraska up through the mid-1980's. Beginning October 1, 1984, as a result of increased funds and technical assistance became from the Centers for Disease Control, the Nebraska Department of Health was presented with the opportunity to conduct a systematic, large-scale investigation of private well water quality.

Spalding, Roy F., M.E. Exner, J.J. Sullivan, and P.A. Lyon, **Chemical Seepage form Tail water Recovery Pit to Adjacent Ground Water,** Journal of Environmental Quality. Vol 8, No 3. July-September 1979

Primary Objective

The purpose of this study was to determine whether the integrity of ground water is threatened by seepage form pits in areas of shallow water table and if threatened to what degree.

Design

Merrick County was selected as the site for this investigation because the water table beneath about 75% of the county is within 3 m of the land surface. A 4-year-old reuse pit in the Platte River bottom land of southwestern Merrick County was chosen as the site for the seepage study. The pit has a maximum dimensions of 46.6 by 16.5 by 3 m. In the immediate area of the reuse pit and in the field upgradient from it the soil is the moderately well-drained Merrick loam (cumulic Haplustoll). This study consisted of two parts: an areal study and a seepage study. The areal study sampled ground water from 18 irrigation wells and 10 reuse pits in Merrick County. Samples were analyzed for atrazine and NO_3-N.

For the seepage study 15 sand-point monitoring wells were installed around a single reuse pit. Five of the wells were upgradient and 10 downgradient from the pit. The intake screens were about 0.8 m below the water table in the very shallow wells, about 1.5 m below in the shallow wells, about 3 m below in the medium-depth wells and about 6 m below in the deep wells. The very shallow wells were installed a few days after the pit was spiked. The reuse pit was spiked with 247kg Br^-, 200g ^{15}N-labeled $NaNO_3$, and 1.1kg atrazine. Samples were collected before and after spiking.

Results and Conclusions

In the areal portion of this study atrazine was detected in all but one of the 18 ground water samples. The significant correlation coefficient of +0.48 for NO_3-N and atrazine indicated that both probably enter the ground water by infiltration through the soils. Some of the lowest atrazine concentrations and the least variability were found beneath soils having a shallow (<1.5m) water table. The low concentrations may be due to either the sorption of atrazine on clay-size particles and/or the degradation of atrazine in the upper soil horizon. Atrazine concentration in ground water beneath moderately well drained and well drained soils showed a high degree of variability. This scatter probability indicates that atrazine occurs in the ground water as relatively nondispersed plumes, which may reflect differences in application rates, water management and/or spillage.

Differences between the transport of Br^-, ^{15}N-labeled NO_3-N, and atrazine were detected in curves of relative concentration vs. time. In this field situation Br^- was the most conservative tracer. Transport of the ^{15}N-labeled NO_3-N tracer was shown to be affected by interaction with N in the sediment-water system. Atrazine transport was least conservative and presumably greatly altered by adsorption on fine-textured sediments at the water-sediment interface.

Detection of Br^-, ^{15}N-labeled NO_3-N in shallow and medium-depth wells downgradient from the reuse pit indicated seepage from the pit into adjacent ground water. Probably many other reuse pits in Merrick County similarly lose water by seepage. However, most of them are in areas were the ground water NO_3-N concentration already exceeds 10 mg/L. During most of the year seepage from such pits probably contains lower concentrations of NO_3-N and atrazine than already occur in the surrounding ground water. One key to lowering seepage losses is pit management. By continually pumping from each pit during irrigation runoff events, head pressure on the sides and bottom of the pit can be kept at a low level, thereby reducing the rate of chemical transport across the water-sediment interface.

Spalding, Roy F., Gregor Junk, and John Richard, **Pesticides in Ground Water Beneath Irrigated Farmland in Nebraska, August 1978.** Pesticides Monitoring Journal, Vol 14, No 3, September 1980

Primary Objective

The purpose of this study was to measure the levels of selected pesticides in ground water overlain by cropped and irrigated medium-textured silt loam soils having a moderately thick unsaturated layer. Most of the pesticides were selected because of current or past usage, but others were chosen because they have been mentioned in the Federal Register in discussions on primary national drinking water regulations.

Design

Water samples were collected from an area along the Platte River in Hall and Buffalo Counties were the NO_3-N concentrations in ground water exceeded 10.0 mg/L. Samples were collected from 14 wells in August of 1978 and analyzed for NO_3-N and the following pesticides: atrazine, alachlor, aldrin, dieldrin, 2,4-D, DDT, endrin, heptachlor, heptachlor epoxide, lindane, methoxychlor, and silvex.

Results and conclusions

Detectable concentrations of atrazine occurred in all ground water samples and alachlor in two samples. Concentrations ranged from 0.06-3.12 ug/L for atrazine and around 0.01 ug/L for alachlor. The wide range in atrazine concentration in water under predominantly silt loam soils suggests that vertical transport is associated with possible differences in water management.

Exner-Spalding, Mary, and Roy F. Spalding, Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska, Tel.: 402-472-7547. **Ground-Water Contamination & Well Construction in Southeast Nebraska.** Study conducted fall 1981 through fall 1982. (Reported in Groundwater 23(1), January-February (1985), 9 pp.)

Primary Objective

The primary objective of this study was to determine the causes of elevated ground-water NO_3-N concentrations and their unusually high frequency in the ground water of the Lincoln quadrangle in southeastern Nebraska. Nitrate-nitrogen (NO_3-N) concentrations and total and fecal coliform densities were determined in ground water from 268 household and stock wells in an 1100 mi^2 area of southeast Nebraska. Forty-seven of the 268 wells were analyzed for several commonly used pesticides as well.

Design:

Ground-water samples were obtained from 47 household and stock wells during fall 1981 and spring, summer, and fall 1982 in the four counties comprising the Lincoln quadrangle in southeastern Nebraska. Eight wells were sampled in Johnson County, 4 wells in Nemaha, 15 wells in Pawnee, and 20 wells in Richardson County. The following information was recorded for each well: type of construction, casing, depth, age, and use. In addition, the location of each well with respect to the land surface and to potential sources of nitrate contamination was recorded.

Samples were analyzed for alachlor, atrazine, carbaryl, carbofuran and propachlor. These pesticides were chosen on the basis of their common usage and their relatively high aqueous solubilities, which suggested that they might be candidates for vertical transport to the aquifer. Pesticide samples were obtained in 4-liter glass jugs and shipped at the end of each day by express bus to the Ames Laboratory, Ames, Iowa. Within 24 hours of arrival, the pesticides were extracted using the XAD-2 resin extraction procedure of Junk *et al.* (1976) and analyzed by GC/ECD with different polarity columns and periodic confirmation by GC/MS. Detection limits were 0.01 ppb for atrazine and alachlor and 0.03 ppb for propachlor, carbofuran, and carbaryl.

Results and Conclusions

Only atrazine and alachlor were found in detectable quantities in the 47 samples analyzed for pesticides. All concentrations were below the respective Maximum Contamination Levels (MCL) for atrazine and alachlor of 2 and 3 ppb. Alachlor was detected in one well in Richardson County at 0.02 ppb. The areal distribution of atrazine in the 13 samples with concentrations above the detection limit was random. The highest concentrations occurred in Pawnee and Richardson (0.51-1.00) and Nemaha (1.01 to 3.00 ppb) Counties. Both the frequency of occurrence (28%) and the levels of atrazine (average concentration of <0.08 ppb) in ground water in the Lincoln quadrangle were much lower than those from an earlier study in the central Platte area where the frequency of occurrence approached 100% and the average concentration was around 1 ppb (Spalding *et al.*, 1978; 1980). There the areal distribution of atrazine was associated closely with that of NO_3-N which was used as an indicator of deep percolation from irrigated croplands (Spalding *et al.*, 1980).

Although highly contaminated with NO_3-N, the ground water sampled in the study was relatively clean with respect to pesticides. There was no significant correlation between the two constituents (r = +0.153). Atrazine, the most frequently detected pesticide, was detected only in water from wells in pump pits or in wells lacking a watertight casing. The one ground-water sample containing alachlor was also from a well in a pump pit. None of the wells surveyed that met construction criteria contained atrazine. It was suggested that spillage during preparation of the pesticide for field use could be the source of contamination.

Jacobs, Candace A. or B. Rettig. Division of Environmental Health and Housing Surveillance, Nebraska Department of Health, Tel.: 402-471-2541. **1985, 1986,** and **1987, Domestic Well Water Sampling in Central Nebraska: Laboratory Findings and their Implications.** Studies conducted/reported 1985, 28 pp., 1986, 19 pp., and 1987, 22 pp.

Primary Objective

Since 1985, a program involving sampling and analysis of water from private wells of randomly selected rural residents has been conducted to determine the extent of contamination of rural drinking water wells and to determine the factors that contribute to contamination of these wells. The program is administered under a cooperative agreement between the Centers for Disease Control (CDC) and the Nebraska Department of Health (NDOH). The purpose of the agreement is to increase the State's capacity to monitor occupational and environmental safety and health. Each year groups of counties are selected as target areas for well water sampling. At the end of the five-year project (1989), randomly selected samples will have been collected and analyzed from the entire state.

Design:

1985 Phase:

The 21-county project target area was separated into three strata according to the variance in ground-water pollution potential within the target area. Stratum I included Blaine, Hooker, Logan, Loup, McPherson, and Thomas Counties. Stratum II included Custer, Frontier, Furnas, Gosper, Harlan, Hayes, Red Willow, Sherman, and Valley Counties, and Stratum III included Buffalo, Dawson, Kearney, Lincoln, and Phelps Counties. The percentage of expected contaminated wells in each stratum was estimated (0.025%, Stratum I; 0.10%, Stratum II; 0.15%, Stratum III) based on differences in ground-water pollution potential. County rural directories were utilized for the random selection of residences for well sampling, eliminating those target area residents living in the more populous communities that usually have a single municipal source of water. At the time of sample collection, information was gathered concerning the construction of the well and the use of specific farm chemicals in the immediate vicinity of the well.

Sample sizes sufficient to reflect the expected proportions of contaminated wells in each stratum were projected statistically; however, the actual numbers of samples analyzed were slightly less: 120 for Stratum I (123 projected), 123 for Stratum II (136 projected) and 166 for Stratum III (188 projected) for a total of 409. Water sampling procedures were standardized according to a detailed protocol. An outside tap as close as possible to the well source was recommended for the sampling. Three separate samples were drawn; one each for the analysis of nitrate and bacteria, background radiation, and pesticides. All samples were analyzed at the State Health Department Laboratory in Lincoln.

Samples were analyzed for carbamate pesticides by a high-performance liquid chromatography (HPLC) method; organophosphate pesticides were analyzed using GC. A list of the specific pesticides included in the analysis was not provided; however, analysis included at least the following: alachlor, atrazine, cyanazine, fonofos, and trifluralin. Detection limits were not provided.

The relationships between the levels of pesticides, nitrates, bacteria, and radiation levels detected in well samples and selected factors related to well construction and chemical usage were examined, along with the intra-sample association between nitrate levels and pesticide contamination.

1986 Phase:
The 1986 project involved a different target area (with the exception of Dawson county). Based on geological characteristics, the three strata in the 11-county study included the following counties: Garfield, Holt, Rock, and Wheeler in Stratum I; Dawson, Hall, Merrick, and Scotts Bluff in Stratum II; and Adams, Clay, and Hamilton in Stratum III. The percentage of expected contaminated wells in each of the three strata was estimated from the previous year's nitrate and pesticide test results to be 10%.

Sample sizes were 135 for Stratum I, 130 for Stratum II, and 134 for Stratum III, for a total of 399. Water sampling procedures and pesticide and data analyses were conducted as described in the 1985 phase.

1987 Phase:
Twenty-two counties located in northeastern and east central Nebraska were grouped into strata based on similarity of soil type and land use. Stratum I includes Boyd, Keya Paha, and Knox counties and is characterized by sandy, sandy loam and loess soils. The land is used primarily for rangeland with some irrigated agriculture and forest areas. Stratum II is composed of Burt, Cedar, Colfax, Cuming, Dakota, Dixon, Dodge, Pierce, Stanton, Thurston, Washington, and Wayne Counties. Soils are silts and sands, and the majority of the land is cultivated. Stratum III includes Fillmore, Polk, Saline, Seward, Thayer, and York Counties. Soils in this area are loess, alluvial silts and clays, and land is primarily used for cultivating irrigated row crops. In addition to the counties included in the three strata, sites selected for sampling in 1985 from Dawson County were resampled this year and results from both years were compared. The percentage of expected contaminated wells in each stratum was estimated based on the results of the previous year's analysis, and soil types: 15% of the wells were expected to be contaminated in Stratum III, and 10% to be contaminated in Strata I and II.

A total of 491 samples was analyzed for pesticides. Thirty-eight samples were collected in Dawson County, and the number of samples collected in each stratum are presented below.

Stratum I	Wells Sampled	Stratum II	Wells Sampled	Stratum III	Wells Sampled
Boyd	29	Burt	10	Fillmore	21
Keya Paha	13	Cedar	12	Polk	22
Knox	87	Colfax	12	Saline	39
		Cuming	18	Seward	58
		Dakota	5	Thayer	23
		Dixon	5	York	27
		Dodge	14		
		Pierce	15		
		Stanton	10		
		Thurston	4		
		Washington	13		
		Wayne	16		

Samples were analyzed for 13 pesticides selected based on usage rates in Nebraska, toxicity, soil leachability, soil half life and ease of laboratory analysis. The pesticides included in analysis were: alachlor, atrazine, carbaryl, carbofuran, chlorpyrifos, cyanazine, fonofos, metolachlor, methyl parathion, metribuzin, parathion, terbufos, and trifluralin. Samples were analyzed for pesticides, based on the class of compounds, following extraction from water with methylene chloride. The carbamate pesticides, carbaryl and carbofuran, were analyzed using reverse-phase HPLC with an ultraviolet wavelength detector. The organophosphates (chlorpyrifos, fonofos, methyl parathion, parathion and terbufos), triazine herbicides (atrazine, cyanazine and metribuzin) acetanilide (alachlor), acetamide (metolachlor) and dinotrotoluidine (trifluralin) compounds were analyzed by GC/N-P. Triazine compound detections were confirmed using HPLC techniques; all other pesticides were confirmed using GC/MS. Limits of detection were not provided.

Water sampling procedures and data analyses were conducted as described in the 1985 phase.

Results and Conclusions

1985 Phase:
Pesticides were detected in 19 wells in the Strata II and III. Atrazine was detected in 3 wells in Stratum II in Frontier, Furnas, and Harlan counties at 0.163 to 0.410 ppb. Fonofos was detected in one well in Stratum II in Franklin County at 0.056 ppb. In Stratum III, alachlor was detected in one Dawson County well at 0.822 ppb. Atrazine was detected at levels exceeding its 3-ppb MCL in two wells in Buffalo County at 3.2 and 3.7 ppb and in one Phelps County well at 107.2 ppb. Atrazine was detected at levels of 0.112-1.9 ppb in 3 wells in Buffalo County, 6 wells in Dawson County, 1 well in Kearney County and 2 wells in Phelps County. Cyanazine was detected in one Dawson County well at 3.2 ppb, below its U.S EPA's Lifetime Health Advisory (LHA) of 10 ppb.

The findings of the study confirmed that certain characteristics of poor well construction--shallow depth, dug or driven construction methods, and the absence of casing--were significantly related to chemical and radiation contamination in the wells sampled. The use of pesticides and nitrates in the vicinity of the wells samples was not associated with well contamination. Although use of both nitrates and pesticides was indicated more frequently in the vicinity of contaminated wells in comparison with the uncontaminated wells, differences were not statistically significant. The concentration of contaminated wells in Strata II and III also corresponded to a greater use of nitrates and pesticides than in Stratum I; however, there were several possible explanations for this finding. The most likely was that the lack of adequate specific data on pesticide and nitrate use near the sampled wells resulted in poor quantification of these variables. In addition, the use of chemicals on neighboring properties in close proximity to the wells sampled was not quantified at all. Another possible explanation was that soil composition, depth of water table, and well construction may have been more important factors in predicting well contamination than nitrate or pesticide use.

The study found nitrate and/or pesticide contamination in 45 of 451 private wells sampled (10.0%); excluding Stratum I, the rate of contamination increased to over 1 in 8 wells (44/325). If such a rate persisted in other areas of the state with similar geologic and economic characteristics (which would include most of the Platte River valley and the predominantly cultivated regions of central and eastern Nebraska), this would indicate that a substantial proportion of the state's population could be ingesting water of dubious quality.

1986 Phase:
In Stratum I atrazine (MCL = 3 ppb) was detected in 1 well in Holt County at 22.70 ppb (13.39 on re-analysis) and in 3 other Holt County wells at 0.548 to 1.57 ppb. Atrazine was detected above its MCL in Stratum II in 1 Merrick County well at 6.24 ppb and in 2 Hall County wells at 3.06 and 4.00 ppb. Atrazine was detected at levels below its MCL in 2 wells in Dawson, 5 wells in Hall, 7 wells in Merrick, and 1 well in Scotts Bluff Counties at 0.343 to 2.73 ppb. In Stratum III, all atrazine detections were below the MCL at 0.147 to 0.907 ppb in 3 Adams County wells, 5 Clay County wells, and 6 Hamilton County wells.

The differences in the percentage of wells contaminated with pesticides in each stratum were statistically significant between Strata I and II and Strata II and III, but not between Strata I and III. Wells contaminated with pesticides were significantly less deep and were located significantly closer to cropland than their uncontaminated counterparts. There were no other statistically significant differences between contaminated and uncontaminated wells for any of the other factors examined.

The percentage of wells with evidence of nitrate, pesticide, bacterial, and radiation contamination reached the highest levels in Stratum I and, with the exception of nitrate contamination, were lowest in Stratum II. The nitrate and pesticide contamination problems in Stratum I, which straddles the Platte River, were documented in earlier studies in the

region (including the 1985 study) and were concluded to be the result of heavy chemical usage and a shallow water table. By contrast, Stratum II is less devoted to agriculture than either Strata I or III, which explains its low percentage of wells contaminated with pesticides.

The findings of the 1986 well survey confirm the findings from the 1985 survey. In both surveys, the mean depth of wells contaminated with nitrates or pesticides was significantly lower than that of the uncontaminated wells. In 1985, wells contaminated with nitrates or pesticides were less likely to have been drilled than uncontaminated wells; however, since almost every well sampled in 1986 was drilled (98.7%), significant differences between contaminated and uncontaminated wells were not observed. In addition, the mean distance to cropland among the 1986 wells contaminated with nitrates or pesticides was significantly less than that to uncontaminated wells, but sufficient data were not available to evaluate 1985's wells. In both 1985 and 1986, pesticides and nitrates were used on the premises of nitrate- and pesticide-contaminated wells more frequently than on the premises of uncontaminated wells, although such differences were not statistically significant in either year, due largely to the fact that agricultural chemicals were used on the premises of both contaminated and uncontaminated wells in a high percentage of cases.

1987 Phase:
Pesticides were found in 6.92% of the wells sampled (34/491). Atrazine was detected in one well in Stratum I in Knox County at 0.36 ppb. Alachlor was detected in this same well at 0.95 ppb. In Stratum II, atrazine was detected in 2 wells in Stanton and Washington Counties at 0.178 to 0.58 ppb. Alachlor was detected in 2 wells in Stratum II at levels exceeding its MCL of 2 ppb. Alachlor was detected in 1 Wayne County well at 2.96 ppb, and 1 Colfax County well at 20.6 ppb. In Stratum III atrazine was detected in 1 Fillmore County well, 7 Polk County wells, 3 Saline County wells, 7 Seward County wells, 1 Thayer County well, and 6 York County wells at 0.13 to 1.70 ppb. Atrazine was detected in 4 wells in Dawson County at 0.37 to 0.5 ppb.

Wells with pesticide contamination were significantly closer to cropland than wells without pesticides. Almost two thirds (22/34) of all wells found containing one or more pesticides were also contaminated with nitrate levels exceeding the MCL (10 mg/l). Strata I, with less cropland and irrigation, had the smallest percentage of wells contaminated with pesticides. Strata III, with the highest percentage of irrigated cropland (and concomitant agricultural chemical application) had the highest number of drinking water wells where pesticides were detected (25/34) and the highest mean nitrate-nitrogen level of all the strata examined. The nitrate and pesticide contamination problems in Strata III, through which the Little Blue, West Fork of the Big Blue, and the Big Blue Rivers run, may be the result of heavy fertilizer and pesticide usage on irrigated cropland.

Driven wells were more contaminated with pesticides than wells that were drilled. Driven wells tend to be more shallow and lack watertight casings, which would draw water from more contaminated shallow aquifers and perched water tables than generally deeper drilled wells, which can draw water from deeper, less contaminated sources. Wells that are deeper tend to have less contamination with nitrates, pesticides and gross alpha radiation. This

agrees with findings from the 1985 and 1986 studies in which it was found that the mean depth of wells contaminated with nitrates or pesticides was significantly less than that of the uncontaminated wells.

Jones, Russell L., S. Dwight Kirkland, and E.L. Chancey, Union Carbide Agricultural Products Company, Research Triangle Park, North Carolina. **Measurement of the Environmental Fate of Aldicarb Residues in a Nebraska Sand Hills Soil.** Study conducted in 1985. (Reported in Applied Agricultural Research; 2(3):177-182 (1987)).

Primary Objective

This study was conducted to support the registration of aldicarb. The objective of this study was to measure the degradation and movement of aldicarb in the Nebraska Sand Hills using an unsaturated and saturated zone field research study.

Design

The experimental site was an approximately 0.6-ha section of a cornfield 3 km (2 mi) south of Bartlett, Nebraska in Wheeler County. This site was selected because of its shallow water table and because its loamy sand soil and sand subsoils are typical of soils on which corn is grown in Nebraska. Aldicarb was applied at planting on May 3, 1985, at a rate of 1.68 kg/ha (1.5 lb/A) in the seed furrow by using insecticide boxes located behind the seed planter. Row spacing was 0.7 m (2.3 ft). The cornfield was irrigated according to normal grower practice using a center pivot irrigation system. The plot was located at the edge of the irrigated area. A site diagram is shown in Figure 1. To monitor shallow ground water at the test site, 15 shallow wells were installed before application of aldicarb. Each well consisted of 3.8-cm-diameter PVC pipe and a 0.3-m long PVC screen with 0.15-mm wide slots. The 15 wells were arranged in five clusters, with one cluster located up-gradient (with respect to ground-water flow) of the treated area, two clusters in the treated area, and two clusters located 13.5 m down-gradient of the treated area. Each cluster contained three wells--one screened just below the water table (about 1.3 m at the time of installation), one screened 1.5 m below the water table, and the third screened 3.0 m below the water table. The wells were installed by manually augering to the water table and then driving the well point to the desired depth.

Water samples were collected after well installation and at approximately 1, 2, 3, 4, 5, 6, and 11.5 months after application. Aldicarb carbamate residue concentrations (aldicarb, aldicarb sulfoxide, and aldicarb sulfone) were measured in soil and water samples by an HPLC procedure using postcolumn reactions and fluorescence detection. The minimum detection level was 1 ppb.

Results and Conclusions

Ground-water samples from the 15 wells sampled 1-11.5 months after treatment did not indicate the presence of aldicarb residues in the saturated zone. Aldicarb was detected in one of the 111 samples at its MCL of 3 ppb. The single detection was during the 2-month sampling interval in which the wells had to be excavated and an extension pipe installed. Topsoil was introduced into the wells during this procedure, which may have resulted in the aldicarb detection. The absence of aldicarb residues in this well a month later, when more downward movement of residue would have occurred in the soil, tends to support this hypothesis. The absence of residues in the two shallow wells in the field screened 1.4-1.7 m and 1.7-2.0 m below the surface, as well as the decline in residues in the 0.6- to 0.9-m stratum in the last soil sampling interval indicates that any aldicarb residues that may have entered the saturation zone degraded relatively rapidly (probably at least as fast as the 15- to 30-day half-life estimated for the unsaturated zone).

Exner, Mary E., and Roy F. Spalding, Water Center, Institute of Agriculture and Natural Resources, University of Nebraska, Tel: 402-472-7547. **Occurrence of Pesticides and Nitrate in Nebraska's Ground Water, 1990.** Summary report of pesticide data representing all available information from 1975 through January 1, 1989. (Reported March 1990, 34 pp.)

Primary Objective

The report represents an atlas of ground-water nitrate and pesticide information from several local and state agencies and the USGS. Its purpose is to characterize the areal distribution of agrichemicals in Nebraska's ground water and to correlate the occurrence of contamination with parameters that enhance leaching. The authors note that because of the disparity in the numbers of different types of wells sampled and the nonrandom distribution of the samples, these data should not be used to describe average conditions of the state's ground water.

Design

The assessment is based on analysis of pesticide residues in 2,260 ground-water samples. Data were provided by the USGS, the Nebraska Departments of Health (NDOH) and Environmental Control (NDEC), the Natural Resources Districts (NRDs), and the Lincoln-Lancaster County Health Department (LLCHD). The database also includes data from the authors' studies at the Conservation and Survey Division (CSD) of the University of Nebraska. All ground-water samples included in the assessment were collected and analyzed by accepted protocols for the purpose of monitoring and researching ground and/or drinking water quality. Additional data available from other sources were not included due to the questionable integrity of sampling techniques or preservation and storage methods used. The pesticide data included in the atlas represent all information available before January 1, 1989. The earliest results were obtained in 1975 for atrazine. In instances where wells were sampled more than once or by more than one agency, only the most recent data were used.

Samples collected by the NDOH, NRDs, and the LLCHD were analyzed for the following pesticides: alachlor, atrazine, carbaryl, carbofuran, chlorpyrifos, cyanazine, ethyl parathion, fonofos, methyl parathion, metolachlor, metribuzin, terbufos, and trifluralin at detection limits in the parts per trillion range. Carbaryl and carbofuran were analyzed by HPLC; all other pesticides were analyzed by GC using EPA method 622 (USEPA 1982) and other methods as appropriate. Pesticides were confirmed by GC-MS. The CSD samples were analyzed by GC-MS using the coincidence of retention time and the coincidence of full scan mass spectra; NDEC samples were analyzed by GC-MS as well. USGS samples were analyzed by the two-column confirmation method, and were not confirmed by GC-MS. The reported triazine detection limit for USGS samples was 0.05 ppb, slightly higher than that reported for all other agencies.

The areal sample distribution is different for each pesticide because each agency analyzed its samples for different pesticides. Only atrazine was measured in all samples taken for pesticide analysis. Distribution of samples indicates that, with the exception of two areas, one in extreme eastern and the other in western Nebraska, ground water in most of Nebraska has been sampled for atrazine. Ground water in both of these areas was sampled in 1989, but data were not available for inclusion in the atlas. Sampling in Douglas, Sarpy, Cass, Saunders, and Butler Counties in eastern Nebraska concluded a three-year investigation in the Lower Platte River Valley. Sampling in Sioux, Dawes, Sheridan, Morrill, Garden, Deuel, Cheyenne, Kimball, and Banner Counties in the western Panhandle, and the three neighboring counties of Grant, Arthur, and Keith completed the last year of the NDOH's 5-year CDC assessment.

Results and Discussion

Atrazine was by far the most frequently detected of the heavily sampled pesticides. It was detected in 13.4% of the 2,260 samples. The majority (78%) of the wells with detectable concentrations of atrazine contained only trace levels of 1 ppb or less. A total of 22 wells had atrazine levels greater than the MCL of 3 ppb. Two wells contained greater than 80 ppb atrazine, concentrations well above normally encountered levels. One of the wells was a shallow 10-ft monitoring well located down-gradient from an irrigated corn field. The highest concentration of 107 ppb occurred in a domestic well in an area where the depth to water was about 85 feet. A spill or back-siphoning accident could have contaminated this well. Some of the 6 wells in which atrazine was detected at 5 to 10 ppb were located in fields with irrigation reuse pits. These irrigation wells could be influenced by seepage from the pits during the spring. Because spring runoff in the reuse pits is not recycled to the field until mid to late June when the irrigation season begins, pesticides in reuse pits can seep into the ground water for over a month.

The regional variability of atrazine concentrations results from areal variability in matric and preferential flow under normal framing practices, differences in usage, and changes in geohydrology that influence atrazine transport in both the unsaturated and saturated zones. About 70% of the atrazine detections occurred where the ground water is highly vulnerable to contamination and nonpoint nitrate contamination has been documented. In addition, there were more pesticide detections in shallow wells than in deep wells, in wells without

sanitary seals than in those with seals, and in wells adjacent to row-cropped areas than in those farther away.

About 30% of the atrazine detections are in areas where it is more than 50 feet to ground water. Excluding the well in Phelps County with 107 ppb atrazine, concentrations were generally in the low ppts. Only 5 wells in this group contained more than 1 ppb atrazine and 3 of those appeared to be influenced by seepage from runoff retention structures and reported spills. The trace levels of atrazine in the remaining wells in irrigated corn-growing areas with greater than 50 feet to ground water could result from preferential flow channels within fine-textured sediments.

Only 16 of the 2069 wells sampled for alachlor contained detectable concentrations (0.8%). Fourteen of the 16 detections were at trace levels of <0.40 ppb. Only 2 wells had detections exceeding the 2-ppb MCL for alachlor. The random distribution of these five wells dispersed throughout eastern and central Nebraska suggests that misuse, overuse, or back siphoning could be causes of contamination. Three of the wells were in areas where it is more than 50 feet to ground water. The sample with the highest alachlor level (20.7 ppb) also contained two other pesticides, which indicated there may have been an accidental spill or misuse of the chemical.

Propachlor was detected in 18 of 145 samples tested. The highest reported concentration was 3.5 ppb, well below the LHA of 90 ppb. Propachlor was detected only in samples collected by USGS and analyzed by private laboratories sunder USGS contract. Most of the detectable concentrations of propachlor were in the irrigated corn-growing areas of the Central Platte Valley and Gosper and Phelps Counties. Based on the fact that metolachlor usage is heavier in corn-growing areas, has a longer half-life, and is more mobile according to the soil sorption index, if most propachlor detections resulted from leachates from nonpoint sources, metolachlor rather than propachlor would be more likely to be detected in the ground water. This was not the case. The authors proposed that the use of propachlor to control weeds around irrigation wells may have increased the likelihood of its direct downward movement through the gravel pack in the annular space around the unsealed wells.

In addition to atrazine, alachlor, and propachlor, 11 other herbicides and insecticides were detected in ground water. The frequency of detection of insecticides was much lower than for herbicides. Most of the additional herbicides were triazines, including cyanazine (detected in 4 drinking water wells and 6 irrigation wells), simazine (detected in 3 drinking water wells and 11 irrigation wells), propazine (detected in 6 irrigation wells), ametryne (detected in 1 drinking water well), and prometone (detected in 2 irrigation wells). Sample collection for the triazines was limited almost exclusively to areas highly vulnerable to contamination; 6 samples with detectable propazine concentrations, and as many as four samples with detectable simazine levels were from wells in the same section.

Metolachlor (detected in 5 drinking water wells and 1 irrigation well) was the only amide herbicide detected other than the alachlor and propachlor detections already discussed. Trifluralin was present in several closely spaced monitoring wells adjacent to an artificial

recharge structure and in one domestic well at concentrations well below the LHA of 5 ppb. Because trifluralin was detected in the monitoring wells during the first sampling but not in subsequent samplings, the detections are not considered to be accurate. The herbicide 2,4-D was measured in only 73 samples largely because its analytical scheme increases the time and expense of analysis. The two detectable concentrations were well below the LHA of 70 ppb. The three detectable insecticides were dieldrin (detected in 2 drinking water wells) and fonofos and terbufos, detected in 1 drinking and irrigation well, respectively of the 1,435 samples analyzed for them. Carbaryl, ethyl and methyl parathion, and metribuzin were not detected in Nebraska ground water.

The authors noted that to minimize exposure to pesticides in drinking water, wells should be screened in the deepest portion of the aquifer, constructed with tight seals to guard against surface infiltration, and situated as far as possible from cropped and irrigated fields. Results also indicated that sprinkler irrigation is preferable to gravity irrigation; under gravity irrigation the vertical movement of nitrate is faster at the head of the field. Such preferential percolation also could enhance the vertical movement of atrazine and other pesticides.

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
1,2-D	UNSPECIFIED COUNTIES	Before 1989/1	72	0	0	72	0	0	
	KEYA PAHA	Before 1989/1	1	0	1	1	0	1	0.01
TOTAL DISCRETE WELLS/SAMPLES			73	0	1	73	0	1	0.01
Alachlor[A]	ADAMS	Before 1989/1	58	0	0	58	0	0	
	ANTELOPE	Before 1989/1	39	0	0	39	0	0	
	BLAINE	Before 1989/1	26	0	0	26	0	0	
	BOONE	Before 1989/1	26	0	0	26	0	0	
	BOYD	Before 1989/1	29	0	0	29	0	0	
	BROWN	Before 1989/1	14	0	0	14	0	0	
	BUFFALO	Before 1989/1	67	0	1	67	0	1	≤0.40
	BURT	Before 1989/1	17	0	0	17	0	0	
	BUTLER	Before 1989/1	2	0	0	2	0	0	
	CEDAR	Before 1989/1	22	0	0	22	0	0	
	CHASE	Before 1989/1	35	0	0	35	0	0	
	CHERRY	Before 1989/1	21	0	0	21	0	0	
	CLAY	Before 1989/1	43	0	0	43	0	0	
	COLFAX	Before 1989/1	18	1	0	18	1	0	20.96
	CUMING	Before 1989/1	27	0	0	27	0	0	
	CUSTER	Before 1989/1	35	0	1	35	0	1	≤0.40

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Alachlor)	DAKOTA	Before 1989/1	5	0	0	5	0	0	
	DAWSON	Before 1989/1	93	0	3	93	0	3	≤0.40-0.822
	DIXON	Before 1989/1	9	0	0	9	0	0	
	DODGE	Before 1989/1	31	0	1	31	0	1	≤0.40
	DUNDY	Before 1989/1	21	0	0	21	0	0	
	FILLMORE	Before 1989/1	29	0	0	29	0	0	
	FRANKLIN	Before 1989/1	14	0	0	14	0	0	
	FRONTIER	Before 1989/1	12	0	0	12	0	0	
	FURNAS	Before 1989/1	5	0	0	5	0	0	
	GAGE	Before 1989/1	9	0	0	9	0	0	
	GARFIELD	Before 1989/1	16	0	0	16	0	0	
	GOSPER	Before 1989/1	13	0	0	13	0	0	
	GREELEY	Before 1989/1	14	0	0	14	0	0	
	HALL	Before 1989/1	56	0	1	56	0	1	≤0.40
	HAMILTON	Before 1989/1	62	0	0	62	0	0	
	HARLAN	Before 1989/1	16	0	0	16	0	0	
	HAYES	Before 1989/1	10	0	0	10	0	0	
	HITCHCOCK	Before 1989/1	16	0	0	16	0	0	
	HOLT	Before 1989/1	142	0	0	142	0	0	
	HOOKER	Before 1989/1	9	0	0	9	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Alachlor)	HOWARD	Before 1989/1	18	0	1	18	0	1	≤0.40
	JEFFERSON	Before 1989/1	7	0	0	7	0	0	
	JOHNSON	Before 1989/1	8	0	0	8	0	0	
	KEARNEY	Before 1989/1	27	0	0	27	0	0	
	KEITH	Before 1989/1	1	0	0	1	0	0	
	KEYA PAHA	Before 1989/1	14	0	0	14	0	0	
	KNOX	Before 1989/1	97	0	1	97	0	1	0.95
	LANCASTER	Before 1989/1	64	0	0	64	0	0	
	LINCOLN	Before 1989/1	53	0	0	53	0	0	
	LOGAN	Before 1989/1	20	0	0	20	0	0	
	LOUP	Before 1989/1	16	0	0	16	0	0	
	MADISON	Before 1989/1	31	0	0	31	0	0	
	MCPHERSON	Before 1989/1	25	0	0	25	0	0	
	MERRICK	Before 1989/1	25	0	2	25	0	2	≤0.40
	NANCE	Before 1989/1	4	0	0	4	0	0	
	NEMAHA	Before 1989/1	6	0	0	6	0	0	
	NUCKOLLS	Before 1989/1	22	0	0	22	0	0	
	PAWNEE	Before 1989/1	16	0	0	16	0	0	
	PERKINS	Before 1989/1	31	0	0	31	0	0	
	PHELPS	Before 1989/1	24	0	0	24	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Alachlor)	PIERCE	Before 1989/1	22	0	0	22	0	0	
	PLATTE	Before 1989/1	36	0	0	36	0	0	
	POLK	Before 1989/1	26	0	0	26	0	0	
	RED WILLOW	Before 1989/1	13	0	0	13	0	0	
	RICHARDSON	Before 1989/1	21	0	1	21	0	1	0.02
	ROCK	Before 1989/1	28	0	0	28	0	0	
	SALINE	Before 1989/1	44	0	1	44	0	1	≤0.40
	SAUNDERS	Before 1989/1	1	0	0	1	0	0	
	SCOTTS BLUFF	Before 1989/1	43	0	0	43	0	0	
	SEWARD	Before 1989/1	61	0	0	61	0	0	
	SHERMAN	Before 1989/1	15	0	0	15	0	0	
	STANTON	Before 1989/1	16	0	0	16	0	0	
	THAYER	Before 1989/1	26	0	0	26	0	0	
	THOMAS	Before 1989/1	27	0	0	27	0	0	
	THURSTON	Before 1989/1	5	0	0	5	0	0	
	VALLEY	Before 1989/1	15	0	0	15	0	0	
	WASHINGTON	Before 1989/1	13	0	0	13	0	0	
	WAYNE	Before 1989/1	22	1	0	22	1	0	2.96
	WEBSTER	Before 1989/1	9	0	0	9	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Alachlor)	WHEELER	Before 1989/1	19	0	0	19	0	0	
	YORK	Before 1989/1	37	0	1	37	0	1	0.41-2.00[B]
TOTAL DISCRETE WELLS/SAMPLES			2,069	2	14	2,069	2	14	0.02-20.6
Aldicarb	WHEELER	1985/5-1986/4	15	1	14	111	1	110	1-3
TOTAL DISCRETE WELLS/SAMPLES			15	1	14	111	1	110	1-3
Ametryn	UNSPECIFIED COUNTIES	Before 1989/1	103	0	0	103	0	0	
	YORK	Before 1989/1	1	0	1	1	0	1	0.01
TOTAL DISCRETE WELLS/SAMPLES			104	0	1	104	0	1	0.01
Atrazine[A,B]	ADAMS	1975-1989/1	58	0	5	58	0	5	0.01-0.907
	ANTELOPE	1975-1989/1	39	0	0	39	0	0	
	BLAINE	1975-1989/1	26	0	0	26	0	0	
	BOONE	1975-1989/1	32	0	1	32	0	1	0.01-0.50
	BOX BUTTE	1975-1989/1	10	0	1	10	0	1	0.51-1.00
	BOYD	1975-1989/1	29	0	0	29	0	0	
	BROWN	1975-1989/1	14	0	3	14	0	3	0.01-1.00
	BUFFALO	1975-1989/1	85	5	23	85	5	23	0.01->3.00
	BURT	1975-1989/1	17	0	0	17	0	0	
	BUTLER	1975-1989/1	3	0	1	3	0	1	0.01-0.50
	CEDAR	1975-1989/1	22	0	0	22	0	0	
	CHASE	1975-1989/1	40	0	2	40	0	2	0.01-0.50
	CHERRY	1975-1989/1	21	0	0	21	0	0	
	CHEYENNE	1975-1989/1	12	1	8	12	1	8	0.01->3.00
	CLAY	1975-1989/1	43	0	9	43	0	9	0.01-0.573
	COLFAX	1975-1989/1	22	0	4	22	0	4	0.01-1.00
	CUMING	1975-1989/1	27	0	0	27	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Atrazine)	CUSTER	1975-1989/1	35	0	1	35	0	1	0.01-0.50
	DAKOTA	1975-1989/1	5	0	0	5	0	0	
	DAWSON	1975-1989/1	93	0	16	93	0	16	0.01-3.00
	DIXON	1975-1989/1	9	0	0	9	0	0	
	DODGE	1975-1989/1	35	1	9	35	1	9	0.01->3.00
	DUNDY	1975-1989/1	21	0	1	21	0	1	0.01-0.50
	FILLMORE	1975-1989/1	33	1	9	33	1	9	0.01->3.00
	FRANKLIN	1975-1989/1	14	0	0	14	0	0	
	FRONTIER	1975-1989/1	12	0	1	12	0	1	0.163
	FURNAS	1975-1989/1	5	0	1	5	0	1	0.410
	GAGE	1975-1989/1	9	0	1	9	0	1	1.01-3.00
	GARFIELD	1975-1989/1	28	0	2	28	0	2	0.01-0.50
	GOSPER	1975-1989/1	18	0	0	18	0	0	
	GREELEY	1975-1989/1	14	0	1	14	0	1	0.01-0.50
	HALL	1975-1989/1	67	3	32	67	3	32	0.01->3.00
	HAMILTON	1975-1989/1	62	0	6	62	0	6	0.147-0.718
	HARLAN	1975-1989/1	16	0	2	16	0	2	0.01-0.50
	HAYES	1975-1989/1	14	0	0	14	0	0	
	HITCHCOCK	1975-1989/1	16	0	1	16	0	1	0.01-0.50
	HOLT	1975-1989/1	168	1	17	168	1	17	0.01-22.70
	HOOKER	1975-1989/1	9	0	0	9	0	0	
	HOWARD	1975-1989/1	18	0	1	18	0	1	0.51-1.00
	JEFFERSON	1975-1989/1	7	0	0	7	0	0	
	JOHNSON	1975-1989/1	8	0	2	8	0	2	0.01-0.50
	KEARNEY	1975-1989/1	35	1	5	35	1	5	0.01->3.00
	KEITH	1975-1989/1	1	0	0	1	0	0	
	KEYA PAHA	1975-1989/1	14	0	0	14	0	0	
	KNOX	1975-1989/1	97	0	1	97	0	1	0.36
	LANCASTER	1975-1989/1	64	1	3	64	1	3	0.01->3.00
	LINCOLN	1975-1989/1	53	0	0	53	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Atrazine)	LOGAN	1975-1989/1	20	0	0	20	0	0	
	LOUP	1975-1989/1	16	0	0	16	0	0	
	MADISON	1975-1989/1	31	0	0	31	0	0	
	MCPHERSON	1975-1989/1	25	0	1	25	0	1	0.01-0.50
	MERRICK	1975-1989/1	42	3	25	42	3	25	0.01->3.00
	NANCE	1975-1989/1	4	0	0	4	0	0	
	NEMAHA	1975-1989/1	6	0	1	6	0	1	1.01-3.00
	NUCKOLLS	1975-1989/1	22	4	13	22	4	13	0.01->3.00
	PAWNEE	1975-1989/1	16	0	4	16	0	4	0.01-1.00
	PERKINS	1975-1989/1	31	0	0	31	0	0	
	PHELPS	1975-1989/1	32	1	9	32	1	9	0.01-107.2
	PIERCE	1975-1989/1	22	0	0	22	0	0	
	PLATTE	1975-1989/1	36	0	1	36	0	1	0.01-0.50
	POLK	1975-1989/1	26	0	7	26	0	7	0.13-1.70
	RED WILLOW	1975-1989/1	13	0	0	13	0	0	
	RICHARDSON	1975-1989/1	21	0	8	21	0	8	0.01-1.00
	ROCK	1975-1989/1	28	0	1	28	0	1	0.01-0.50
	SALINE	1975-1989/1	44	0	4	44	0	4	0.01-0.50
	SAUNDERS	1975-1989/1	4	0	3	4	0	3	0.01-0.50
	SCOTTS BLUFF	1975-1989/1	43	0	1	43	0	1	0.819
	SEWARD	1975-1989/1	61	0	8	61	0	8	0.01-1.56
	SHERMAN	1975-1989/1	15	0	0	15	0	0	
	STANTON	1975-1989/1	16	0	1	16	0	1	0.178
	THAYER	1975-1989/1	33	0	8	33	0	8	0.01-0.57
	THOMAS	1975-1989/1	27	0	0	27	0	0	
	THURSTON	1975-1989/1	5	0	0	5	0	0	
	VALLEY	1975-1989/1	15	0	0	15	0	0	
	WASHINGTON	1975-1989/1	13	0	1	13	0	1	0.58
	WAYNE	1975-1989/1	22	0	0	22	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Atrazine)	WEBSTER	1975-1989/1	9	0	2	9	0	2	0.01-3.00
	WHEELER	1975-1989/1	41	0	3	41	0	3	0.01-3.00
	YORK	1975-1989/1	41	0	11	41	0	11	0.01-3.00
TOTAL DISCRETE WELLS/SAMPLES			2,260	22	281	2,260	22	281	0.01-107.2
Butylate	UNSPECIFIED COUNTIES	Before 1989/1	71	0	0	71	0	0	
TOTAL DISCRETE WELLS/SAMPLES			71	0	0	71	0	0	
Carbaryl	BOYD	1987	29	0	0	29	0	0	
	BURT	1987	10	0	0	10	0	0	
	CEDAR	1987	12	0	0	12	0	0	
	COLFAX	1987	12	0	0	12	0	0	
	CUMING	1987	18	0	0	18	0	0	
	DAKOTA	1987	5	0	0	5	0	0	
	DAWSON	1987	38	0	0	38	0	0	
	DIXON	1987	5	0	0	5	0	0	
	DODGE	1987	14	0	0	14	0	0	
	FILLMORE	1987	21	0	0	21	0	0	
	KEYA PAHA	1987	13	0	0	13	0	0	
	KNOX	1987	87	0	0	87	0	0	
	PIERCE	1987	15	0	0	15	0	0	
	POLK	1987	22	0	0	22	0	0	
	SALINE	1987	39	0	0	39	0	0	
	SEWARD	1987	58	0	0	58	0	0	
	STANTON	1987	10	0	0	10	0	0	
	THAYER	1987	23	0	0	23	0	0	
	THURSTON	1987	4	0	0	4	0	0	
	WASHINGTON	1987	13	0	0	13	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Carbaryl)	WAYNE	1987	16	0	0	16	0	0	
	YORK	1987	27	0	0	27	0	0	
TOTAL DISCRETE WELLS/SAMPLES			491	0	0	491	0	0	
Carbofuran	UNSPECIFIED COUNTIES	Before 1989/1	1008	0	0	1008	0	0	
	BOYD	1987	29	0	0	29	0	0	
	BURT	1987	10	0	0	10	0	0	
	CEDAR	1987	12	0	0	12	0	0	
	COLFAX	1987	12	0	0	12	0	0	
	CUMING	1987	18	0	0	18	0	0	
	DAKOTA	1987	5	0	0	5	0	0	
	DAWSON	1987	38	0	0	38	0	0	
	DIXON	1987	5	0	0	5	0	0	
	DODGE	1987	14	0	0	14	0	0	
	FILLMORE	1987	21	0	0	21	0	0	
	KEYA PAHA	1987	13	0	0	13	0	0	
	KNOX	1987	87	0	0	87	0	0	
	PIERCE	1987	15	0	0	15	0	0	
	POLK	1987	22	0	0	22	0	0	
	SALINE	1987	39	0	0	39	0	0	
	SEWARD	1987	58	0	0	58	0	0	
	STANTON	1987	10	0	0	10	0	0	
	THAYER	1987	23	0	0	23	0	0	
	THURSTON	1987	4	0	0	4	0	0	
	WASHINGTON	1987	13	0	0	13	0	0	
	WAYNE	1987	16	0	0	16	0	0	
	YORK	1987	27	0	0	27	0	0	
TOTAL DISCRETE WELLS/SAMPLES			1,499	0	0	1,499	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
Chlorpyrifos	UNSPECIFIED COUNTIES	Before 1989/1	944	0	0	944	0	0	
	BOYD	1987	29	0	0	29	0	0	
	BURT	1987	10	0	0	10	0	0	
	CEDAR	1987	12	0	0	12	0	0	
	COLFAX	1987	12	0	0	12	0	0	
	CUMING	1987	18	0	0	18	0	0	
	DAKOTA	1987	5	0	0	5	0	0	
	DAWSON	1987	38	0	0	38	0	0	
	DIXON	1987	5	0	0	5	0	0	
	DODGE	1987	14	0	0	14	0	0	
	FILLMORE	1987	21	0	0	21	0	0	
	KEYA PAHA	1987	13	0	0	13	0	0	
	KNOX	1987	87	0	0	87	0	0	
	PIERCE	1987	15	0	0	15	0	0	
	POLK	1987	22	0	0	22	0	0	
	SALINE	1987	39	0	0	39	0	0	
	SEWARD	1987	58	0	0	58	0	0	
	STANTON	1987	10	0	0	10	0	0	
	THAYER	1987	23	0	0	23	0	0	
	THURSTON	1987	4	0	0	4	0	0	
	WASHINGTON	1987	13	0	0	13	0	0	
	WAYNE	1987	16	0	0	16	0	0	
	YORK	1987	27	0	0	27	0	0	
TOTAL DISCRETE WELLS/SAMPLES			1,435	0	0	1,435	0	0	
Cyanazine	UNSPECIFIED COUNTIES	Before 1989/1	1082	0	0	1082	0	0	
	BOYD	1987	29	0	0	29	0	0	
	BUFFALO	Before 1989/1	1	0	1	1	0	1	<3.2[8]
	BURT	1987	10	0	0	10	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Cyanazine)	CEDAR	1987	12	0	0	12	0	0	
	COLFAX	1987	12	0	0	12	0	0	
	CUMING	1987	18	0	0	18	0	0	
	DAKOTA	1987	5	0	0	5	0	0	
	DAWSON	1987	38	0	0	38	0	0	
		1985/9	1	1	0	1	1	0	3.2
		Before 1989/1	3	0	3	3	0	3	<3.2[B]
	DIXON	1987	5	0	0	5	0	0	
	DODGE	1987	14	0	0	14	0	0	
	FILLMORE	1987	21	0	0	21	0	0	
		Before 1989/1	1	0	1	1	0	1	<3.2[B]
	KEYA PAHA	1987	13	0	0	13	0	0	
	KNOX	1987	87	0	0	87	0	0	
	HOWARD	Before 1989/1	1	0	1	1	0	1	<3.2[B]
	PIERCE	1987	15	0	0	15	0	0	
	POLK	Before 1989/1	1	0	1	1	0	1	<3.2[B]
		1987	22	0	0	22	0	0	
	SALINE	1987	39	0	0	39	0	0	
	SEWARD	1987	58	0	0	58	0	0	
	STANTON	1987	10	0	0	10	0	0	
	THAYER	1987	23	0	0	23	0	0	
	THURSTON	1987	4	0	0	4	0	0	
	WASHINGTON	1987	13	0	0	13	0	0	
	WAYNE	1987	16	0	0	16	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/ℓ)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Cyanazine)	WHEELER	Before 1989/1	1	0	1	1	0	1	<3.2[B]
	YORK	Before 1989/1	1	0	1	1	0	1	<3.2[B]
		1987	27	0	0	27	0	0	
TOTAL DISCRETE WELLS/SAMPLES			1,583	1	9	1,583	1	9	<3.2-3.2
Diazinon	UNSPECIFIED COUNTIES	Before 1989/1	54	0	0	54	0	0	
TOTAL DISCRETE WELLS/SAMPLES			54	0	0	54	0	0	
Dicamba	UNSPECIFIED COUNTIES	Before 1989/1	36	0	0	36	0	0	
TOTAL DISCRETE WELLS/SAMPLES			36	0	0	36	0	0	
Dieldrin	UNSPECIFIED COUNTIES	Before 1989/1	33	0	0	33	0	0	
	BUFFALO	Before 1989/1	1	0	1	1	0	1	0-0.05[B]
	KEYA PAHA	Before 1989/1	1	0	1	1	0	1	0-0.05[B]
TOTAL DISCRETE WELLS/SAMPLES			35	0	2	35	0	2	0-0.5
EPTC	UNSPECIFIED COUNTIES	Before 1989/1	48	0	0	48	0	0	
TOTAL DISCRETE WELLS/SAMPLES			48	0	0	48	0	0	
Fonofos	UNSPECIFIED COUNTIES	Before 1989/1	943	0	0	943	0	0	
	BOYD	1987	29	0	0	29	0	0	
	BURT	1987	10	0	0	10	0	0	
	CEDAR	1987	12	0	0	12	0	0	
	COLFAX	1987	12	0	0	12	0	0	
	CUMING	1987	18	0	0	18	0	0	
	DAKOTA	1987	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/ℓ)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Fonofos)	DAWSON	1987	38	0	0	38	0	0	
	DIXON	1987	5	0	0	5	0	0	
	DODGE	1987	14	0	0	14	0	0	
	FILLMORE	1987	21	0	0	21	0	0	
	FRANKLIN	Before 1989/1	1	0	1	1	0	1	0.05
	KEYA PAHA	1987	13	0	0	13	0	0	
	KNOX	1987	87	0	0	87	0	0	
	PIERCE	1987	15	0	0	15	0	0	
	POLK	1987	22	0	0	22	0	0	
	SALINE	1987	39	0	0	39	0	0	
	SEWARD	1987	58	0	0	58	0	0	
	STANTON	1987	10	0	0	10	0	0	
	THAYER	1987	23	0	0	23	0	0	
	THURSTON	1987	4	0	0	4	0	0	
	WASHINGTON	1987	13	0	0	13	0	0	
	WAYNE	1987	16	0	0	16	0	0	
	YORK	1987	27	0	0	27	0	0	
TOTAL DISCRETE WELLS/SAMPLES			1,435	0	1	1,435	0	1	0.05
Metolachlor	UNSPECIFIED COUNTIES	Before 1989/1	505	0	0	505	0	0	
	BOYD	1987	29	0	0	29	0	0	
	BURT	1987	10	0	0	10	0	0	
	CEDAR	1987	12	0	0	12	0	0	
	COLFAX	1987	12	0	0	12	0	0	
	CUMING	1987	18	0	0	18	0	0	
	DAKOTA	1987	5	0	0	5	0	0	
	DAWSON	Before 1989/1	1	0	1	1	0	1	0-2.32[B]
		1987	38	0	0	38	0	0	
	DIXON	1987	5	0	0	5	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
	DODGE	1987	14	0	0	14	0	0	
	FILLMORE	Before 1989/1	1	0	1	1	0	1	0-2.32[B]
		1987	21	0	0	21	0	0	
	HOWARD	Before 1989/1	1	0	1	1	0	1	0-2.32[B]
	KEYA PAHA	1987	13	0	0	13	0	0	
	KNOX	1987	87	0	0	87	0	0	
	MERRICK	Before 1989/1	1	0	1	1	0	1	0-2.32[B]
	PIERCE	1987	15	0	0	15	0	0	
	POLK	Before 1989/1	1	0	1	1	0	1	0-2.32[B]
		1987	22	0	0	22	0	0	
	SALINE	1987	39	0	0	39	0	0	
	SEWARD	1987	58	0	0	58	0	0	
	STANTON	1987	10	0	0	10	0	0	
	THAYER	Before 1989/1	1	0	1	1	0	1	0-2.32[B]
		1987	23	0	0	23	0	0	
	THURSTON	1987	4	0	0	4	0	0	
	WASHINGTON	1987	13	0	0	13	0	0	
	WAYNE	1987	16	0	0	16	0	0	
	YORK	1987	27	0	0	27	0	0	
TOTAL DISCRETE WELLS/SAMPLES			1,002	0	6	1,002	0	6	0-2.32
Metribuzin	BOYD	1987	29	0	0	29	0	0	
	BURT	1987	10	0	0	10	0	0	
	CEDAR	1987	12	0	0	12	0	0	
	COLFAX	1987	12	0	0	12	0	0	
	CUMING	1987	18	0	0	18	0	0	
	DAKOTA	1987	5	0	0	5	0	0	
	DAWSON	1987	38	0	0	38	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Metribuzin)	DIXON	1987	5	0	0	5	0	0	
	DODGE	1987	14	0	0	14	0	0	
	FILLMORE	1987	21	0	0	21	0	0	
	KEYA PAHA	1987	13	0	0	13	0	0	
	KNOX	1987	87	0	0	87	0	0	
	PIERCE	1987	15	0	0	15	0	0	
	POLK	1987	22	0	0	22	0	0	
	SALINE	1987	39	0	0	39	0	0	
	SEWARD	1987	58	0	0	58	0	0	
	STANTON	1987	10	0	0	10	0	0	
	THAYER	1987	23	0	0	23	0	0	
	THURSTON	1987	4	0	0	4	0	0	
	WASHINGTON	1987	13	0	0	13	0	0	
	WAYNE	1987	16	0	0	16	0	0	
	YORK	1987	27	0	0	27	0	0	
TOTAL DISCRETE WELLS/SAMPLES			491	0	0	491	0	0	
Parathion, ethyl	BOYD	1987	29	0	0	29	0	0	
	BURT	1987	10	0	0	10	0	0	
	CEDAR	1987	12	0	0	12	0	0	
	COLFAX	1987	12	0	0	12	0	0	
	CUMING	1987	18	0	0	18	0	0	
	DAKOTA	1987	5	0	0	5	0	0	
	DAWSON	1987	38	0	0	38	0	0	
	DIXON	1987	5	0	0	5	0	0	
	DODGE	1987	14	0	0	14	0	0	
	FILLMORE	1987	21	0	0	21	0	0	
	KEYA PAHA	1987	13	0	0	13	0	0	
	KNOX	1987	87	0	0	87	0	0	
	PIERCE	1987	15	0	0	15	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Parathion, ethyl)	POLK	1987	22	0	0	22	0	0	
	SALINE	1987	39	0	0	39	0	0	
	SEWARD	1987	58	0	0	58	0	0	
	STANTON	1987	10	0	0	10	0	0	
	THAYER	1987	23	0	0	23	0	0	
	THURSTON	1987	4	0	0	4	0	0	
	WASHINGTON	1987	13	0	0	13	0	0	
	WAYNE	1987	16	0	0	16	0	0	
	YORK	1987	27	0	0	27	0	0	
TOTAL DISCRETE WELLS/SAMPLES			491	0	0	491	0	0	
Parathion, methyl	BOYD	1987	29	0	0	29	0	0	
	BURT	1987	10	0	0	10	0	0	
	CEDAR	1987	12	0	0	12	0	0	
	COLFAX	1987	12	0	0	12	0	0	
	CUMING	1987	18	0	0	18	0	0	
	DAKOTA	1987	5	0	0	5	0	0	
	DAWSON	1987	38	0	0	38	0	0	
	DIXON	1987	5	0	0	5	0	0	
	DODGE	1987	14	0	0	14	0	0	
	FILLMORE	1987	21	0	0	21	0	0	
	KEYA PAHA	1987	13	0	0	13	0	0	
	KNOX	1987	87	0	0	87	0	0	
	PIERCE	1987	15	0	0	15	0	0	
	POLK	1987	22	0	0	22	0	0	
	SALINE	1987	39	0	0	39	0	0	
	SEWARD	1987	58	0	0	58	0	0	
	STANTON	1987	10	0	0	10	0	0	
	THAYER	1987	23	0	0	23	0	0	
	THURSTON	1987	4	0	0	4	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Parathion, methyl)	WASHINGTON	1987	13	0	0	13	0	0	
	WAYNE	1987	16	0	0	16	0	0	
	YORK	1987	27	0	0	27	0	0	
TOTAL DISCRETE WELLS/SAMPLES			491	0	0	491	0	0	
Pendimethalin	UNSPECIFIED COUNTIES	Before 1989/1	17	0	0	17	0	0	
TOTAL DISCRETE WELLS/SAMPLES			17	0	0	17	0	0	
Phorate	UNSPECIFIED COUNTIES	Before 1989/1	38	0	0	38	0	0	
TOTAL DISCRETE WELLS/SAMPLES			38	0	0	38	0	0	
Propazine	UNSPECIFIED COUNTIES	Before 1989/1	167	0	4	167	0	4	0-0.11
	BUFFALO	Before 1989/1	4	0	4	4	0	4	0-0.11[B]
	KEARNEY	Before 1989/1	1	0	1	1	0	1	
	PHELPS	Before 1989/1	1	0	1	1	0	1	0-0.11[B]
TOTAL DISCRETE WELLS/SAMPLES			173	0	10	173	0	10	0-0.11
Prometon	UNSPECIFIED COUNTIES	Before 1989/1	165	0	0	165	0	0	
	BUFFALO	Before 1989/1	2	0	2	2	0	2	0-0.09
TOTAL DISCRETE WELLS/SAMPLES			167	0	2	167	0	2	0-0.09
Propachlor[A,B]	BOONE	Before 1989/1	1	0	0	1	0	0	
	BUFFALO	Before 1989/1	7	0	1	7	0	1	<1.0
	CUSTER	Before 1989/1	1	0	0	1	0	0	
	DAWSON	Before 1989/1	12	0	0	12	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Propachlor)	DODGE	Before 1989/1	7	0	0	7	0	0	
	GAGE	Before 1989/1	2	0	0	2	0	0	
	GARFIELD	Before 1989/1	4	0	2	4	0	2	<1.0
	GOSPER	Before 1989/1	5	0	4	5	0	4	1.0-3.5
	HALL	Before 1989/1	13	0	4	13	0	4	1.0-3.5
	HAMILTON	Before 1989/1	1	0	0	1	0	0	
	HOLT	Before 1989/1	15	0	0	15	0	0	
	HOWARD	Before 1989/1	1	0	0	1	0	0	
	JOHNSON	Before 1989/1	8	0	0	8	0	0	
	KEARNEY	Before 1989/1	4	0	3	4	0	3	1.0-3.5
	KEYA PAHA	Before 1989/1	1	0	0	1	0	0	
	LANCASTER	Before 1989/1	1	0	0	1	0	0	
	MERRICK	Before 1989/1	4	0	0	4	0	0	
	NEMAHA	Before 1989/1	6	0	0	6	0	0	
	NUCKOLLS	Before 1989/1	8	0	0	8	0	0	
	PAWNEE	Before 1989/1	16	0	0	16	0	0	
	PHELPS	Before 1989/1	3	0	3	3	0	3	1.0-3.5
	POLK	Before 1989/1	1	0	0	1	0	0	
	RICHARDSON	Before 1989/1	21	0	0	21	0	0	
	SALINE	Before 1989/1	1	0	0	1	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Propachlor)	WHEELER	Before 1989/1	2	0	1	2	0	1	1.0-3.5
	YORK	Before 1989/1	1	0	0	1	0	0	
TOTAL DISCRETE WELLS/SAMPLES			146	0	18	146	0	18	<1.0-3.5
Simazine	UNSPECIFIED COUNTIES	Before 1989/1	159	0	0	159	0	0	
	BUFFALO	Before 1989/1	3	0	3	3	0	3	0-0.69[B]
	HALL	Before 1989/1	7	0	7	7	0	7	0-0.69[B]
	KEARNY	Before 1989/1	1	0	1	1	0	1	0-0.69[B]
	KEYA PAHA	Before 1989/1	1	0	0	1	0	1	0-0.69[B]
	WHEELER	Before 1989/1	2	0	2	2	0	2	0-0.69[B]
TOTAL DISCRETE WELLS/SAMPLES			173	0	13	173	0	14	0-0.69[B]
Terbufos	UNSPECIFIED COUNTIES	Before 1989/1	943	0	0	943	0	0	
	BOYD	1987	29	0	0	29	0	0	
	BURT	1987	10	0	0	10	0	0	
	CEDAR	1987	12	0	0	12	0	0	
	COLFAX	1987	12	0	0	12	0	0	
	CUMING	1987	18	0	0	18	0	0	
	DAKOTA	1987	5	0	0	5	0	0	
	DAWSON	1987	38	0	0	38	0	0	
	DIXON	1987	5	0	0	5	0	0	
	DODGE	1987	14	0	0	14	0	0	
	FILLMORE	1987	21	0	0	21	0	0	
	HALL	Before 1989/1	1	0	1	1	0	1	0.02
	KEYA PAHA	1987	13	0	0	13	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Terbufos)	KNOX	1987	87	0	0	87	0	0	
	PIERCE	1987	15	0	0	15	0	0	
	POLK	1987	22	0	0	22	0	0	
	SALINE	1987	39	0	0	39	0	0	
	SEWARD	1987	58	0	0	58	0	0	
	STANTON	1987	10	0	0	10	0	0	
	THAYER	1987	23	0	0	23	0	0	
	THURSTON	1987	4	0	0	4	0	0	
	WASHINGTON	1987	13	0	0	13	0	0	
	WAYNE	1987	16	0	0	16	0	0	
	YORK	1987	27	0	0	27	0	0	
TOTAL DISCRETE WELLS/SAMPLES			1,435	0	1	1,435	0	1	0.02
Trifluralin	UNSPECIFIED COUNTIES	Before 1989/1	948	0	0	948	0	0	
	BOYD	1987	29	0	0	29	0	0	
	BUFFALO	Before 1989/1	1	0	1	1	0	1	0.042
	BURT	1987	10	0	0	10	0	0	
	CEDAR	1987	12	0	0	12	0	0	
	COLFAX	1987	12	0	0	12	0	0	
	CUMING	1987	18	0	0	18	0	0	
	DAKOTA	1987	5	0	0	5	0	0	
	DAWSON	1987	38	0	0	38	0	0	
	DIXON	1987	5	0	0	5	0	0	
	DODGE	1987	14	0	0	14	0	0	
	FILLMORE	1987	21	0	0	21	0	0	
	KEYA PAHA	1987	13	0	0	13	0	0	
	KNOX	1987	87	0	0	87	0	0	
	PIERCE	1987	15	0	0	15	0	0	

PESTICIDE SAMPLING IN THE STATE OF NEBRASKA

PESTICIDE	COUNTY	DATE	WELL RESULTS			SAMPLE RESULTS			RANGE OF CONCEN-TRATIONS (µg/l)
			TOTAL WELLS SAMPLED	# OF POSITIVE WELLS		TOTAL # SAMPLES	# OF POSITIVE SAMPLES		
		YEAR/MONTH		≥ MCL	< MCL		≥ MCL	< MCL	
(Trifluralin)	POLK	1987	22	0	0	22	0	0	
	SALINE	1987	39	0	0	39	0	0	
	SEWARD	1987	58	0	0	58	0	0	
	STANTON	1987	10	0	0	10	0	0	
	THAYER	1987	23	0	0	23	0	0	
	THURSTON	1987	4	0	0	4	0	0	
	WASHINGTON	1987	13	0	0	13	0	0	
	WAYNE	1987	16	0	0	16	0	0	
	YORK	1987	27	0	0	27	0	0	
TOTAL DISCRETE WELLS/SAMPLES			1,440	0	1	1,440	0	1	0.042
GRAND TOTAL DISCRETE WELLS/SAMPLES			2,280	24	319	2,376	24	414	

[A] Data reported from the atlas summary, Occurrence of Pesticides and Nitrate in Nebraska's Ground Water, 1990. One sample per well is reported here because the number of samples was not included in the atlas and was not available from the individual reports. If concentrations for detections were available from the other reports, they were used; otherwise, concentration ranges used in the atlas were reported.

[B] Concentrations in the 1990 report cited above were given as ranges for all samples analyzed. Ranges and/or individual detection results were not given by county.

STATE OF NEBRASKA
WELLS BY COUNTY

COUNTY	TYPES OF WELLS									SOURCE OF CONTAMINATION (NUMBER OF WELLS)		
	DRINKING WATER			MONITORING			OTHER					
	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	NFU*	PS*	UNK*
Adams	58	0	5	0	0	0	0	0	0	3	0	2
Antelope	20	0	0	0	0	0	19	0	0	0	0	0
Blaine	26	0	0	0	0	0	0	0	0	0	0	0
Boone	27	0	0	5	0	1	0	0	0	0	0	1
Box Butte	2	0	0	0	0	0	8	0	1	0	0	1
Boyd	29	0	0	0	0	0	0	0	0	0	0	0
Brown	14	0	3	0	0	0	0	0	0	0	0	3
Buffalo	64	1	6	5	1	4	16	3	15	6	0	24
Burt	12	0	0	0	0	0	5	0	0	0	0	0
Butler	2	0	0	0	0	0	1	0	1	0	0	1
Cedar	12	0	0	0	0	0	10	0	0	0	0	0
Chase	35	0	2	0	0	0	5	0	0	0	0	2
Cherry	21	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	0	12	1	8	0	0	0	0	0	9
Clay	43	0	9	0	0	0	0	0	0	5	0	4
Colfax	12	0	1	0	0	0	10	0	4	1	0	4
Cuming	18	0	0	0	0	0	9	0	0	0	0	0
Custer	35	0	1	0	0	0	0	0	0	1	0	0
Dakota	5	0	0	0	0	0	0	0	0	0	0	0
Dawson	93	0	18	0	0	0	5	1	4	18	0	5
Dixon	5	0	0	0	0	0	4	0	0	0	0	0
Dodge	14	0	0	0	0	0	21	1	9	0	0	10
Dundy	21	0	1	0	0	0	0	0	0	0	0	1
Fillmore	30	0	9	1	1	0	2	0	0	1	0	9
Franklin	14	0	1	0	0	0	0	0	0	1	0	0
Frontier	12	0	1	0	0	0	0	0	0	1	0	0
Furnas	5	0	1	0	0	0	0	0	0	1	0	0
Gage	1	0	0	0	0	0	8	0	1	0	0	1
Garfield	12	0	0	7	0	1	9	0	3	0	0	4
Gosper	8	0	0	0	0	0	10	0	4	0	0	4
Greeley	14	0	1	0	0	0	0	0	0	1	0	0

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STATE OF NEBRASKA
WELLS BY COUNTY

COUNTY	TYPES OF WELLS									SOURCE OF CONTAMINATION (NUMBER OF WELLS)		
	DRINKING WATER			MONITORING			OTHER					
	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	NFU*	PS*	UNK*
Hall	45	2	12	8	0	7	14	1	13	7	0	28
Hamilton	59	0	6	0	0	0	3	0	0	6	0	0
Harlan	16	0	2	0	0	0	0	0	0	0	0	2
Hayes	11	0	0	0	0	0	3	0	0	0	0	0
Hitchcock	16	0	1	0	0	0	0	0	0	0	0	1
Holt	119	1	3	0	0	0	49	0	14	3	1	14
Hooker	9	0	0	0	0	0	0	0	0	0	0	0
Howard	18	0	2	0	0	0	0	0	0	0	0	2
Jefferson	3	0	0	0	0	0	4	0	0	0	0	0
Johnson	6	0	2	0	0	0	2	0	0	0	0	2
Kearney	23	1	0	0	0	0	12	0	5	0	0	6
Keith	1	0	0	0	0	0	0	0	0	0	0	0
Keya Paha	13	0	1	1	0	0	0	0	0	1	0	0
Knox	87	0	1	0	0	0	10	0	0	1	0	0
Lancaster	59	1	2	0	0	0	5	0	1	0	0	4
Lincoln	53	0	0	0	0	0	0	0	0	0	0	0
Logan	20	0	0	0	0	0	0	0	0	0	0	0
Loup	16	0	0	0	0	0	0	0	0	0	0	0
Madison	19	0	0	0	0	0	12	0	0	0	0	0
McPherson	25	0	1	0	0	0	0	0	0	1	0	0
Merrick	24	1	10	0	0	0	18	2	15	8	0	20
Nance	4	0	0	0	0	0	0	0	0	0	0	0
Nemaha	5	0	1	0	0	0	1	0	0	0	0	1
Nuckolls	16	0	11	0	0	0	6	4	2	0	0	17
Pawnee	11	0	3	0	0	0	5	0	1	0	0	4
Perkins	31	0	0	0	0	0	0	0	0	0	0	0
Phelps	22	1	2	0	0	0	10	0	10	2	1	10
Pierce	15	0	0	0	0	0	7	0	0	0	0	0
Platte	34	0	1	0	0	0	2	0	0	0	0	1
Polk	24	0	7	0	0	0	2	0	0	7	0	0
Red Willow	13	0	0	0	0	0	0	0	0	0	0	0

STATE OF NEBRASKA
WELLS BY COUNTY

COUNTY	TYPES OF WELLS									SOURCE OF CONTAMINATION (NUMBER OF WELLS)		
	DRINKING WATER			MONITORING			OTHER					
	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	TOTAL SMPLD	≥ MCL	< MCL	NFU*	PS*	UNK*
Richardson	17	0	6	0	0	0	4	0	2	0	0	8
Rock	18	0	0	0	0	0	10	0	1	0	0	1
Saline	39	0	4	0	0	0	5	0	0	3	0	1
Saunders	0	0	0	0	0	0	4	0	3	0	0	3
Scotts Bluff	43	0	1	0	0	0	0	0	0	1	0	0
Seward	58	0	7	0	0	0	3	0	1	7	0	1
Sherman	15	0	0	0	0	0	0	0	0	0	0	0
Stanton	10	0	1	0	0	0	6	0	0	1	0	0
Thayer	33	0	8	0	0	0	0	0	0	1	0	7
Thomas	27	0	0	0	0	0	0	0	0	0	0	0
Thurston	4	0	0	0	0	0	1	0	0	0	0	0
Valley	15	0	0	0	0	0	0	0	0	0	0	0
Washington	13	0	1	0	0	0	0	0	0	1	0	0
Wayne	17	0	1	0	0	0	5	0	0	1	0	0
Webster	9	0	2	0	0	0	0	0	0	0	0	2
Wheeler	12	0	1	31	1	15	13	0	3	16	0	4
York	35	0	9	0	0	0	6	0	2	6	0	5
TOTAL	1,846	8	168	70	4	36	364	12	115	112	2	229

* NFU=Known or Suspected Normal Field Use
PS =Known or Suspected Point Source
UNK=Unknown

APPENDIX I - PESTICIDE CROSS-REFERENCE TABLE

PESTICIDE CROSS-REFERENCE TABLE

CHEMICAL NAME	REFERENCE	MCL (µg/l)	LHA (µg/l)	PESTICIDE CATEGORY	REGULATORY STATUS
1-Naphthol				Insecticide	C
1,2,4-Trichlorobenzene		9	9	Herbicide	U,C
1,2-D	1,2-Dichloropropane				
1,2-Dichloroethane		5		Fumigant	S
1,2-Dichloropropane		5		Fumigant	C
1,3-D	Dichloropropene				
1,3-Dichloropropene	Dichloropropene				
2-Chloroallyl-diethyldithiocarbamate	CDEC				
2(2,4-Dichlorophenoxy) propionic acid	Dichlorprop				
2(2,4-DP)Diethylamine salt	Dichloroprop				
2,4-D		70		Herbicide	S,SR[Pre]
2,4-DB				Herbicide	S,SR[Pre]
2,4-Dichlorobenzoic acid				Possible degradate or impurity	
2,4-Dichlorophenoxyacetic acid	2,4-D				
2,4-Dinitrophenol				Acaricide insecticide	U,C
2,4-DP	Dichlorprop				
2,4,5-T		70		Herbicide	C,SR[C]
2,4,5-Trichlorophenoxy-acetic acid	2,4,5-T				
2,4,5-TP		50		Herbicide	C,SR[C]
2,4,6-Trichlorophenol	Trichlorophenol				
2,6-diethylaniline	Alachlor			Degradate	
3-Hydroxycarbofuran	Carbofuran			Degradate	
3-Ketocarbofuran & 3-Ketocarbofuran (phenol)	Carbofuran			Degradate	
3,5-Dichlorobenzoic acid	Pronamide			Degradate	
4-Nitrophenol	Parathion, methyl		60	Degradate Fungicide	S
4(2,4-Dichlorophenoxy) butyric acid	2,4-DB				
4(2,4-DB), Butoxyethanol ester	2,4-DB				

PESTICIDE CROSS-REFERENCE TABLE

CHEMICAL NAME	REFERENCE	MCL (µg/l)	LHA (µg/l)	PESTICIDE CATEGORY	REGULATORY STATUS
4(2,4-DB), Dimethylamine salt	2,4-DB				
5-Hydroxy dicamba	Dicamba			Degradate	
Acenaphthene				Insecticide Fungicide	S
Acephate				Insecticide	S
Acifluorfen				Herbicide	S
Acrolein				Fungicide Herbicide Antimicrobial	S,R
Acrylonitrile				Fumigant	C,R,SR[C]
Alachlor		2		Herbicide	S,R,SR[P]
Aldicarb		3	1	Insecticide Acaricide Fungicide Nematicide	S,R,SR[P]
Aldicarb Sulfone	Aldicarb	2	1	Degradate	
Aldicarb Sulfoxide	Aldicarb	4	1	Degradate	
Aldicarb, Total	Aldicarb	3		Parent + degradates	SR[P]
Aldrin				Insecticide	C,SR[C]
Ametryn		60	60	Herbicide	S
Aminocarb				Insecticide	U,C
Amitraz				Insecticide Acaricide	S,R,SR[C]
Amitrole				Herbicide	S,R[P]
Anilazine				Fungicide	S
Arsenic		50			
Arsenates, Arsenites	Arsenic			Insecticide Fungicide Herbicide	C SR[C]
Arsenic acid Arsenicals	Arsenic			Defoliant Insecticide	S,R SR[P]
Atraton	experimental discontinued triazine			Herbicide	C
Atrazine		3		Herbicide	S,R
Atrazine, dealkylated	Atrazine			Degradate	
Azinphos-ethyl				Insecticide	C
Azinphos-methyl				Insecticide	S,R
Banvel	Dicamba				

PESTICIDE CROSS-REFERENCE TABLE

CHEMICAL NAME	REFERENCE	MCL (µg/l)	LHA (µg/l)	PESTICIDE CATEGORY	REGULATORY STATUS
Barban				Herbicide	C
Baygon	Propoxur				
Bendiocarb				Insecticide	S,R
Benefin	Benfluralin			Insecticide Herbicide	S
Benfluralin	Benefin				
Benomyl				Fungicide	S,SR[C]
Bensulide				Herbicide	S
Bentazon		20	20	Herbicide	S
Bentazon, sodium salt	Bentazon			Degradate	
BHC (α,β,δ)				Insecticide	C,SR[C]
BHC (Γ)	Lindane				
Bromacil			90	Herbicide	S
Bromide	Sodium bromide				
Bromoxynil				Herbicide	S
Bufencarb				Insecticide	C
Butachlor				Herbicide	C
Butylate			350	Herbicide	S
Captafol				Fungicide	C
Captan				Fungicide	S,SR[C]
Carbaryl			700	Insecticide	S
Carbendazim				Fungicide	C
Carbofuran		40	40	Insecticide Acaracide Fungicide Nematicide	S,R,SR[C]
Carbofuran phenol	Carbofuran			Degradate	
Carbofuran, total	Carbofuran			Parent + degradates	SR[C]
Carbon disulfide				Fumigant Fungicide	U
Carbon tetrachloride		5		Fire retardant in fumigant formulations	SR[C]
Carbophenothion				Insecticide Acaricide	C
Carbophenothion, methyl				Insecticide Acaricide	U

PESTICIDE CROSS-REFERENCE TABLE

CHEMICAL NAME	REFERENCE	MCL (ig/l)	LHA (ig/l)	PESTICIDE CATEGORY	REGULATORY STATUS
Carboxin			700	Fungicide	S
CDEC				Herbicide	C
Chloramben			100	Herbicide	U,C
Chlordane		2		Insecticide Termiticide	C,SR[C]
Chlordecone				Insecticide	C,SR[C]
Chlordimeform				Insecticide Acaricide Ovacide	C,SR[C]
Chlorfenac				Herbicide	U,C
Chlorfenson				Acaricide	U,C
Chloroallyl alcohol				Insecticide	C
Chlorobenzilate				Insecticide Acaricide	C,SR[C]
p-Chloro-m-cresol				Fungicide Antimicrobial	S
p-Chloro-o-cresol					
Chloroform		100		Fumigant	C,SR[P]
Chloroneb				Fungicide	S
Chloropicrin				Fumigant Warning agent	S,R
Chlorothalonil				Fungicide	S
Chloroxuron					C
Chlorpropham				Herbicide	S
Chlorpyrifos		20		Insecticide	S
Chlorpyrifos, methyl				Insecticide	S
Chlorsulfuron				Herbicide	S
Chlorthal dimethyl	DCPA				
Copper					
Copper salts	Copper			Insecticide Herbicide Antimicrobial Fungicide	some S some U
Copper oxides	Copper			Insecticide Herbicide Fungicide	S
Coumaphos				Insecticide	S
Crufomate				Insecticide	
Cyanazine			1	Herbicide	S,R,SR[C]

PESTICIDE CROSS-REFERENCE TABLE

CHEMICAL NAME	REFERENCE	MCL (µg/l)	LHA (µg/l)	PESTICIDE CATEGORY	REGULATORY STATUS
Cyanide		200	200		
Cyanide, calcium or potassium	Cyanaide			Rodenticide	U
Cyanaide, sodium	Cyanide			Rodenticide	S,R
Cycloate				Herbicide	S
Cypermethrin				Insecticide	S,R
Cyprazine				Herbicide	C
Dacthal	DCPA				
Dacthal diacid	DCPA acid metabolites				
Dalapon		200	200	Herbicide	U,C
DBCP		0.2		Fumigant	C,R,SR[C]
DCBA	2,4-Dichlorobenzoic acid				
DCP	1,2-Dichloropropane				
DCPA			4000	Herbicide	S
DCPA acid metabolites	DCPA			Degradate	
D-D Mix	1,2-Dichloropropane and Dichloropropene				
DDT				Insecticide	C
DDD	DDT			Degradate	SR[C]
DDE	DDT			Degradate	
DDVP	Dichlorvos				
DEF	Tribufos			Insecticide Acaricide	C,R
Demeton				Insecticide Acaricide	C
Demeton-methyl				Insecticide Acaricide	C
Demeton-S				Degradate	
Demeton-S sulfone	Demeton-S			Degradate	
Des-ethyl atrazine	Atrazine			Degradate	
Des-isopropyl atrazine	Atrazine			Herbicide	C,R
Diallate				Herbicide	C,R,SR[C]
Diazinon			0.6	Insecticide Fungicide Nematicide	S,SR[C]
Dibromochloropropane	DBCP				

PESTICIDE CROSS-REFERENCE TABLE

CHEMICAL NAME	REFERENCE	MCL (µg/l)	LHA (µg/l)	PESTICIDE CATEGORY	REGULATORY STATUS
Dibutyl phthalate				Insect repellant	U,C
Dicamba			200	Herbicide	S
Dichlobenil				Herbicide	S
o-Dichlorobenzene		600	600	Antimicrobial	U
p-Dichlorobenzene		75	75	Insecticide Fungicide Rodenticide Antimicrobial	S
Dichloropropane[A]					
Dichloropropene				Nematicide Fumigant	S,R,SR[P]
Dichlorprop				Herbicide	S,SR[Pre]
Dichlorprop, butoxyethanol ester	Dichlorprop				
Dichlorvos				Insecticide	S,SR[P]
Dicofol				Insecticide Acaricide	S,SR[C]
Dicrotophos				Insecticide	S,R
Dieldrin				Insecticide	C,SR[C]
Diethylhexyl phthalate	Dioctyl phthalate				
Dimethoate				Insecticide Acaricide	S,SR[C]
Dinoseb		7	7	Herbicide	C,SR[C]
Dinitrocresol	DNOC				
Dioctyl phthalate				Acaricide	C
Dioxacarb					C
Dioxathion				Insecticide	C,R
Diphenamid			200	Herbicide	C
Diquat		20	20	Herbicide	S
Diquat dibromide and various salts	Diquat				
Disulfoton			0.3	Insecticide Acaricide	S,R
Disulfoton sulfone	Disulfoton			Degradate	
Disulfoton sulfoxide	Disulfoton			Degradate	
Diuron			10	Herbicide	S
DNPA				Fly larvicide	C

PESTICIDE CROSS-REFERENCE TABLE

CHEMICAL NAME	REFERENCE	MCL (µg/l)	LHA (µg/l)	PESTICIDE CATEGORY	REGULATORY STATUS
DNOC				Insecticide Herbicide Fungicide Antimicrobial	U,C
DNOC, sodium salt	DNOC				
EDB	Ethylene dibromide				
EBDC compounds	Maneb, Mancozeb, Zineb				SR[C]
Endosulfan				Fungicide Antimicrobial	S
Endosulfan I	Endosulfan			Isomer	
Endosulfan II	Endosulfan			Isomer	
Endosulfan sulfate	Endosulfan			Degradate	
Endothall		100	100	Herbicide	S
Endrin		2	2	Insecticide	U,C,R,SR[C]
Endrin aldehyde	Endrin			Degradate	
EPN				Insecticide Acaricide	C,R
EPTC				Herbicide	S
Ethalfluralin				Herbicide	S,SR[C]
Ethion				Insecticide Acaricide	S,R
Ethoprop				Insecticide Fungicide Nematicide	S,R
Ethyl alcohol				Disinfectant	S
Ethylan				Insecticide	U,C,SR[C]
Ethylene bisdithiocarbamate compounds	Maneb, Mancozeb, Zineb				
Ethylene dibromide		0.05		Insecticide	C,R,SR[C]
Ethylene dichloride	1,2-Dichloroethane				
Ethylene thiourea	ETU				
Ethyl parathion	Parathion, ethyl				
Etridiazole				Fungicide	S
ETU	Maneb			Degradate	
Fenac	Chlorfenac				
Fenamiphos			2	Insecticide Fungicide Nematicide	S,R

PESTICIDE CROSS-REFERENCE TABLE

CHEMICAL NAME	REFERENCE	MCL (µg/l)	LHA (µg/l)	PESTICIDE CATEGORY	REGULATORY STATUS
Fenamiphos sulfone	Fenamiphos			Degradate	
Fenamiphos sulfoxide	Fenamiphos			Degradate	
Fenarimol				Fungicide	S
Fenbutatin-oxide				Insecticide Acaricide	S
Fensulfothion				Insecticide Fungicide Nematicide	C,R
Fenthion				Insecticide	C
Fenuron				Herbicide	C
Fenvalerate				Insecticide	S,R
Fluazifop-butyl				Herbicide	S
Fluchloralin				Herbicide	S
Flumetralin				Herbicide	S
Fluometuron			90	Herbicide	S
Fluridone				Aquatic herbicide	S
Fonofos			10	Insecticide	S,R
Formaldehyde			1000	Fungicide Antimicrobial	U
Glyphosate		700	700	Herbicide	S
Glyphosate isopropylamine salt	Glyphosate				
Guthion	Azinphos-methyl				
HCH (α,β,δ)	BHC (α,β,δ)				
HCH (Γ)	Lindane				
Heptachlor		0.4		Insecticide	C,SR[C]
Heptachlor epoxide	Heptachlor	0.2		Degradate	
Hexachlorobenzene		1		Seed protectant	
Hexazinone			200	Herbicide	S
Hydroxyalachlor	Alachlor			Degradate	
Iprodione				Fungicide	S
Isobornyl thiocyanoacetate				Insecticide	C
Isofenphos				Insecticide Herbicide	S,R
Isopropalin				Herbicide	C

PESTICIDE CROSS-REFERENCE TABLE

CHEMICAL NAME	REFERENCE	MCL (µg/l)	LHA (µg/l)	PESTICIDE CATEGORY	REGULATORY STATUS
Kepone	Chlordecone				
Lindane		0.2	0.2	Insecticide	S,R,SR[C]
Linuron				Herbicide	S,SR[P]
Malathion			200	Insecticide	S
Malaoxon	Malathion			Degradate	
Mancozeb				Fungicide	S
Maneb				Fungicide	S
MCPA			10	Herbicide	some C, some S
MCPA acids, salts, esters	MCPA				
MCPB				Insecticide	S
MCPB salts, esters	MCPB				
MCPP salts, esters	Mecoprop				
MCPPA	Mecoprop				
Mecoprop				Herbicide	S
Mercury		2	2		SR[C]
Merphos				Fungicide Herbicide	U,C
Metalaxyl				Fungicide	S
Methamidophos				Insecticide Acaricide	S,R
Methazole				Herbicide	S
Methidathion				Insecticide Acaricide	S,R
Methiocarb				Insecticide Acaricide Molluscicide Rodenticide Bird repellant	S,R
Methomyl			200	Insecticide	S,R
Methoxychlor		40	40	Insecticide Acaricide	S
Methyl bromide				Insecticide Antimicrobial	S,R
Methyl carbophenothion	Carbophenothion, methyl				
Methyl isothiocyanate				Insecticide Fungicide Herbicide	S,R
Methyl parathion	Parathion, methyl			Degradate	

PESTICIDE CROSS-REFERENCE TABLE

CHEMICAL NAME	REFERENCE	MCL (µg/l)	LHA (µg/l)	PESTICIDE CATEGORY	REGULATORY STATUS
Methyl parathion	Parathion, methyl				
Methyl trithion	Carbophenothion, methyl				
Methylene chloride				Insecticide	U
Metolachlor			100	Herbicide	S
Metribuzin			200	Insecticide	S
Metribuzin DA	Metribuzin			Degradate	
Metribuzin DADK	Metribuzin			Degradate	
Metribuzin DK	Metribuzin			Degradate	
Mevinphos				Insecticide Acaricide	S,R
Mexacarbate				Insecticide	U,C
Mirex				Insecticide	C,SR[C]
Molinate				Herbicide	S
Molinate sulfoxide	Molinate			Degradate	
Monocrotophos				Insecticide Acaricide	C,R
Monuron				Herbicide	C,SR[C]
Naled				Insecticide Acaricide	S
Naphthalene			20	Insecticide	S
Napropamide				Insecticide	S
Naptalam				Herbicide	S
Neburon				Herbicide	C
Nemagon	DBCP				
Nitrofen				Herbicide	C
p-Nitrophenol	4-Nitrophenol				
Nonachlor	Chlordane			Impurity in formulation	
Norflurazon				Herbicide	S
Octyl bicycloheptene-dicarboximide				Insecticide Fungicide Antimicrobial	S
Ortho-dichlorobenzene	o-Dichlorobenzene				
Oryzalin				Herbicide	S
Ovex	Chlorfenson				

PESTICIDE CROSS-REFERENCE TABLE

CHEMICAL NAME	REFERENCE	MCL (µg/l)	LHA (µg/l)	PESTICIDE CATEGORY	REGULATORY STATUS
Oxamyl		200		Insecticide Acaricide Fungicide Nematicide	S,R
Oxychlordane	Chlordane			Animal metabolite	
Oxydemeton-methyl				Insecticide Acaricide	S,R,SR[P]
Oxydisulfoton				Insecticide Acaricide	C
Oxyfluorfen				Herbicide	S,SR[C]
Para-chlorometacresol	p-Chloro-m-cresol				
para-Dichlorobenzene see p-Dichlorobenzene, listed at dichlorobenzene	p-Chloro-o-cresol				
Paraquat			30	Herbicide	S,R
Paraquat dichloride	Paraquat				
Parathion	Parathion, ethyl				
Parathion, ethyl				Insecticide	S,R,SR[C]
Parathion, methyl		2		Insecticide	S,R
PCNB				Fungicide	S,SR[C]
PCP	Pentachlorophenol				
Pebulate				Insecticide Herbicide	S
Pendimethalin				Herbicide	S
Pentachlorophenol		1		Insecticide Fungicide Antimicrobial	S,R,SR[P]
Permethrin				Insecticide	S,R
Perthane	Ethylan				
Phorate				Insecticide	S,R
Phorate sulfone	Phorate			Degradate	
Phorate sulfoxide	Phorate			Degradate	
Phoratoxon	Phorate			Degradate	
Phoratoxon sulfone	Phorate			Degradate	
Phoratoxon sulfoxide	Phorate			Degradate	
Phosalone				Insecticide Acaricide	U,R
Phosmet				Insecticide	S

PESTICIDE CROSS-REFERENCE TABLE

CHEMICAL NAME	REFERENCE	MCL (µg/l)	LHA (µg/l)	PESTICIDE CATEGORY	REGULATORY STATUS
Phosmet oxygen analog	Phosmet			Degradate	
Phosphamidon				Insecticide	C,R
Picloram		500	500	Herbicide	S,R
Pirimicarb				Aphidicide	C
Pirimicarb sulfone	Pirimicarb			Degradate	
Profenofos				Insecticide	S,R
Profluralin				Herbicide	C
Promecarb				Insecticide	NR (in US)
Prometon			100	Herbicide Antimicrobial	S
Prometryn				Herbicide	S
Pronamide			50	Herbicide	S,R,SR[C]
Propachlor			90	Herbicide	S
Propanil				Herbicide	S
Propargite				Insecticide Acaricide	S
Propazine			10	Herbicide	C
Propham			100	Herbicide	C
Propoxur			3	Insecticide	S,SR[P]
Propyzamide	Pronamide				
Prothiofos	Prothiophos				
Prothiophos				Insecticide	NR
Pyrethrins				Insecticide Fungicide Antimicrobial	U
Pyriclor				Herbicide	C
Ronnel				Insecticide	U,C,SR[C]
Rotenolone	Rotenone			Degradate	
Rotenone				Insecticide Acaricide Piscicide	S
Secbumeton				Herbicide	C
Sethoxydim				Herbicide	S
Siduron				Herbicide	S
Silvex	2,4,5-TP				
Simazine		1	4	Herbicide	S

PESTICIDE CROSS-REFERENCE TABLE

CHEMICAL NAME	REFERENCE	MCL (µg/l)	LHA (µg/l)	PESTICIDE CATEGORY	REGULATORY STATUS
Simetone				Herbicide	NR
Simetryn				Herbicide	NR
Sodium bromide	Bromide			Insecticide Fungicide Herbicide Antimicrobial	S
Sodium cyanide	Cyanide				
Sulprofos				Insecticide	S,R
Swep				Herbicide	C
TCA and salts	Trichloroacetic acid				
TCE	Trichloroethene				
Tebuthiuron			500	Herbicide	S
Telone	Dichloropropene				
Terbacil			90	Herbicide	S
Terbufos			0.9	Insecticide Fungicide Nematicide	S,R
Terbufos sulfone	Terbufos			Degradate	
Terbuthylazine				Herbicide Algaecide	S
Terbutryn				Herbicide	C
Terrazole	Etridiazole				
Tetrachloroethylene		5		Fumigant	C
Tetrachlorvinphos				Insecticide	S
Tetradifon					U,C
Thanite	Isobornyl thiocyanoacetate				
Thiobencarb				Herbicide	S
Thiobencarb sulfoxide				Degradate	
Thiophanate				Fungicide	C
Thiophanate-methyl				Insecticide Fungicide	S,SR[C]
Tordon	Picloram				
Toxaphene		3		Insecticide	U,R,SR[C]
Tralomethrin				Insecticide	S,R
Trans-nonachlor	chlordane			Impurity in formulation	
Triadimefon				Fungicide	S

PESTICIDE CROSS-REFERENCE TABLE

CHEMICAL NAME	REFERENCE	MCL (µg/l)	LHA (µg/l)	PESTICIDE CATEGORY	REGULATORY STATUS
Tribufos				Herbicide	S
Trichlorfon				Insecticide	S
Trichloroacetic acid				Herbicide	U
Trichlorobenzene	1,2,4-Trichlorobenzene				
Trichloroethene					
Trichloroethylene	Trichloroethene	5		Fumigant	C
Trichloronat(e)				Insecticide	C
Trichlorophenol				Fungicide Herbicide Antimicrobial	U,C
Trichlorophon	Trichlorfon				
Triclopyr				Insecticide Herbicide	S
Tricyclazole				Fungicide	NR
Trifluralin			5	Herbicide	S,SR,[C]
Trithion	Carbophenothion				
Tunic	Methazole				
Uracil/Urea				Antimicrobial	U
Vernolate				Herbicide	S
Vorlex	1,2-Dichloropropane, Dichloropropene, Methyl isothiocyanate				
Xylene		10000	10000	Insecticide Fungicide Herbicide Antimicrobial	U
Zineb				Insecticide Fungicide	C
Ziram				Insecticide Fungicide	U

SR^{Pre} Presently in Pre-Special Review

SR^{P} Special Review in progress

SR^{C} Special Review completed

S Supported: The producer(s) of the pesticide has made commitments to conduct the studies and pay the fees required for reregistration, and is meeting those commitments in a timely manner.

PESTICIDE CROSS-REFERENCE TABLE

U Unsupported: The producer(s) of the pesticide has not made or honored a commitment to seek reregistration, conduct the necessary studies, or pay the requisite fees for reregistration of the product.

C Canceled: The active ingredient is no longer contained in any registered pesticide products.

R Restricted Use: The pesticide has been classified as a Restricted Use Pesticide under 40 CFR Part 1, Subpart 1. It is therefore restricted to use by a certified applicator, or by or under the direct supervision of a certified applicator.

A In Hawaii both dichloropropane and 1,2-dichloropropane appear in the data.

APPENDIX II - NATIONAL SURVEY OF PESTICIDES IN DRINKING WATER WELLS

NATIONAL SURVEY OF PESTICIDES IN DRINKING WATER WELLS

At this time the Pesticides in Ground Water Database does not contain data from the National Survey of Pesticides in Drinking Water Wells (NPS). These data have been recently analyzed and published.[3] OPP is currently working on importing the results of the pesticide analyses, so that they will be available when the PGWDB becomes part of the Pesticide Information Network. The following is a short description of the NPS and a summary of findings from the NPS.

The NPS is a joint project of EPA's Office of Drinking Water and Office of Pesticide Programs. This survey is the first national study of pesticides, pesticide degradates and nitrate in drinking water wells. The Survey has two principal objectives: 1) to determine the frequency and concentration of pesticides and nitrate in drinking water wells nationally; and 2) to improve EPA's understanding of how the presence of pesticides and nitrate in drinking water wells is associated with patterns of pesticide use and the vulnerability of ground water to contamination. The focus of the Survey was on the quality of drinking water in wells, rather than on the quality of ground water, surface water or drinking water at the tap. The Survey was designed to yield valuable information on both the frequency and levels of pesticides, pesticide degradates and nitrate in rural domestic (private) and community (public) drinking water wells on a nationwide basis. The Survey was not designed to provide an assessment of pesticide contamination in drinking water wells at the local, county or State level.

More than 1300 wells were sampled, some in each State, for 127 analytes. Nitrate was the most commonly detected analyte in these wells. Based upon the NPS results EPA estimates that nitrate is present at or above the analytical minimum reporting limit of 0.15ug/L in about 52.1% or community wells, and 57% of rural wells nationwide.

The survey detected pesticides and pesticide degradates much less frequently than nitrate. Twelve of the 126 pesticides and degradates were found in the sampled wells. EPA estimates that 10.4% of community wells and 4.2% of rural domestic wells in the United States contain pesticides or pesticide degradates at or above the analytical minimum reporting limit. The two most commonly found pesticides were DCPA acid metabolites (degradate of dimethyl tetrachloroterphthalate) and atrazine. The following is a list of the pesticides found in each type of well.

<u>Community:</u> atrazine, DCPA acid metabolites, dibromochloropropane, dinoseb, hexachlorobenzene, prometon, simazine.

<u>Rural Domestic:</u> alachlor, atrazine, bentazon, DCPA acid metabolites, dibromochloropropane, ethylene dibromide, ethylene thiourea, gamma-HCH (lindane), prometon, simazine.