npic

NATIONAL PESTICIDE INFORMATION CENTER

-2025-

Environmental & Molecular Toxicology

Oregon State University

The National Pesticide Information Center (NPIC) is a service that provides a variety of pesticide and related information to the public and professionals across the United States and its territories. NPIC is a cooperative agreement between Oregon State University and the US Environmental Protection Agency. The 2025 Annual Report covers the period of March 01, 2025 - February 28, 2026.

DISCLAIMER

Material presented in this report is based on information as provided to NPIC by individuals who have contacted NPIC for information or to report a pesticide incident. None of the information reported to NPIC has been verified or substantiated by independent investigation by NPIC staff, laboratory analysis, or any other means. Based on the information provided, NPIC qualifies the information by assigning a consistency index (CI) and a severity index (SI). NPIC makes no claims or guarantees as to the accuracy of the CI, SI, or other information presented in its reports, other than that NPIC has done its best to accurately document and report the information provided to NPIC.

Submitted To:

U.S. Environmental Protection Agency
Office of Pesticide Programs

Submitted By:
Serhan Mermer, Ph.D.
Project Director

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NPIC 2025 Annual Report

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INTRODUCTION / DELIVERING OBJECTIVES

NPIC provides objective, science-based information about pesticides and related topics to enable people to make informed decisions about pesticides and their use. In this, the second year of the project period under cooperative agreement #**X8-84067801**, Oregon State University (OSU) provided information to millions of people by phone, email, social media, live chat, data-sharing, mobile web apps, and/or web content.

NPIC supports the U.S. Environmental Protection Agency's (U.S. EPA) 2022-2026 Strategic Plan Objective 7.1, to "Ensure Chemical and Pesticide Safety" by protecting "the health of families, communities, and ecosystems from the risks posed by pesticides." NPIC also supports the mission of the OSU Extension System, conveying research-based knowledge in a way that is useful for people to improve their lives, their homes, and their communities.

The complete record of NPIC accomplishments for the operational year includes this annual report, four quarterly reports, and a quality assurance report. Quarterly and supplemental reports were submitted to the Project Officer within 30 days of the reporting period's closure.

The 12-month reporting period began on March 01, 2025 and ended February 28, 2026. This period will be referenced as "2025" in this report.

The cooperative agreement between OSU and the U.S. EPA includes seven strategic project objectives. Those objectives are listed below with a summary of measures taken to meet or exceed the goals in our work-plan.

1. Serve as a source of factual, unbiased information for diverse audiences.

- NPIC maintained open hours with multilingual capabilities from 8:00am to 12:00pm Pacific Time, Monday-Friday, excluding holidays, with no closures due to technical or staffing issues. NPIC reduced hotline hours to 3 days per week starting February 1, 2026 in response to staff shortages.
- NPIC responded to calls received during open hours and when inquiries were received via voicemail, email, social media, and/or LiveChat. Occasionally, people may choose to leave a message.

2. Provide information on a wide variety of pesticide-related subjects including, but not limited to, pesticide products, toxicology, environmental chemistry, safety practices, pesticide regulation, enforcement, risk assessment, risk management and communication, environmental effects, clean-up and disposal, understanding the label, recognition and management of pesticide poisonings, and integrated pest management (IPM).

- In order to stay current, NPIC staff members monitored 30 relevant publications and publication indexing services, including federal register notices, affiliated dockets, newsletters, listservs, and selected journals of relevance.
- NPIC exceeded this year's goal of evaluating 1,000 articles, documents, and websites in order to maintain and expand up-to-date, reputable, immediately accessible and optimized information about pesticide science and regulation. This year NPIC evaluated 3,292 relevant articles, documents, and websites.
- NPIC updated six active ingredient (AI) files and created five new AI files. NPIC also added 1,456 new documents to its internal search database.

New AI files

- *Burkholderia rinojensis*
- Isocycloseram
- Trimethylamine
- Vadescana
- Veratrine

Updated AI files

- Atrazine
- Boric acid
- *Pseudomonas chlororaphis*
- Paradichlorobenzene
- Terbacil
- Yeast - Saccharomyce

- NPIC vetted 43 existing AI files, removing old or outdated documents to improve the usability of the AI interface.

DELIVERING OBJECTIVES

2. Provide information on a wide variety of pesticide-related subjects (continued).

- To provide the best referrals when appropriate, NPIC actively verifies/updates local contact lists (i.e., county extension, vector control, manufacturers) on a routine basis. In 2025, NPIC updated 614 contacts for Housing & Urban Development with the addition of tribal contacts, OSHA State Offices, and State Health Agencies/Departments. NPIC began comprehensively verifying/updating Pesticide Manufacturers including removing closed and/or transferred businesses.
- NPIC maintained storage capacity in order to ensure continuous access to NPIC resources by stakeholders, documenting and reporting milestones to inform future efforts for secure, long term data storage and hosting capacity.

3. Support education and outreach efforts by federal, state, tribal, and local governments.

- NPIC collaborated with nine organizations this grant year to provide outreach and expert risk communication instruction to multilingual communities, agricultural communities, pest control communities, educators, regulators, and the public to increase awareness of the NPIC program:
  - NPIC coordinated with EPA Region 10 to develop a resource about safe use practices for bed bug control in English (Web | PDF) and Spanish (Web | PDF).
  - NPIC provided expert consultation to Oregon State Representative Hudson to provide explanatory information on EPA's Cancer Classification schema.
  - NPIC presented "Understanding Pesticide Risks - What Master Gardeners Need to Know" to the Oregon Master Gardener Association's Joy of Gardening Conference in Corvallis, OR.
  - NPIC attended the Rodenticide Task Force meeting to provide expert consultation.
  - NPIC met with tribal regulators at the Tribal Pesticide Programs Council (TPPC) annual meeting.
  - NPIC attended and presented updates at the Oregon Pesticide Symposium in Salem, Oregon.
  - NPIC delivered virtual (3) and in-person (2) trainings about Risk Communication to several organizations. These qualified as continuing education credits for pesticide applicators:
    - Good Earth Pest Control applicators in Corvallis, OR
    - Oregon State University's Pesticide Safety Education Program (OR PSEP)
    - Washington State University's Pesticide Resources and Education Program (WSU PREP)
    - WSU PREP for Spanish speaking applicators in Lynnwood, WA
- NPIC shared 103 noteworthy cases with the Project Officer during the 2025 grant year period.
- NPIC provided six special reports about incidents and inquiries upon request. Reports were provided within 10 business days, unless otherwise negotiated. NPIC fulfilled data requests for:
  - EPA Office of Pesticide Programs (OPP): Human incidents involving diazinon, 2021-present
  - OPP Consumer and Worker Protection Branch: Incidents involving greenhouses or indoor facilities with poor ventilation, 2020-2024
  - OPP Health Effects Division: Human incidents involving glyphosate, 2013-present
  - Oregon State University: Dicamba Drift Incidents, 1995-2025
  - Oregon Department of Agriculture:
    - Pesticides used in lawns surrounding apartment buildings, 2014-present
    - Oregon incidents and associated active ingredients, 2014-present
- NPIC promoted the availability of NPIC inquiry data to attendees of the Tribal Pesticide Programs Council (TPPC) annual meeting and via a quarterly newsletter sent to subscribers.
- NPIC discussed potential trends and data with EPA's Office of Pesticide Programs (OPP) at four Quarterly Coordination Meetings.
- Key personnel from NPIC held a virtual site visit with EPA Headquarters, the EPA Project Officer, and representatives from various OPP divisions on December 9, 2025. Topics of focus during these meetings included:
  - 2024 inquiry highlights and call trends
  - Updates to the new website and LiveChat feature
  - AI impacts for web traffic and page views
- NPIC specialists were polled about trends and discussed 100% of cases flagged as "important and interesting" as a team. Specialists discussed 150 cases during the year.
- NPIC ensured continuous access to NPIC apps by stakeholders, maintaining software applications, tools, and mobile apps. NPIC developed conversion software to translate herbicide property values into web-usable data for an updated version of the Herbicide Properties Tool (HPT). The HPT interface is being tested internally with an anticipated rollout date in 2026.

DELIVERING OBJECTIVES

4. Provide education and outreach to the public and professionals.

- NPIC coordinated and communicated with EPA Office of Pesticide Programs (OPP) frequently throughout the grant period. Additionally, NPIC met with EPA Region 10 to discuss a special collaboration about best practices for controlling bed bugs.
- NPIC created/translated eight new web pages and updated three web pages this year.

New/updated web pages

- Atrazine fact sheet (update)
- *Bacillus thuringiensis* (*Bt*) in Genetically Modified Crops fact sheet
- Battling the Bug: Everyday Tools You Can Use (English | Spanish)
- 1,3-Dichloropropene (1,3-D) fact sheet
- Hoja informativa sobre la naftalina (naphthalene fact sheet)

New/updated web pages

- Hoja informativa sobre el paradiclorobenceno (paradichlorobenzene fact sheet)
- Illegal, Counterfeit, Canceled, and Restricted Pesticides (update)
- Productos pesticidas caseros (Pesticide Home Remedies)
- Seleccionando una compañía de control de plagas (Selecting a Pest Control Company)
- Treated Wood and Wood Preservatives (update)

- NPIC developed five new graphic materials in English and/or Spanish:
  - Pesticides: Buy Only What You Need (video)
  - What are mothballs? infographic (JPG | PDF)
  - ¿Qué son las bolas contra polillas? infographic (JPG | PDF)
  - Why do I have roaches in my home? comic (JPG | PDF)
  - ¿Por qué tengo cucarachas en mi casa? comic (JPG | PDF)
- NPIC developed, updated, and/or translated five fact sheets:
  - Atrazine (update)
  - *Bacillus thuringiensis* (*Bt*) in Genetically Modified Crops
  - 1,3-Dichloropropene (1,3-D)
  - Hoja informativa sobre la naftalina (naphthalene)
  - Hoja informativa sobre el paradiclorobenceno (paradichlorobenzene)
- NPIC posts new items on social media platforms (Facebook, Instagram, and X) promoting safe use practices, IPM, and pesticide label comprehension. In 2025, NPIC uploaded 55 original posts across three platforms (165) averaging 3 per week.
- NPIC reviewed 100% of its web content this grant year. NPIC removed/replaced 377 broken links and added 132 new links. NPIC's website received 2,133,323 page views.
- NPIC shared updates with its subscribers in quarterly newsletters highlighting new NPIC resources, and featuring existing, relevant resources.

5. Provide accurate, unbiased, scientific information in a manner understandable to a lay audience to help people make informed decisions.

- No new pesticide specialists were hired during this period.
- NPIC staff members attended 32 events for continuing education (CE) this year, including 21 webinars, six events hosted by Oregon State University, and five conferences or workshops hosted by other organizations.
- Annually, specialists made timely and appropriate referrals with less than a 3% margin of error. This standard was evaluated as part of annual staff evaluations.

6. Collect and disseminate quality pesticide incident data via a rigorous and well-defined data collection system.

- NPIC tracked certain elements to quantify risk-reduction activities. In conversation with callers, pesticide specialists discussed following the label 1,408 times, ways to minimize exposure 1,075 times, IPM concepts 380 times, and environmental protection (including pollinator protection) 65 times.
- NPIC specialists were able to document demographic information for 97% of human incidents, including age and/or gender. Callers occasionally decline to provide personal information such as age.
- "Incident information" includes details such as symptoms, time to onset of symptoms, and circumstances surrounding reported exposures. Among 861 reported incidents involving humans or animals, NPIC specialists were able to capture the symptom/scenario information in 88% of cases.
- NPIC specialists were able to collect product information for 85% of reported incidents.
- NPIC specialists were able to document the location for 87% of reported pesticide incidents.
- Among the 86 reported incidents involving humans or animals, NPIC specialists were able to capture the exposure route in 80% of cases.
- NPIC used standard operating procedures and rigorous quality control to classify reported signs/ symptoms in terms of severity (severity index) and in terms of their relationship to the reported exposures (consistency index). NPIC assigned a severity index 100% of the time when signs/symptoms were described (466 times). NPIC assigned a consistency index 100% of the time when signs/symptoms were described, and they could be compared to published reports about the active ingredient(s) involved (251 times).
- The QA/QC facilitator led nine training exercises during staff meetings to facilitate consistency in data quality.
- Log Assessment Reviews (LARs) were conducted as part of regularly scheduled annual staff evaluations (see Objective 7: Evaluate staff members), including quantifiable measures of data completeness and coding consistency.
- NPIC compiles summary statistics about inquiries received on a quarterly and annual basis. All quarterly reports were submitted within 30 days of the quarter's closure, along with this annual report, and a quality assurance report.
- NPIC held a virtual site visit with EPA Headquarters and met with the EPA Project Officer and various OPP divisions on December 9, 2025.
- NPIC produced and provided a summary of all incidents involving a known active ingredient (AI) or EPA Regulation Number to the Project Officer as a supplement to each quarterly report.
- NPIC monitored data quality using automated QA protocols and held routine staff development exercises to ensure high standards were met. All incidents, including all cases with symptoms, were manually inspected/verified.

7. Provide exceptional customer service by integrating professionalism, teamwork, integrity, accountability, and a strong commitment to the public, as well as to the professional and medical communities.

- NPIC comprehensively evaluated each staff member this quarter, including quantified measures of data collection skills (see Objective 6), customer service skills, and continuing education measures.
- NPIC retained two highly qualified pesticide specialists.

SUMMARY

Trends in NPIC Data

- During this period, NPIC received 5,574 inquiries.
- About 71% of the total inquiries were addressed over the telephone.
- About 19% of NPIC inquiries in 2025 were incidents. A pesticide incident is defined as: 1) any unintended exposure to humans or animals, 2) an exposure with an adverse effect, 3) a spill, and/or 4) a misapplication. See page 19.
- Two human deaths and 43 animal deaths were reported to NPIC. See pages 32, 34, and 36.
- The following active ingredients were involved in the most incident reports: naphthalene, paradichlorobenzene, boric acid, and imidacloprid. See page 29.
- There were 1,389 entities involved in incidents reported to NPIC during this period, 47% were human, 25% were animals, 15% were natural environmental non-target entities, and 13% were built environment. See page 33.
- Among the 399 humans with known age, 16% were children (ages 4 and under) and 33% were seniors (ages 65 and over). See page 35.
- Questions related to health/risk (1,563) and pest control (868) were most common. See page 24.
- The NPIC website received 2,133,323 page views during this period. There were more than 1.5 million "new" visitors with an average visit duration of approximately 46 seconds. See pages 21 and 22.

Foreign Language Capabilities

Under an agreement with LanguageLine Solutions, NPIC is capable of responding to inquiries in more than 240 languages. Translation services are provided immediately during calls, at no cost to NPIC customers, and language identification is available through this service. NPIC retained one bilingual Specialist with Spanish fluency during 2025. Most Spanish language inquiries were handled with in-house translation.

NPIC responded to 55 inquiries in languages other than English, including Spanish (47), Polish (2), French (1), German (1), Hindi (1), Mandarin (1), Russian (1), and Tagalog (1).

Noteworthy Inquiries

Bed Bugs – NPIC received 237 inquiries related to bed bugs this year. About 6% of these (13) were pesticide incidents. Many of these inquiries were related to the difficulty of pest control and the potential health effects of pesticides.

Bees – NPIC received 77 questions about bees or reports of bee deaths. The majority of bee calls were informational only (88%). NPIC Specialists have experience discussing pollinator protection, including ways to prevent pesticide exposure for beneficial insects and how to compare pesticide products for bee toxicity. NPIC immediately notifies the EPA Project Officer when bee deaths are reported.

Mothball Products – NPIC received 221 inquiries about mothballs, flakes, and bars. Of these, 122 (55%) were incidents. Many reports involved off-label use of mothballs to repel animals or insects in and around the home.

Resources & Facilities

NPIC maintains an extensive collection of hard copy and electronic information. NPIC specialists have access to the full resources of OSU's Valley Library, which includes electronic access to thousands of academic journals, databases, and indexing services. NPIC's library includes a comprehensive Active Ingredient (AI) file collection with detailed scientific and regulatory information for more than 1,180 active ingredients. This collection has been scanned, saved, and indexed for desktop access using software developed by NPIC.

Funding & Compliance

Funding for NPIC is provided by the U.S. Environmental Protection Agency and Oregon State University.

Throughout the reporting period, NPIC has complied with the requirements of the U.S. EPA regarding Title VI of the Civil Rights Act of 1964 and Section 13 of the FWPCA Amendments of 1972. NPIC has complied with the U.S. EPA Guidelines regarding procurement requirements stipulated in 40 CFR Part 33. NPIC has complied with all requirements specified by the U.S. EPA as part of the funding authorization of this project.

Personnel Update

The NPIC Executive Committee includes the director and one co-investigator. As of February 28, 2026, due to budget constraints, NPIC staff included two Pesticide Specialists, two supporting staff members, the Project Coordinator, and the Executive Committee.

Standard Operating Procedures (SOPs)

NPIC staff use a variety of SOPs and policies to guide their work and decision making. This year, three SOPs were significantly updated.

Environmental & Molecular Toxicology

Oregon State University

ABOUT US

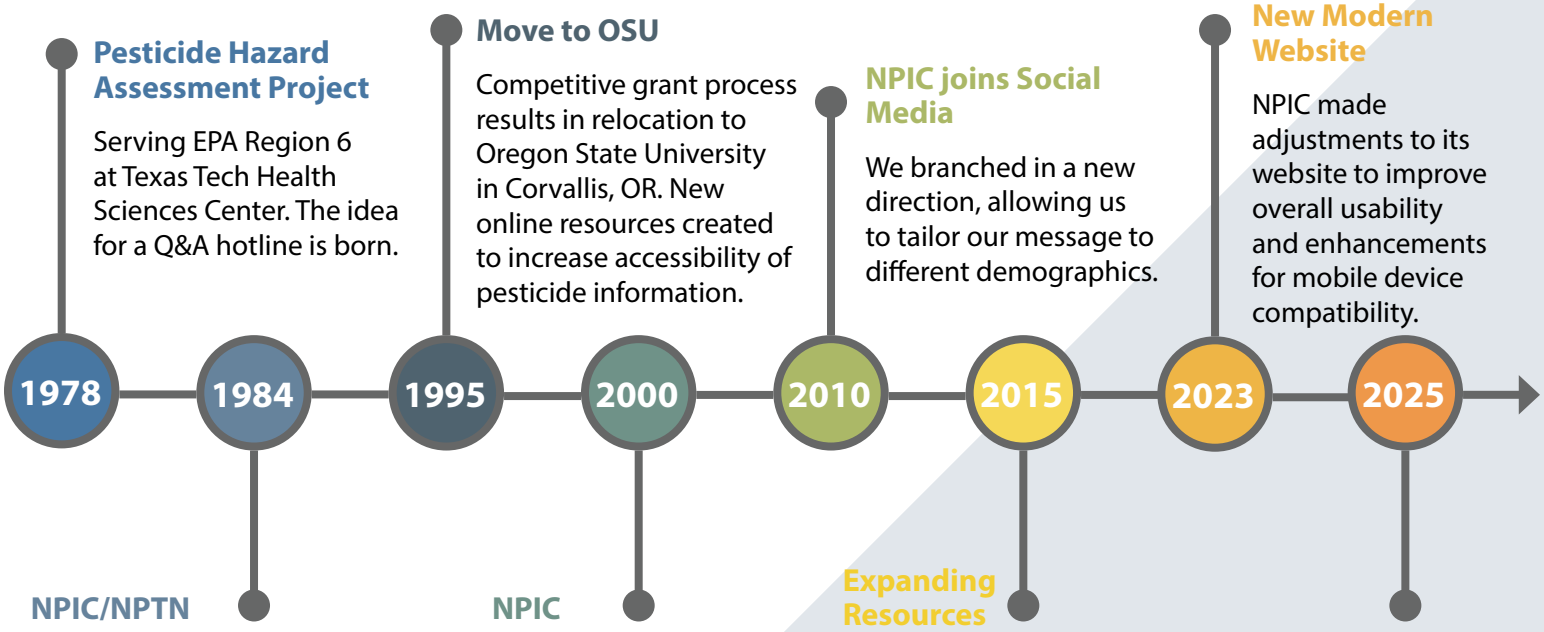
Who is NPIC?

NPIC is a team of well-trained, approachable scientists and talented support staff. We have the knowledge and skill needed to effectively communicate scienfic information to anyone who contacts us. If we can't directly answer the question, we'll try to figure out who most likely can.

Our number one goal is to provide objective, science-based information about pesticides and related topics to enable people to make informed decisions about pesticides and their use.

We reliably create accessible, up-to-date, factual materials to communicate complex pesticide information to both the public and professionals.

NPIC: A History



WEBSITE APPS

Website

The NPIC website, available in both English and Spanish, is the culmination of years of work from every member on our team. We conducted website usability testing to help us better understand how people find information on our site which will guide future updates.

Working from user suggestions gathered from web usability testing, NPIC updated the look and feel of its website to improve overall usability and enhancements for mobile device compatibility.

Web Apps

We've developed web apps for the public and professionals. Available on any browser, apps are mobile- and desktop-compatible for easy access wherever you might be. Because they are web-based, you always get the most up-to-date information. Apps range from NPIC's Product Research Online (NPRO) for product information to our Herbicide Properties Tool. This tool helps people select low-impact herbicides for targeted plant irradiation in the field.

In 2025, NPIC created or significantly updated 11 web pages in English and Spanish. Selected examples are listed below.

Web Topics

- Human/animal health and safety
- Environmental protection
- Food safety
- Integrated Pest Management
- How to report pesticide incidents
- Safe use practices
- Local pesticide-related contacts

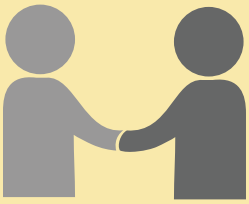
Web Pages

- Battling the Bug: Everyday Tools You Can Use (English & Spanish)
- Illegal, Counterfeit, Canceled, and Restricted Pesticides
- Pesticide Home Remedies (Spanish)
- Selecting a Pest Control Company (Spanish)
- Treated Wood and Wood Preservatives

Fact Sheets

- *Bacillus thuringiensis* (*Bt*) in Genetically Modified Crops
- 1,3-Dichloropropene (1,3-D)
- Naphthalene (Spanish)
- Paradichlorobenzene (Spanish)

COLLABORATIONS : OUTREACH



NPIC teams up with national, state, and local groups to increase awareness about pesticide health and safety across the nation. In 2025, NPIC promoted the availability of NPIC inquiry data to attendees of the Tribal Pesticide Programs Council (TPPC) annual meeting and via a quarterly newsletter.

Partnering with NPIC

NPIC partners with several organizations to raise awareness about pesticide safe use practices. Our outreach materials focus on topics for the public and professionals. This year, NPIC partnered with EPA Region 10 to promote safe use practices for bed bug control through an ad campaign.

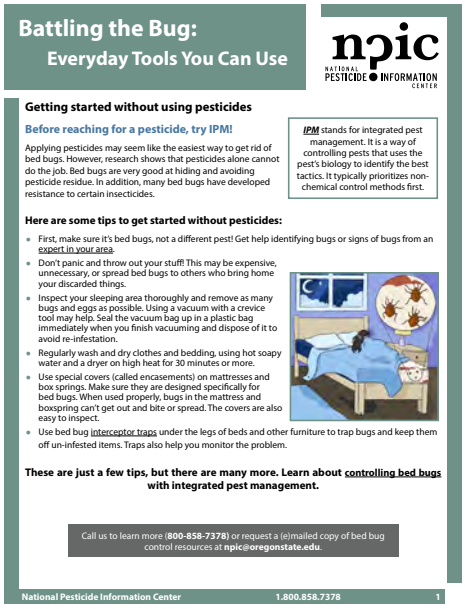
Battling Bed Bugs:

Everyday Tools You Can Use

- The ad was clicked approximately 25,500 times.
- The landing page was viewed more than any other NPIC page during that time.
- Bed bug inquiries to NPIC were more than double the amount received over the same period in 2024.

The campaign generated significant web traffic and doubled bed bug inquiries to NPIC.

On nearly all days of the ad campaign, the new bed bug landing page outperformed all other NPIC webpages.



Battling the Bug:
Everyday Tools You Can Use

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Getting started without using pesticides

Before reaching for a pesticide, try IPM!

Applying pesticides may seem like the easiest way to get rid of bed bugs. However, research shows that pesticides alone cannot do the job. Bed bugs are very good at hiding and avoiding pesticide residue. In addition, many bed bugs have developed resistance to certain insecticides.

IPM stands for integrated pest management. It is a way of controlling pests that uses the pest's biology to identify the best tactics. It typically prioritizes non-chemical control methods first.

Here are some tips to get started without pesticides:

- First, make sure it's bed bugs, not a different pest! Get help identifying bugs or signs of bugs from an expert in your area.
- Don't panic and throw out your stuff! This may be expensive, unnecessary, or spread bed bugs to others who bring home your discarded things.
- Inspect your sleeping area thoroughly and remove as many bugs and eggs as possible. Using a vacuum with a crevice tool may help. Seal the vacuum bag up in a plastic bag immediately when you finish vacuuming and dispose of it to avoid re-infestation.
- Regularly wash and dry clothes and bedding, using hot soapy water and a dryer on high heat for 30 minutes or more.
- Use special covers (called encasements) on mattresses and box springs. Make sure they are designed specifically for bed bugs. When used properly, bugs in the mattress and boxspring can't get out and bite or spread. The covers are also easy to inspect.
- Use bed bug interceptor traps under the legs of beds and other furniture to trap bugs and keep them off un-infested items. Traps also help you monitor the problem.

These are just a few tips, but there are many more. Learn about controlling bed bugs with integrated pest management.

Call us to learn more (**800-858-7378**) or request a (e)mailed copy of bed bug control resources at **npic@oregonstate.edu**.

National Pesticide Information Center 1.800.858.7378 1

NPIC Presentations

NPIC has more than 25 years of experience engaging the public in science-based conversations. We're excited to share our pesticide and science communication expertise at public and professional events.

6 Speaking events in 2025, some examples include:

Outreach to Master Gardners

Understanding Pesticide Risks - What Master Gardeners Need to Know

Invited Speaking Event

Good Earth Pest Control

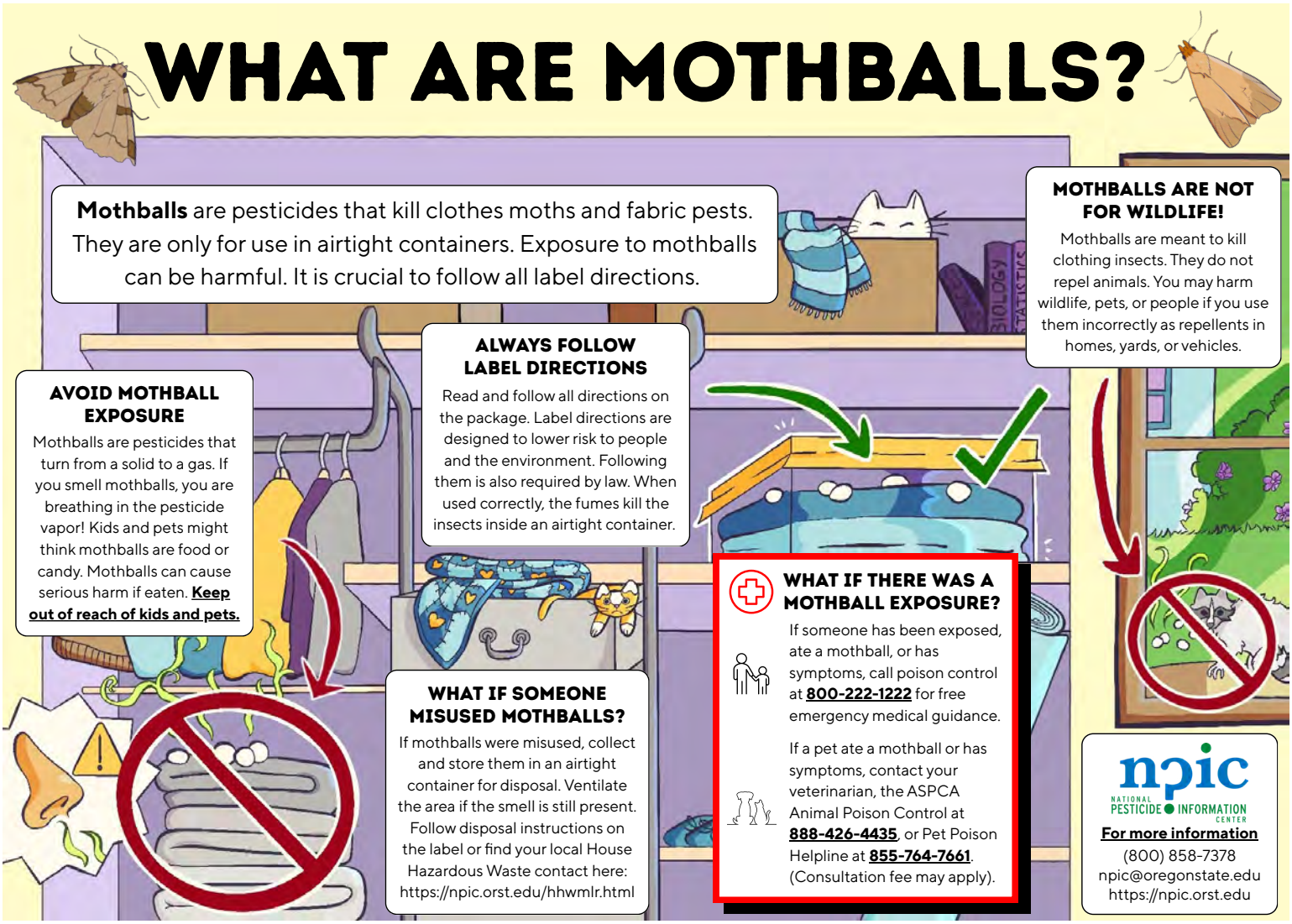
Three Training Courses

Pesticide Education Programs (PREP and PSEP)

GRAPHIC MATERIALS

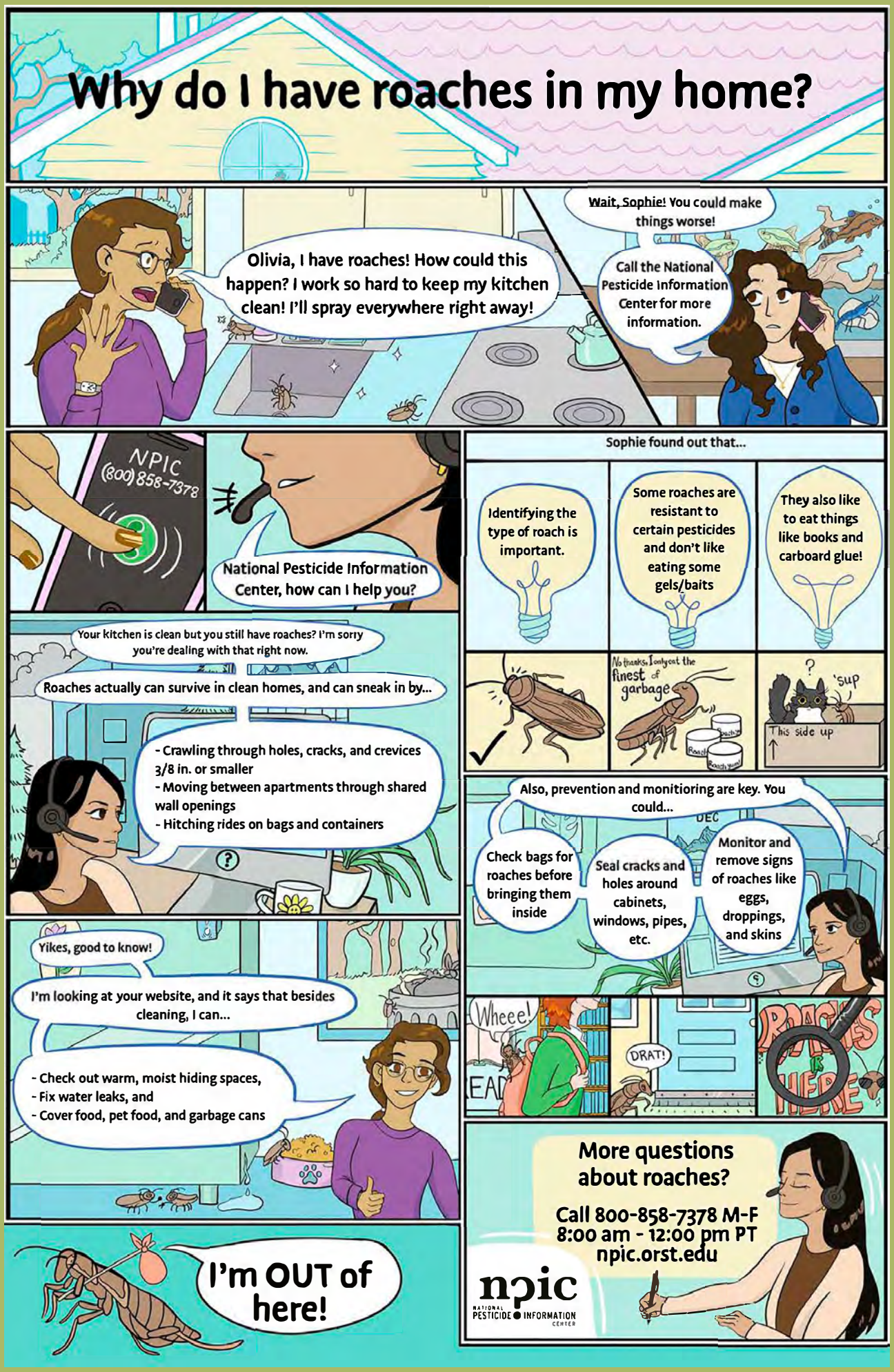
Graphic materials

We concentrated our efforts on visual projects in 2025, including infographics, comics, and videos. Easy to follow, these colorful graphics are perfect for printing or sharing for outreach opportunities.



In 2025, we introduced two new Spanish materials

- **¿Qué son las bolas contra polillas? infographic (What are mothballs?)**
- **¿Por qué tengo cucarachas en mi casa? comic (Why do I have roaches in my home?)**


Why do I have roaches in my home?
Olivia, I have roaches! How could this happen? I work so hard to keep my kitchen clean! I'll spray everywhere right away!
Wait, Sophie! You could make things worse!
Call the National Pesticide Information Center for more information.
NPIC (800) 858-7378
National Pesticide Information Center, how can I help you?
Sophie found out that...
Identifying the type of roach is important.
Some roaches are resistant to certain pesticides and don't like eating some gels/baits
They also like to eat things like books and carboard glue!
No thanks, I only eat the finest of garbage
?
'sup
This side up
Your kitchen is clean but you still have roaches? I'm sorry you're dealing with that right now.
Roaches actually can survive in clean homes, and can sneak in by...
- Crawling through holes, cracks, and crevices 3/8 in. or smaller
- Moving between apartments through shared wall openings
- Hitching rides on bags and containers
Also, prevention and monitioring are key. You could...
Check bags for roaches before bringing them inside
Seal cracks and holes around cabinets, windows, pipes, etc.
Monitor and remove signs of roaches like eggs, droppings, and skins
Yikes, good to know!
I'm looking at your website, and it says that besides cleaning, I can...
- Check out warm, moist hiding spaces,
- Fix water leaks, and
- Cover food, pet food, and garbage cans
Wheee!
DRAT!
ROACHES HERE
I'm OUT of here!
More questions about roaches?
Call 800-858-7378 M-F 8:00 am - 12:00 pm PT
npic.orst.edu
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FACT SHEETS | SOCIAL MEDIA

Fact Sheets

As part of our mission to encourage informed decision making, NPIC publishes scientific information in the form of fact sheets. These summarize information about pesticides and related topics.

Our pesticide chemical (active ingredient) fact sheets answer common questions asked by the public about specific pesticides. They allow people to "dig deeper" for answers.

In 2025, NPIC created/updated five fact sheets:

- Atrazine
- *Bacillus thuringiensis* (*Bt*) in Genetically Modified Crops
- 1,3-Dichloropropene (1,3-D)
- Hoja informativa sobre la naftalina
- Hoja informativa sobre el paradiclorobenceno

Social Media

At NPIC, we understand that we have to meet people on familiar ground. By staying active on various social media platforms, NPIC can further expand our reach to make science-based pesticide information available.

We try to keep our followers in the loop about seasonal pest and pesticide issues, health and safety topics, along with the latest resources from NPIC and other reputable organizations.

165 posts this year

CONTINUING ED | AI FILES

Continuing Education

Our Pesticide Specialists and staff make it a priority to keep up with current events, regulatory decisions, and relevant findings in science research. Each year, we devote significant time to NPIC's Continuing Education program.

We attend a diverse array of educational events, including webinars, regional professional conferences, expert speaker seminars, and guest lectures. Specialists also regularly monitor scientific journals, daily news articles, social media, and other relevant publications.

In 2025

21 web-based events

webinars | recorded events

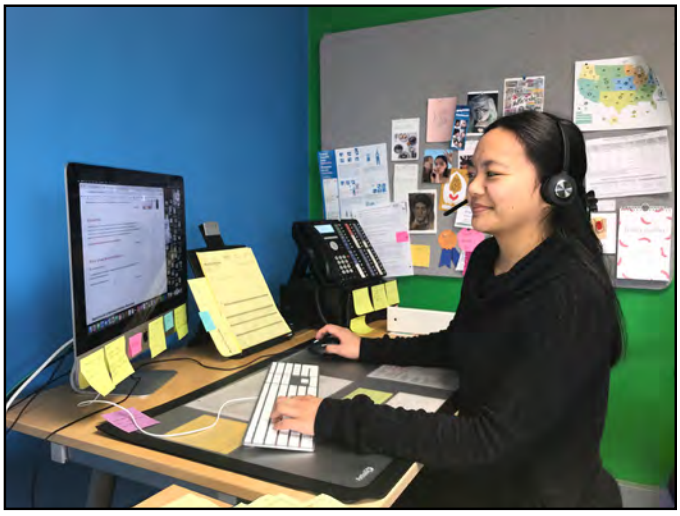
in-person events 11

seminars | invited speakers

Active Ingredient Files

We answer questions as we get them, with limited time for research. To do this, our team needs to have the best resources at our fingertips. We continually monitor and evaluate a wide variety of peer-reviewed sources for the latest research on toxicology, regulatory information, ecological impacts, and pest management science.

1,456 new documents added in 2025



Documents are uploaded in our searchable collection of Active Ingredient (AI) files for quick reference. The collection now includes more than 22,000 documents in 1,183 AI files and 11 scanned books referencing toxicological data, mode of action, symptomology, and more. All of these documents are available for Specialists during conversations with the public and professionals.

We invested many hours per week monitoring Federal Register Notices, affiliated dockets, newsletters, and selected journals of relevance.

NPIC DATA STAFF

NPIC's Pesticide Inquiry Database (PID)

When our Specialists get questions over the phone, email, chat, social media, or other methods, we collect certain pieces of information about the inquiry. We don't collect personally identifiable information, but we do ask questions to paint a better picture of each unique situation. This helps us tailor our resources to each person, making the conversation valuable to individuals, and our data valuable to other organizations, including:

- Pesticide Regulators and Policy Makers
  - EPA
  - Federal
  - State
  - Tribal
- Researchers
- Universities

5,574 inquiries

2025 Inquiry Types

4,339 informational
1,082 pesticide incidents
69% with known active ingredient
153 other (not pesticide related)

Staff Training & Experience

Our team of highly qualified Pesticide Specialists have nearly 30 years of combined experience answering questions at NPIC.

Thanks to our rigorous training program, people can be confident they are speaking with an experienced Specialist. The training process exposes new team members to a variety of topics, scenarios, and challenges.

During training, we take an "all hands on deck" approach, where every team member is invested in training new Specialists.

Our Pesticide Specialists have unique scientific backgrounds, from pollinator health to toxicology, soil, and environmental science. This scientific diversity strengthens our ability to answer diverse questions about pesticides and related topics.

ecology and evolutionary biology
chemistry biology public health
environmental and occupational health
toxicology environmental science
entomology

PESTICIDE INQUIRY DATA

The following pages include details about the incidents and inquiries documented by NPIC from March 01, 2025 to February 28, 2026.

Disclaimers and Explanatory Information:

- Material presented in this report is based on information provided to NPIC by individuals who contacted NPIC, primarily by phone or email.
- None of the information has been verified or substantiated through independent investigation by NPIC staff, laboratory analyses, or by any other means. This is similar to other self-reported public-health-monitoring programs, including the incident data recorded by poison control centers.
- If a person alleges/reports a pesticide incident, it will likely be recorded as an incident by NPIC. To meet the criteria, the person must have sufficient knowledge about the scenario, and it must be reported within two years of its occurrence.
- NPIC defines an incident in terms of public health. The NPIC definition includes any unintended exposure (e.g., child ate a mothball), intended exposures with adverse effects (e.g., illness in pets treated with flea/tick products), spills, and potential misapplications (e.g., a product intended for ornamental plants was applied to vegetables in the home garden).
- About 6% of the time, callers' main purpose for contacting NPIC was to report a pesticide incident. More often, they contacted NPIC to obtain technical information. See page 24. Regardless, NPIC specialists make every effort to collect complete information about scenarios that meet the NPIC incident definition. Approximately 20% of inquiries to NPIC are coded as incidents.
- NPIC specialists are trained to recognize scenarios that could potentially lead to enforcement actions. In these cases, the standard operating procedure requires providing the inquirer a referral to the appropriate State Pesticide Regulatory Agency. See page 25.
- NPIC qualifies the information received by assigning a consistency index (CI). The CI is an estimate by NPIC as to the likelihood that the reported signs and symptoms were consistent or inconsistent with published reports/materials for the identified active ingredients, in the context of the reported pesticide exposure. See page 31.
- NPIC makes no claims or guarantees as to the accuracy of the CI or other information presented in its reports, other than that NPIC has done its best to accurately document the information provided to NPIC.
- It is occasionally necessary to collect personally identifiable information (PII) in order to respond to inquiries, for example, by voicemail, email, or mail. In all other cases, it is NPIC policy to refrain from collecting/documenting PII from people who contact NPIC through public channels.
- Through its cooperative agreement with EPA, NPIC provides special reports upon request. Special reports may also be provided to other cooperative agreement holders with EPA, such as state-level agriculture and environmental protection agencies. Other entities with interest in special reports should contact NPIC to inquire about the procedure and possible costs.

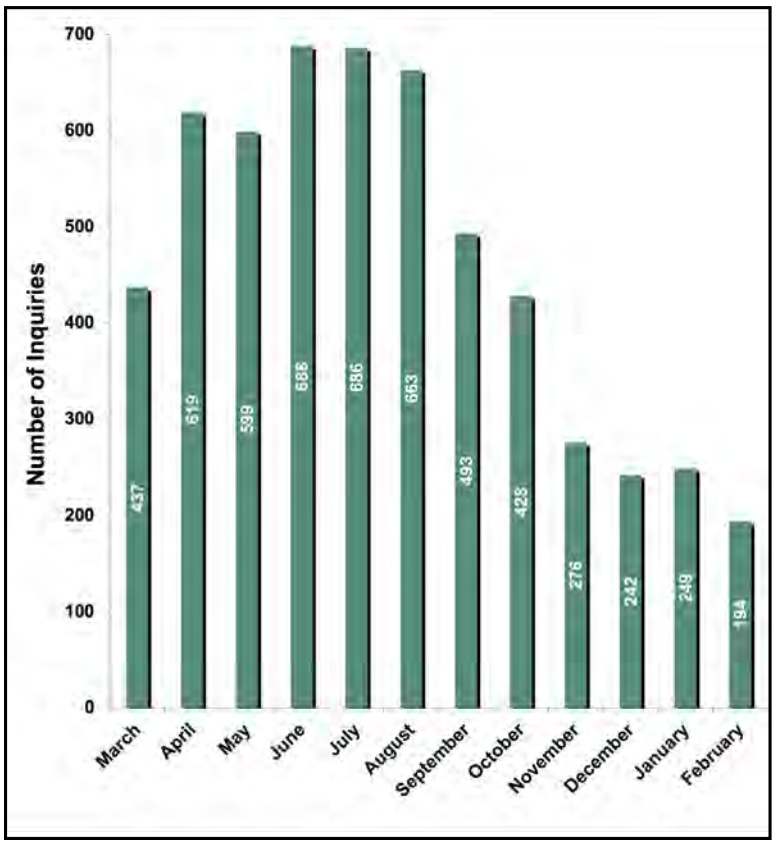
1. Monthly Inquiries

NPIC received 5,574 inquiries during this grant year. Graph 1 shows the number of inquiries received for each month. Seventy-five percent (75%) of the inquiries were received between April and October, concurrent with the part of the year when pest pressures are highest.

Table 1. Monthly inquiries

Month	Total
March 2025	437
April	619
May	599
June	688
July	686
August	663
September	493
October	428
November	276
December	242
January	249
February 2026	194

Graph 1. Monthly inquiries



2. Type of Inquiry

NPIC classifies inquiries as information, incident, or other (not pesticide related) inquiries. A pesticide spill, misapplication, contamination of a non-target entity, or any purported exposure to a pesticide, regardless of injury, is classified as an incident.

The types of inquiries are summarized in Table 2 and Chart 2.

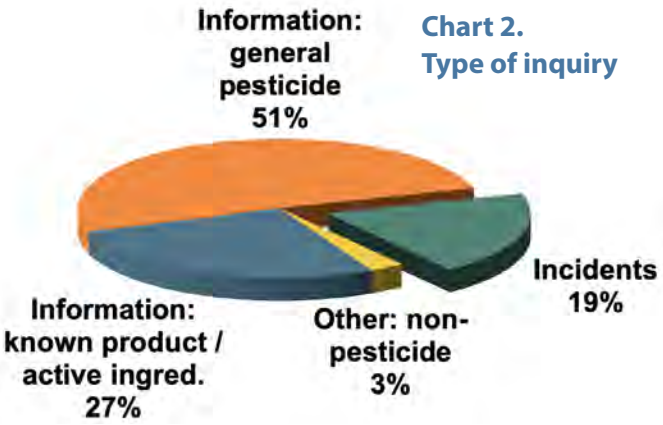
The majority of inquiries (4,339 or 78%) were informational inquiries about pesticides or related topics. NPIC responded to 2,825 (51%) information inquiries about pesticides in general. NPIC responded to 1,514 (27%) information inquiries relating to specific pesticides or active ingredients.

NPIC documented 1,082 incidents involving pesticides (19%). Pesticide specialists routinely provided requested information, evaluated the need for any referrals, and asked several scoping questions to document the circumstances surrounding the reported incidents.

Table 2. Type of inquiry

Type of Inquiry	Total
Information - general pesticide	2825
Information - known product/AI	1514
Incidents	1082
Other (nonpesticide)	153
Total =	5574

Chart 2. Type of inquiry



3. Origin of Inquiry

Table 3 summarizes the origin of inquiries received by NPIC. In 2025, NPIC introduced a new method of inquiry response using LiveChat software. About 70% of inquiries were received by phone/voicemail and 21% were received via LiveChat.

Table 3. Origin of inquiry

Origin of Inquiry	Total
Phone	3282
LiveChat	1134
Voicemail	650
Email/Social Media	507
Mail	1
Total =	5574

4. Website Access

The NPIC website attracted more than 1.5 million "new" visitors viewing 2,133,323 pages during this period. The average visit duration was approximately 46 seconds.

Most page views originated from queries on popular search sites (77%). Others were connected with NPIC from a bookmark (21%) or direct link (i.e., shared via email).

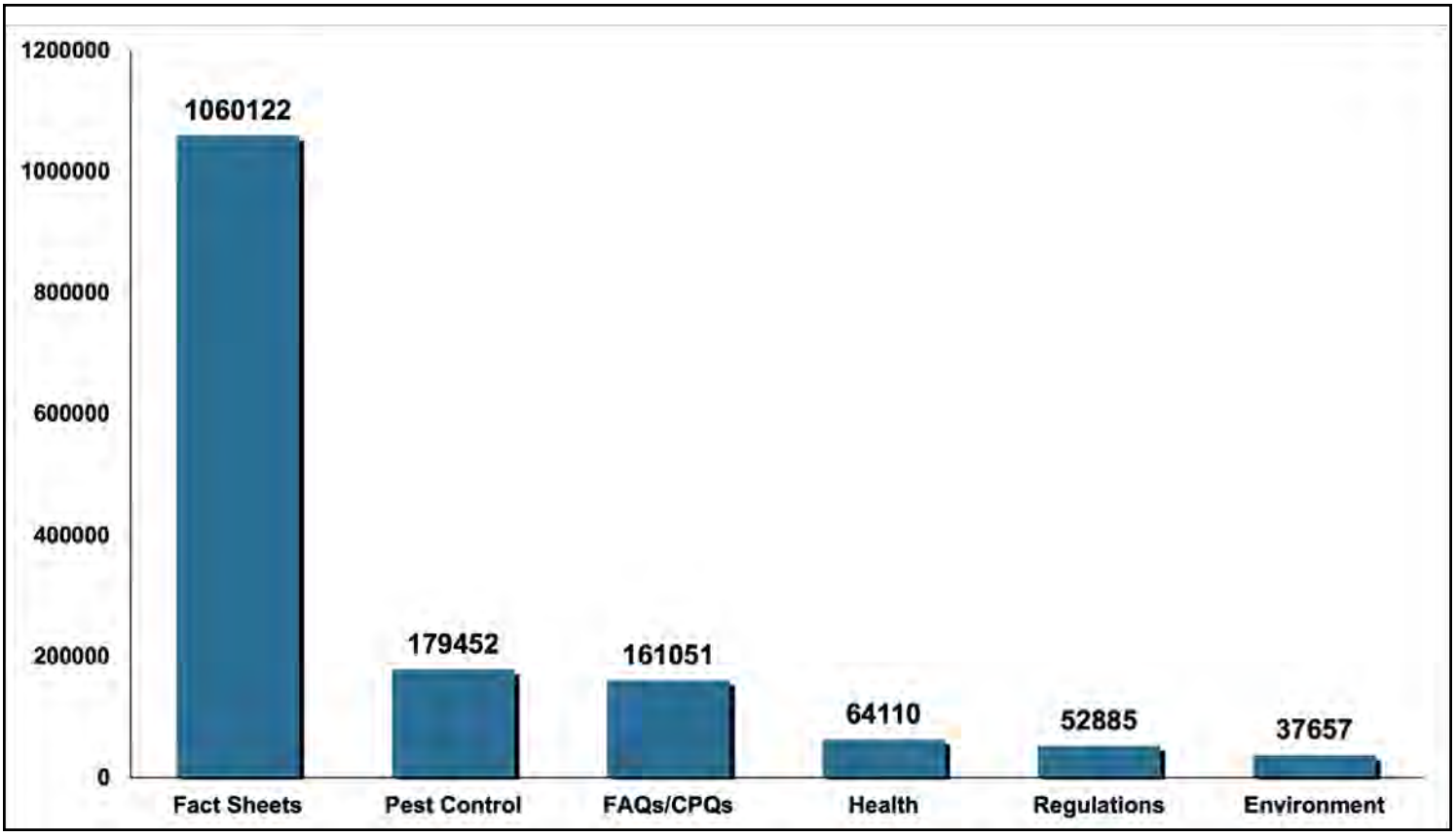
The most popular pages viewed were:

- Diatomaceous Earth Fact Sheet (133,053)
- Neem Oil Fact Sheet (89,147)
- NPIC homepage (65,525)
- Why do I have cockroaches in my home? (58,321)
- Glyphosate Fact Sheet (50,968)

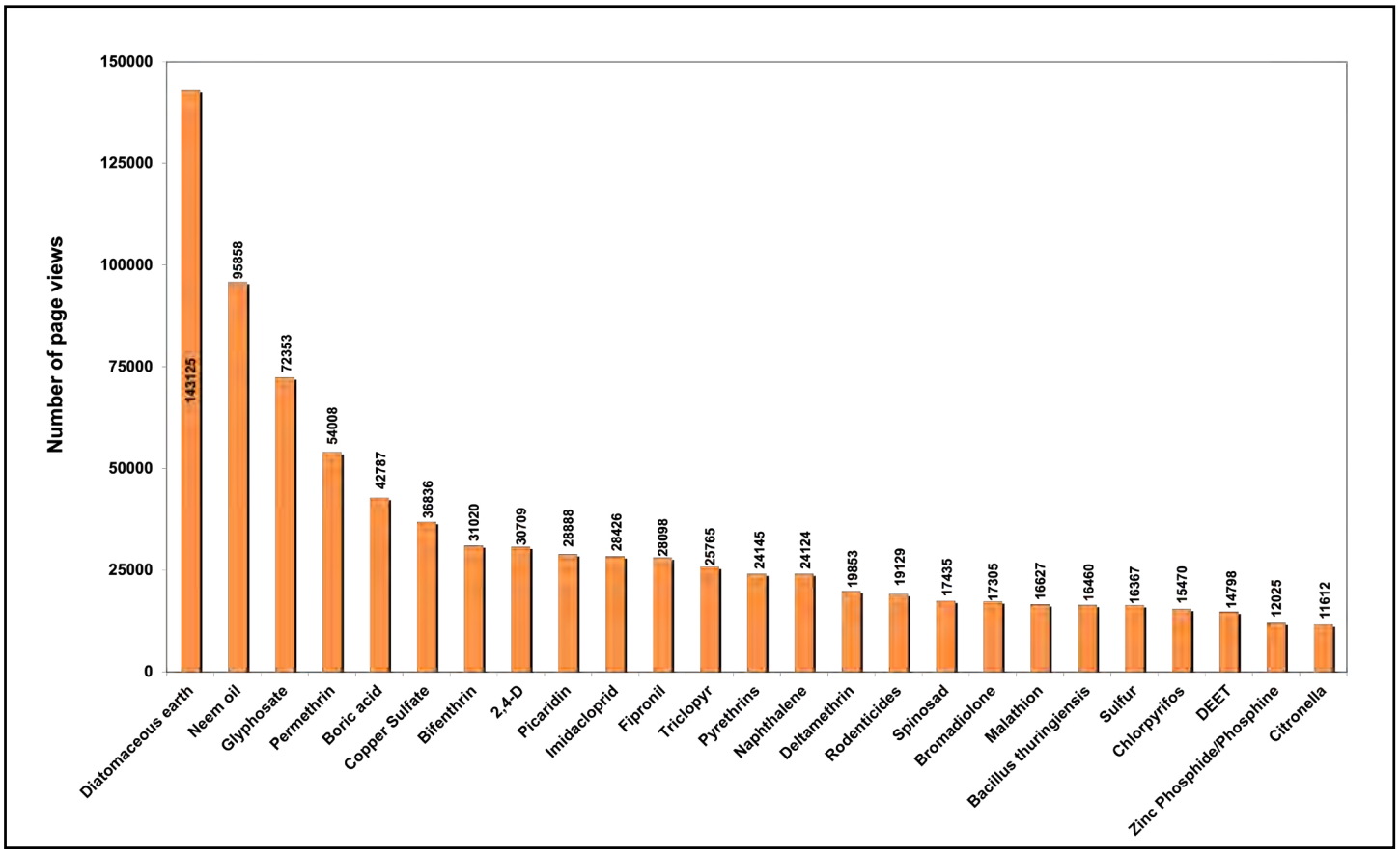
Table 4. Selected page views by category

Page accessed	English page views	Spanish page views
Fact Sheets	1,018,314	41,808
FAQs/CPQs	184,211	161,051
Pest Control	124,968	54,484
Regulations	51,283	1,602
Health and Safety	42,818	21,292
Environment	30,665	6,992

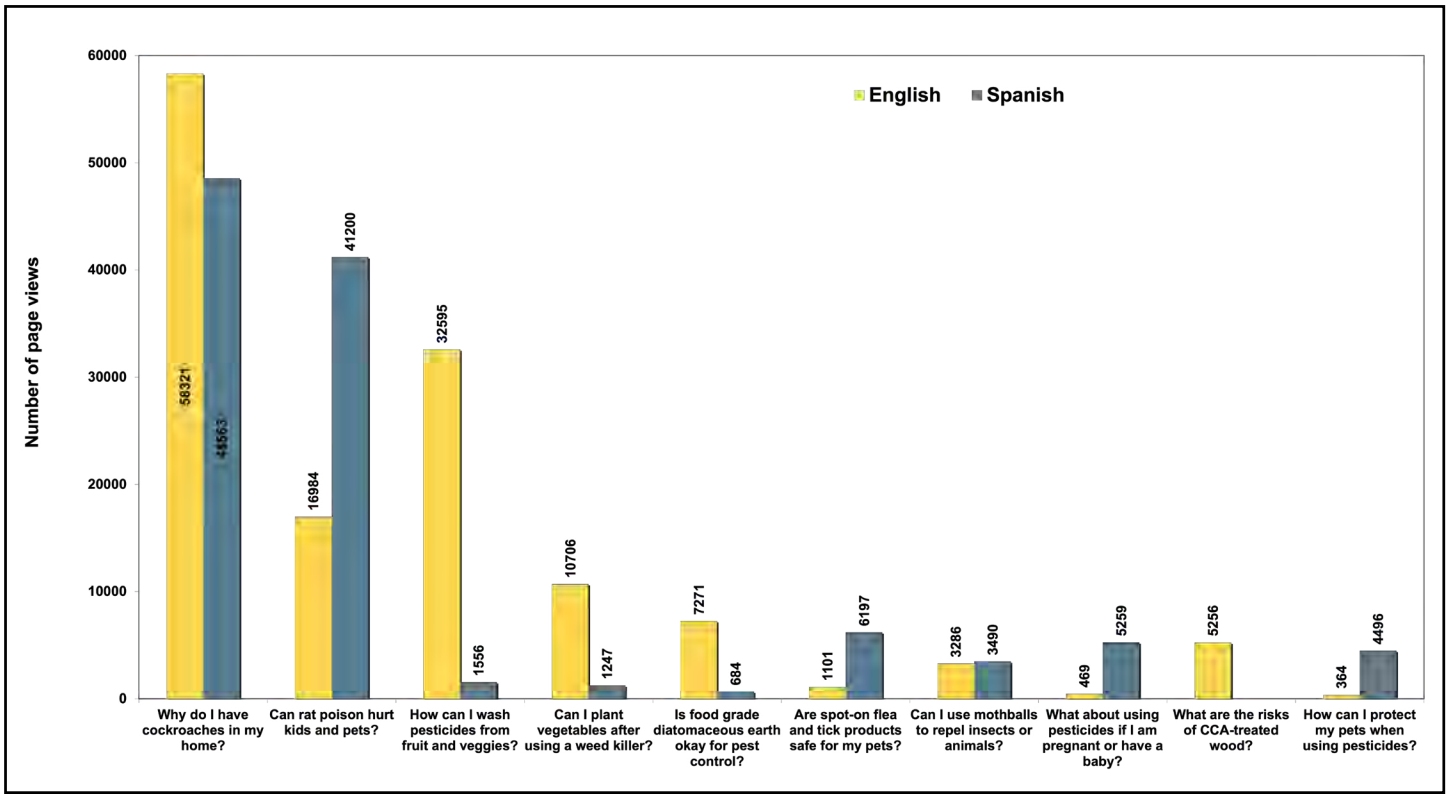
Graph 4.1. Web pages viewed by category



Graph 4.2. Top 25 active ingredient fact sheet pages viewed



Graph 4.3. Top 10 pages viewed about frequently asked questions



5. Type of Inquirer

Table 5 summarizes the profession/occupation of individuals contacting NPIC. The majority of inquiries to NPIC are from the public. Of the 5,574 inquiries received, there were 5,047 (91%) from the public, 97 from pesticide manufacturers, 86 from federal, state, local government agencies, or schools, and 46 from human and animal medical personnel.

Chart 5 summarizes the 437 inquirers who contacted NPIC, not including the public, for an issue related to their job or on behalf of an organization/agency.

Chart 5. Inquiries from agencies and organizations

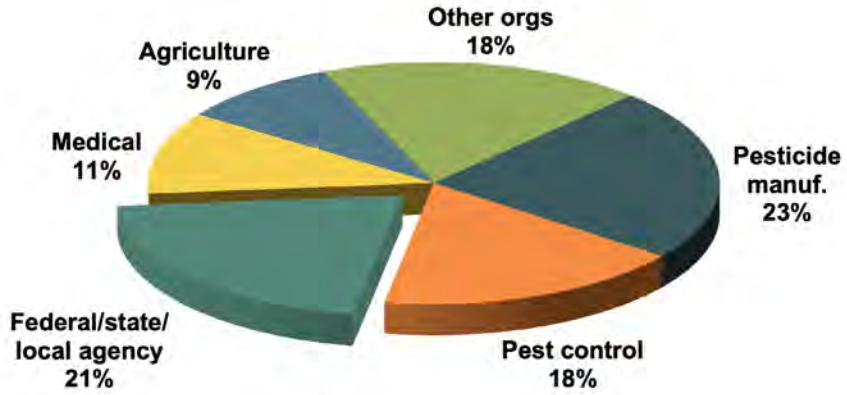


Table 5. Type of inquirer

Type of Inquirer	Total
General Public	5047
Federal/State/Local Agencies	
Government Agency	36
Enforcement Agency	23
Schools / Libraries	19
Health Agency	8
Medical Personnel	
Human Medical	29
Animal / Vet / Clinic	17
Agencies or Organizations	
Pesticide Mfg. or Mktg. Co.	97
Pest Control	70
Farmer	28
Labs/Consulting	21
Info Service - Unions	17
Retail Store/Nursery	17
Media/Authors	8
Master Gardener	8
Lawyers/Insurance	6
Non-migrant Ag Worker	6
Environmental Organizations	4
Beekeeper	4
Vector Control	3
Other	15
Grant Year Total =	5484

6. Type of Question

The questions received at NPIC are most often related to health (e.g., effects to humans and animals, risk, etc.), pest control (e.g., how to control a pest, pest habits, etc.), and application (e.g., methods, label clarity, etc.). "Other" questions (735) include all wrong numbers and people seeking their pest control companies, among others.

Questions about how to follow pesticide label directions are coded as "application" (617). Questions about regulations (535) range from "How do I get a new product registered?" to "Can the authorities make my neighbor stop spraying?"

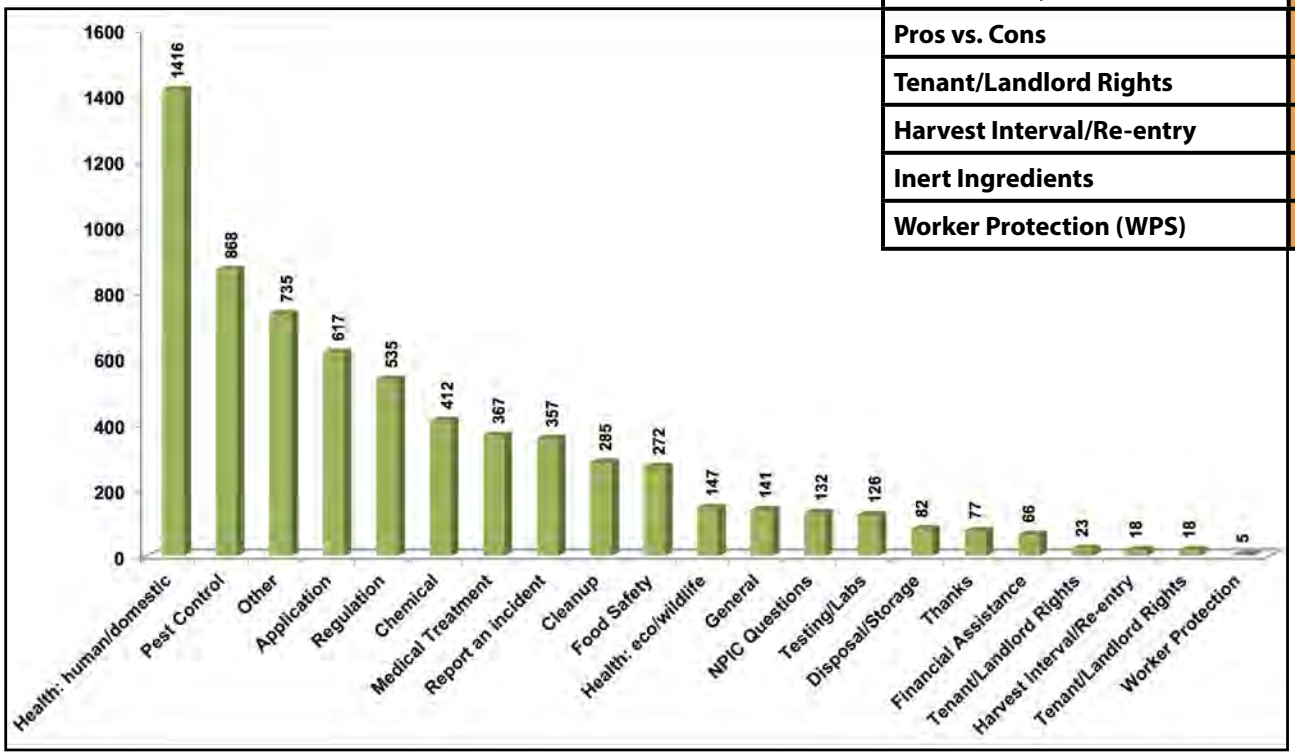
People contacted NPIC specifically to report a pesticide incident 357 times. In these cases, NPIC provided people with appropriate local referrals for enforcement, as needed. NPIC standard operating procedure is to refer all inquiries with regulatory or compliance concerns to enforcement agencies, regardless of their primary reason for contacting NPIC.

Inquiries may involve more than one type of question. Inquirers asked 6,833 questions during this grant year in the course of 5,574 inquiries.

Table 6. Type of question

Type of Question	Total
Health: human/domestic	1416
Pest Control	868
Other	735
Application	617
Regulation	535
Chemical	412
Medical Treatment	367
Report an incident	357
Cleanup	285
Food Safety	272
Health: eco/wildlife	147
General	141
NPIC Questions	132
Testing/Labs	126
Disposal/Storage	82
Thanks	77
Financial Assistance	66
Just Wants Another Contact	59
Where to Buy a Product	57
Pros vs. Cons	25
Tenant/Landlord Rights	23
Harvest Interval/Re-entry	18
Inert Ingredients	11
Worker Protection (WPS)	5

Graph 6. Type of question



7. Actions Taken

Primary actions:

NPIC specialists respond to inquiries in a variety of ways. The primary actions are summarized in Table 7.1. Most inquiries (5,037) were answered by providing information over the phone. Information was also sent via email in 589 cases. Upon request, materials were mailed to people contacting NPIC 29 times during the grant year.

Table 7.1. Primary action taken

Primary Action Taken	Number of Inquiries
	2025
Verbal Info	5037
Emailed Info	589
Transferred to EC / PC	107
Handled Inquiry in Spanish	33
Transferred to Specialist / Voicemail	33
Mailed Info	22
Sent NPIC Outreach Material(s)	7
Interpreted via Language Line Svs	5

Risk reduction actions:

NPIC keeps track of certain conversation topics aimed at reducing pesticide risk. Specialists documented 2,928 risk reduction actions, detailed in Table 7.2.

Table 7.2. Risk reduction actions

Risk Reduction Action Taken	Number of Inquiries
	2025
Discussed Following the Label	1408
Discussed Ways to Minimize Exp.	1075
Discussed IPM Concepts	380
Discussed Environmental Protection	65

Referrals to other organizations:

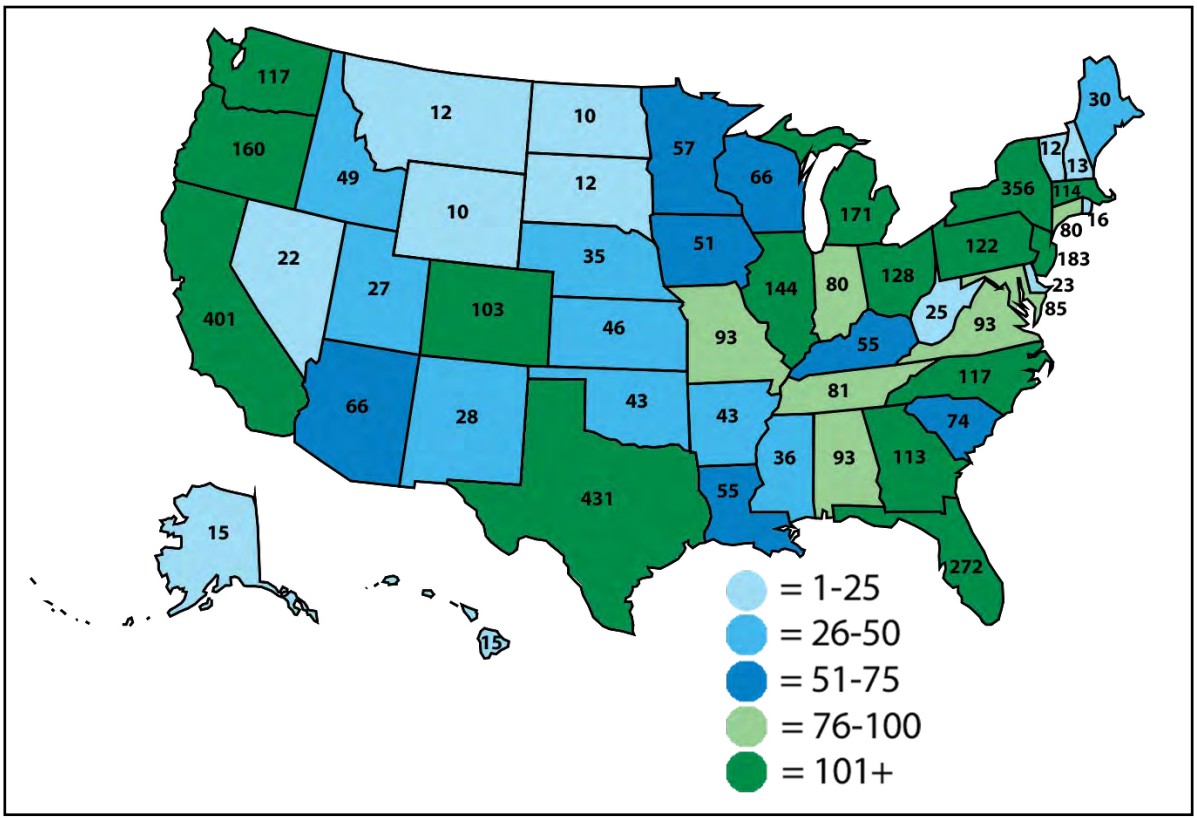
The number of referrals to various organizations is presented in Table 7.3. Specialists use their training and SOPs to evaluate the need for referrals, providing them only when the requested information is outside NPIC boundaries and there is an appropriate resource available to provide the information. Examples include "manufacturer/distributor" for detailed application instructions/product complaints, "county extension" for pest control advice, and "state pesticide regulatory agencies" for enforcement. NPIC follows standard operating procedures to provide contact information for appropriate enforcement agencies any time callers share compliance or regulatory concerns.

Table 7.3. Referrals to other organizations

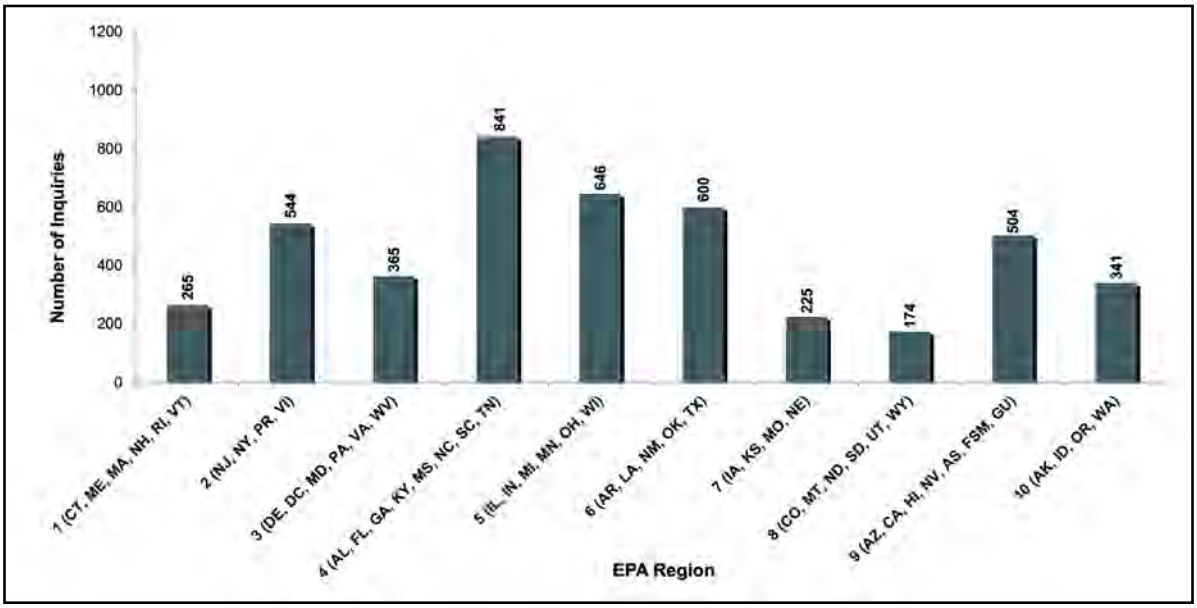
Organization Name	Number of Inquiries
	2025
Manufacturer / Distributor contact	1225
NPIC Website	1102
County Extension contact	954
State Lead contact	586
Other Org. contact	406
Poison Control contact	382
EPA Website	188
Animal Poison Contact	177
Dept of Health Contact	142
EPA HQ / OPP Contact	137
Other State Agency Contact	136
Hazardous Waste Contact	106
EPA Region Contact	82
Other Federal Agency Contact	45
OSHA Contact	8

8. Inquiries by State

The map below shows the number of inquiries received by NPIC from each state. The largest number of inquiries came from Texas (431), California (401), New York (356), and Florida (272). In addition to the states, NPIC received inquiries from the District of Columbia (17), Canada (14), Puerto Rico (5), and other countries (200). Sometimes a state cannot be identified during the inquiry.



Graph 8. Inquiries by EPA region



9. Top 25 Active Ingredients for All Inquiries

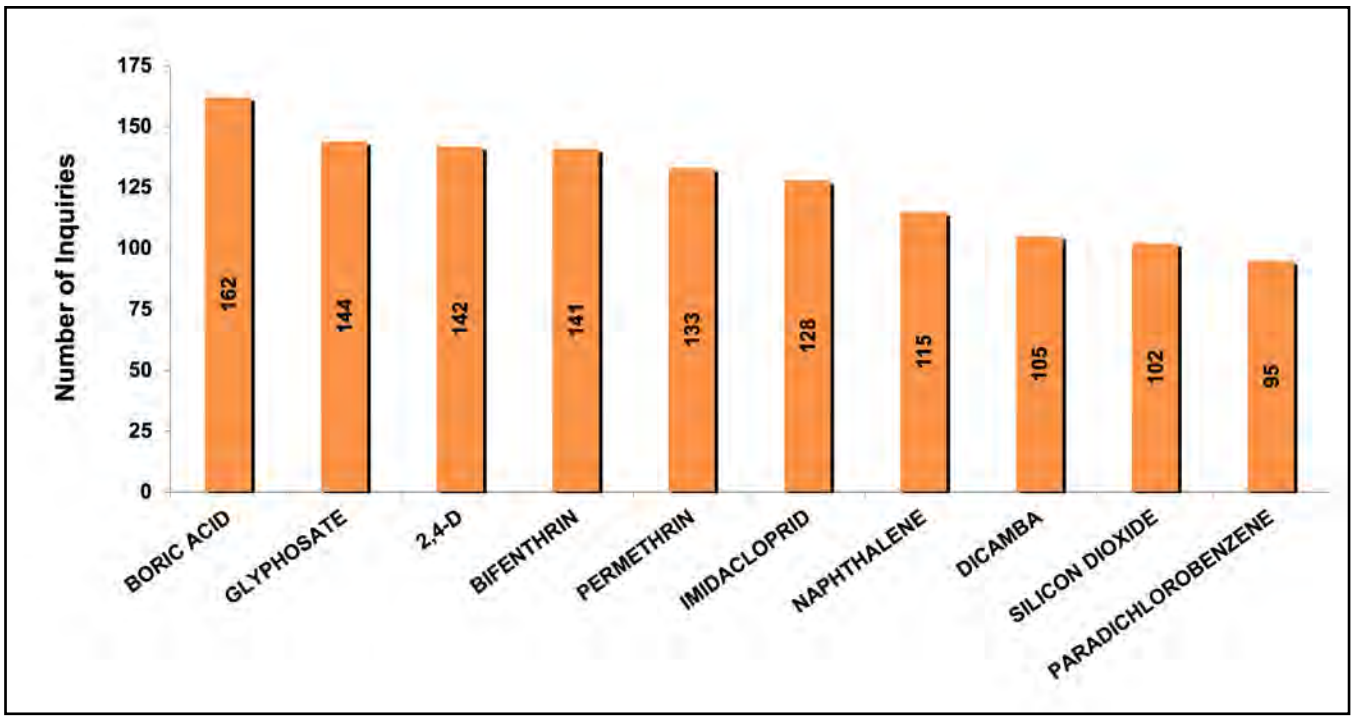
When inquiries to NPIC involve discussion of a specific product or active ingredient, specialists record the product and the active ingredient in the PID. Boric acid was discussed in more inquiries than any other single active ingredient this year (Table 9, Graph 9). Note that an inquiry may involve discussion of several active ingredients.

Graph 9 illustrates the number of informational and incident inquiries for the top 10 active ingredients discussed during the grant year.

Table 9. Top 25 active ingredients for all inquiries

Active Ingredient	Total Inquiries
BORIC ACID	162
GLYPHOSATE	144
2,4-D	142
BIFENTHRIN	141
PERMETHRIN	133
IMIDACLOPRID	128
NAPHTHALENE	115
DICAMBA	105
SILICON DIOXIDE	102
PARADICHLOROBENZENE	95
PIPERONYL BUTOXIDE	87
TRICLOPYR	73
DELTAMETHRIN	69
FIPRONIL	67
NEEM OIL	65
PYRETHRINS	55
BACILLUS THURINGIENSIS	49
CAPSAICIN	44
IMAZAPYR	42
DINOTEFURAN	40
FLUMETHRIN	37
CYFLUTHRIN	37
LAMBDA-CYHALOTHRIN	37
MECOPROP	37
ABAMECTIN	33

Graph 9. Top 10 pesticide active ingredients for all inquiries



10. Incident Type

An incident may involve a spill, misapplication, exposure, adverse effects, or any combination of these events.

There were 1,247 pesticide exposures and 616 accidents. Charts 10.1 and 10.2 provide further details. Among reported exposures, inhalation was the most common route of exposure (28%), followed by dermal contact (25%) and ingestion (19%). When a specific exposure route could not be identified, specialists documented an "unknown" exposure route (11%). When an exposure occurred but could not be verified (e.g., a pet is found next to an open container), specialists documented "possible" exposure.

Indoor spills (44) were reported more often than outdoor spills (14). Among reported misapplications (257), 60% were misapplications by the homeowner or resident.

Chart 10.1. Pesticide exposures (Total: 1,247)

Chart 10.2. Pesticide accidents (Total: 616)

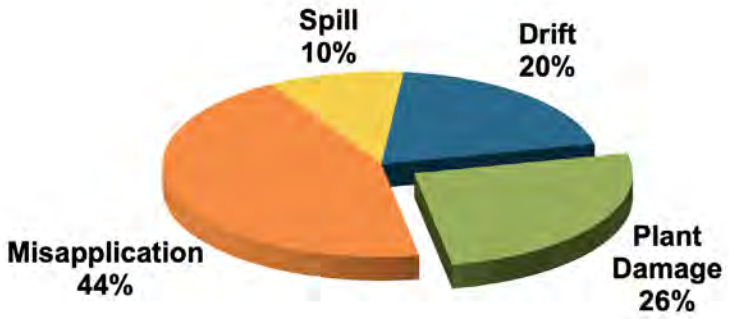


Table 10. Incident Type

Type of Incident	Total
Exposures	
Inhalation	345
Dermal	312
Ingestion	235
Unknown	141
Exposure Possible	139
Ocular	35
Occupational	21
Workplace	19
Accidents	
Misapp - Homeowner	156
Plant Damage	149
Drift	115
Misapp - PCO	70
Spill - Indoor	44
Misapp - Other	26
Spill - Outdoor	14
Missapp - Unknown	5
Other	4
Total =	1830

11. Top 25 Active Ingredient Exposures Involved in Reported Incidents

The 25 most common active ingredients reported during incident inquiries are listed in Table 11. The table identifies the number of exposures or accidents involving humans, animals, and other entities, such as environmental entities and property. Exposures to multiple entities may be documented in a single incident inquiry to NPIC. Naphthalene and paradichlorobenzene were involved in more reported exposures/accidents than any other active ingredients.

In Table 11, the top three active ingredients for human and animal exposures are highlighted below. Naphthalene, paradichlorobenzene, and boric acid were involved in the highest number of exposures for human incidents. The top three active ingredients with the highest number of exposures involving animals were imidacloprid, boric acid, and flumethrin.

Table 11. Top 25 active ingredients for exposures reported to NPIC[1]

Active Ingredient	Human Exposures	Animal Exposures	Other Accidents
NAPHTHALENE	84	11	87
PARADICHLOROBENZENE	82	14	80
BORIC ACID	62	44	9
IMIDACLOPRID	10	46	15
2,4-D	22	9	40
BIFENTHRIN	17	8	26
GLYPHOSATE	19	3	24
DICAMBA	13	4	24
IRON PHOSPHATE	0	28	0
FLUMETHRIN	1	29	0
PERMETHRIN	21	5	11
SILICON DIOXIDE	20	9	2
CAPSAICIN	24	1	3
PIPERONYL BUTOXIDE	20	2	11
DELTAMETHRIN	17	6	7
ABAMECTIN	3	15	3
BROMETHALIN	1	14	4
FIPRONIL	11	7	6
PYRIPROXYFEN	5	7	5
BACILLUS THURINGIENSIS	9	8	0
BROMADIOLONE	1	8	4
CYPERMETHRIN	4	3	6
NEEM OIL	13	1	4
PYRETHRINS	10	2	6
CYFLUTHRIN	13	3	4

[1] Note that incidents may include multiple humans, animals, and other entities. See Table 9 for a count of incident inquiries by active ingredient.

12. Locations of Exposure or Accident

For incidents, specialists record the location of an exposure or accident. Of the 1,652 locations where exposures or accidents were documented, 71% occurred in the home or yard, 13% occurred at the intersection of home and agricultural property, and 6% occurred in an agricultural setting. Table 12 identifies the number of exposures or accidents reported to NPIC in a variety of other locations.

Based on inquiries, NPIC saw a decrease in incidents occurring at natural (e.g., ponds, lakes, streams) and treated water locations in 2025 (20) compared to 2024 (50).

Table 12. Location of exposure/accident

Location	Total
Home - Inside	659
Home - Outside	515
Ag/urban interface	209
Agricultural	94
Office Building	29
Industrially Related	25
Vehicle	23
Other	22
Roadside/Right-of-Way	20
School/Day Care	16
Treated Water	12
Park/Golf Course	9
Pond/Lake/Stream	8
Health Care Facility	5
Food Service/Restaurant	2
Nursery/Greenhouse	2
Retail Store	2
Total =	1652

13. Environmental Impact

Table 13 presents the type of incidents reported for each kind of environmental or built entity. The most common environmental incidents reported to NPIC involve plant damage to home gardens (73).

Table 13. Reported environmental impacts

	Drift	Misapplication: Resident	Misapplication: Other	Misapplication: PCO	Misapplication: Unknown	Other	Plant Damage	Spill: Indoor	Spill: Outdoor
Agricultural Crop	14	3	1	1	0	0	15	0	0
Building - Home/Office	1	70	17	12	0	0	0	29	6
Home Garden	69	26	2	34	3	0	73	0	0
Home Lawn	7	15	1	5	0	0	6	0	0
Natural Water	0	0	0	0	0	1	0	0	0
Other[1]	0	0	1	4	0	0	0	0	1
Property	1	11	2	2	0	0	0	6	2
Soil/Plants/Trees	40	17	1	5	2	0	50	0	4
Treated Water	3	0	0	3	0	1	0	0	1
Vehicle	2	2	0	0	0	1	0	8	0

[1] "Other" refers to miscellaneous items not included in previous categories (e.g., sidewalk, food).

14. Consistency Index

Table 14 and Graphs 14.1 and 14.2 summarize the consistency index (CI) assignments for all incidents that were eligible to be classified. An incident is eligible to be classified if there was an exposed person or animal with reported signs/symptoms and at least one active ingredient was known.

Of the total number of entities assigned a CI (1,388), 18% of the cases were assigned a consistency index of "consistent," 6% were assigned an index of "inconsistent," and 76% were considered "unclassifiable." Because none of the information reported to NPIC has been verified or substantiated by independent investigation, uncertainty is common. This is the case with many forms of self-reported data, which are often used for monitoring public health.

Consistency index assignments for all human and animal incidents were reviewed by a quality assurance specialist.

What is the consistency index?

The consistency index is an estimate by NPIC as to the likelihood that the reported signs and symptoms were "**consistent"** or "**inconsistent"** with published reports/ materials for the identified active ingredients, in the context of the reported pesticide exposure.

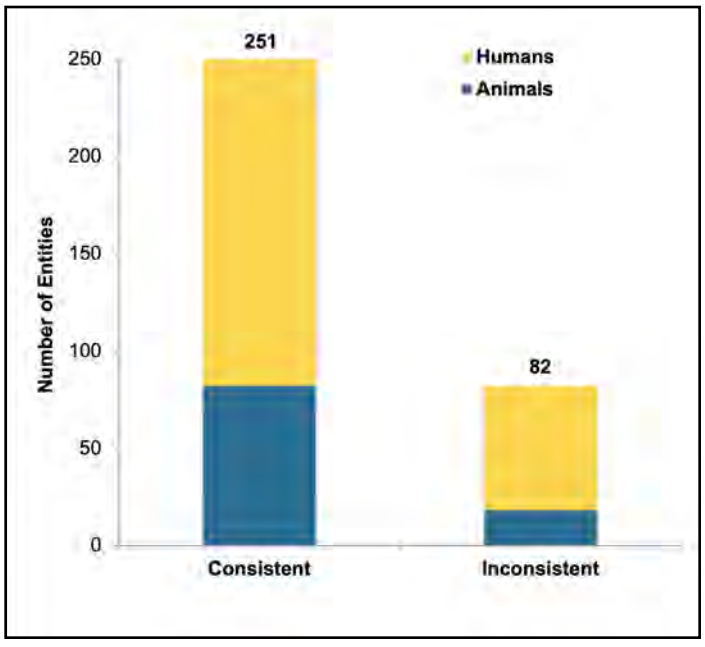
The consistency index is "**unclassifiable"** when one or more of the following criteria apply:

- An exposure occurred, but no symptoms were reported.
- No active ingredient could be identified.
- The presence or absence of symptoms was unknown.

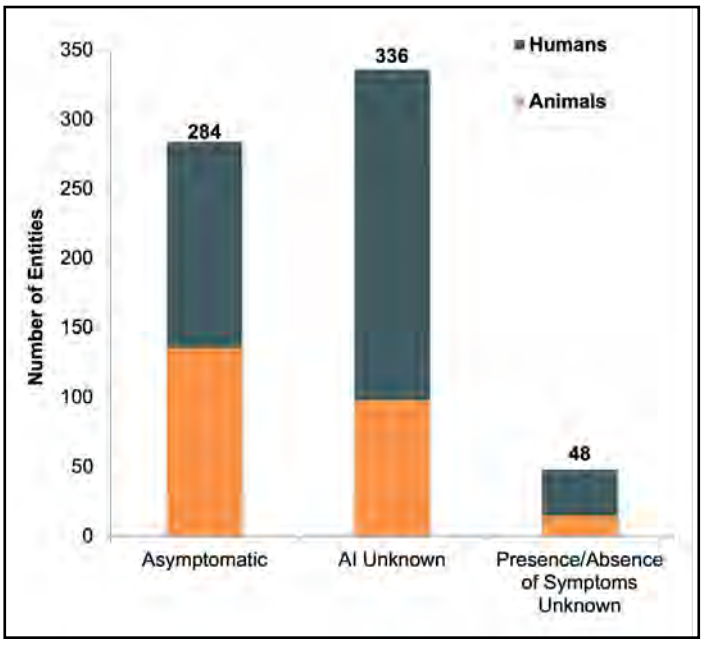
Table 14. Incident inquiries by consistency index (CI)

CI for All Categories of Entities					Breakdown of Human-Entity Incident Inquiries			
Consistency Index (CI)	Humans	Animals	Other	Total	Male	Female	Groups	Gender Not Stated
Unclassifiable	419	249	387	1055	129	215	61	12
Consistent	169	82	0	251	62	82	20	3
Inconsistent	64	18	0	82	28	30	4	1

Graph 14.1. Consistency index for incidents



Graph 14.2. Unclassifiable CI categories



15. Severity Index

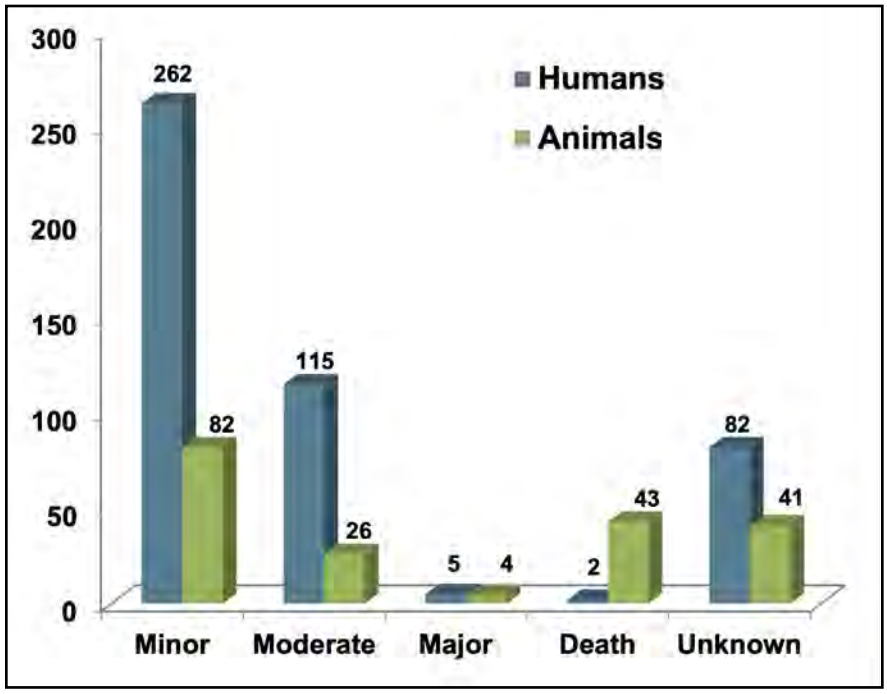
Table and Graph 15 summarize the severity of symptoms for all human and animal incidents reported to NPIC.

For all human pesticide incidents with reported exposures, 40% had minor symptoms, 18% had moderate symptoms, and 1% had major symptoms. Symptoms were unknown in 13% of human incidents. In 28% of human exposure incidents, the person reported that they did not experience any symptoms.

Table 15. Human and animal incidents by severity index (SI)

SI for All Categories of Entities				Breakdown of Human-Entity Incident Inquiries			
Severity Index (SI)	Humans	Animals	Total	Male	Female	Groups	Gender Not Stated
Minor	262	82	344	87	139	31	5
Moderate	115	26	141	43	60	12	0
Major	5	4	9	2	3	0	0
Death	2	43	45	2	0	0	0
Unknown	82	41	123	18	58	14	8
Asymptomatic	185	153	338	67	88	27	0

Graph 15. Severity index for human and animal incidents



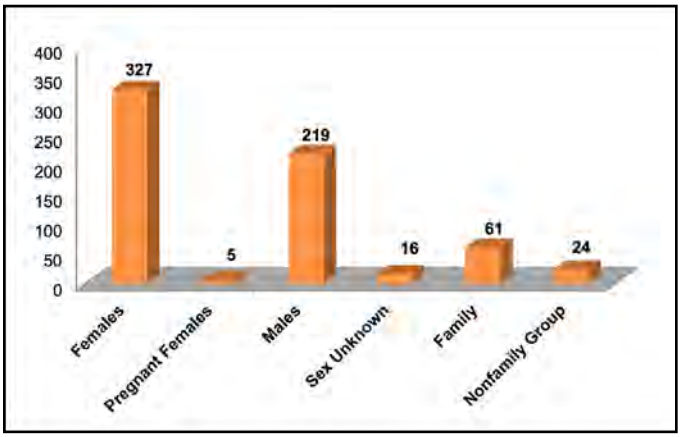
What is the severity index?

The severity index is an estimate by NPIC as to the severity of signs/symptoms reported for incidents. The severity of signs/symptoms can be categorized as minor, moderate, major, death, unknown, or asymptomatic. The NPIC severity index is based on criteria used by poison control centers in their National Poison Data System (NPDS).

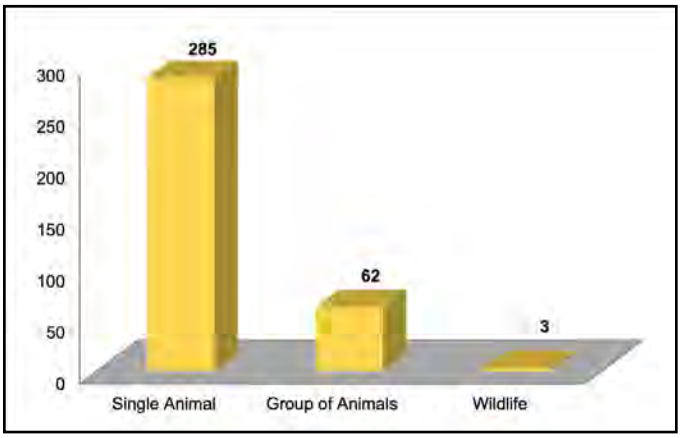
16. Description of Entities

The chart and graphs below provide a summary of entities involved in pesticide incidents. Of the 1,389 entities, 47% were human, 25% were animals, 15% were natural environmental entities (cultivated and wild plants, soil, water bodies) and 13% were part of the built environment (buildings, vehicles, or other human-made property). Other entities (6, 0.4%) are miscellaneous items (e.g., sidewalk, food). Pesticide incidents may involve multiple entities.

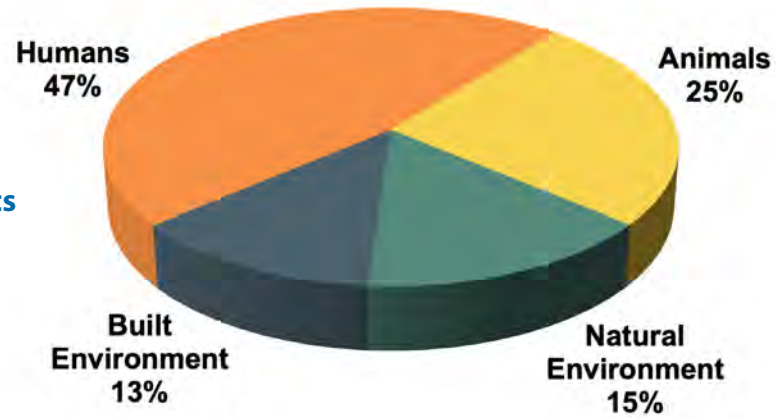
Humans Involved in Incidents

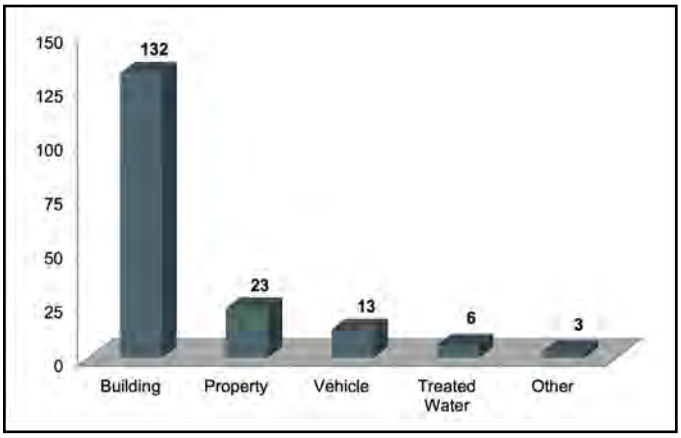


Animals Involved in Incidents

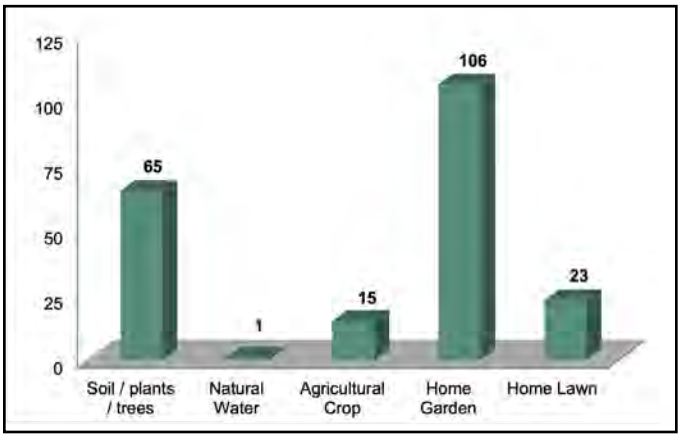


Entities Involved in Incidents





Built Environment Involved in Incidents



Natural Environment Involved in Incidents

17. Reported Deaths

Of the 652 human entities and 350 animal entities involved in pesticide incidents, 45 deaths were reported. Of those, there one human death and 17 animal deaths where the active ingredients were known (Table 17.1).

The male death involved a neighbor with a shared ventilation system that used 14-16 foggers.

Table 17.2 describes reported deaths with known active ingredient(s) where signs and/or symptoms were consistent with literature, in the context of the reported exposure scenario.

Table 17.1. Reported deaths with known active ingredient

Reported Deaths	Total
Human Deaths	
Male	1
Animal Deaths	
Single Animal	10
Group of Animals	6
Wildlife	1
Total =	17

Table 17.2. Reported animal deaths with compatible signs/symptoms

ACTIVE INGREDIENT	INCIDENT TYPE	ENTITY	STATE
BRODIFACOUM	Exposure: Unknown	Single Animal	TX
FLUMETHRIN | IMIDACLOPRID	Exposure: Dermal	Single Animal	PA
FLUMETHRIN | IMIDACLOPRID	Exposure: Dermal	Single Animal	IN
PERMETHRIN | PYRIPROXYFEN | IMIDACLOPRID	Exposure: Dermal	Single Animal	SC
4-AMINOPYRIDINE	Exposure: Possible	Wildlife	FL
FIPRONIL | DIURON | IMIDACLOPRID	Exposure: Dermal | Exposure: Possible	Group of Animals	FL
PYRETHRINS	Exposure: Dermal	Single Animal	OR
PYRETHRINS	Exposure: Dermal	Single Animal	OR
FLUMETHRIN | IMIDACLOPRID	Exposure: Ingestion | Exposure: Dermal	Single Animal	PA
DICHLORVOS	Exposure: Unknown	Single Animal	NY
BIFENTHRIN	Exposure: Ingestion | Exposure: Inhalation | Exposure: Ocular | Exposure: Dermal	Group of Animals	CA
D-LIMONENE	Exposure: Possible	Single Animal	PA

18. Entity Age

Table 18 and Graph 18 summarize the ages of people involved in incidents reported to NPIC. Among 567 single human entities, NPIC was able to collect the person's age 70% of the time. NPIC aims to capture the age for all human entities; occasionally callers decline to provide that information.

Among the 399 humans with known age, 16% were children (ages 4 and under), and 33% were seniors (ages 65 and over).

Graph 18. Age of people involved in reported incidents

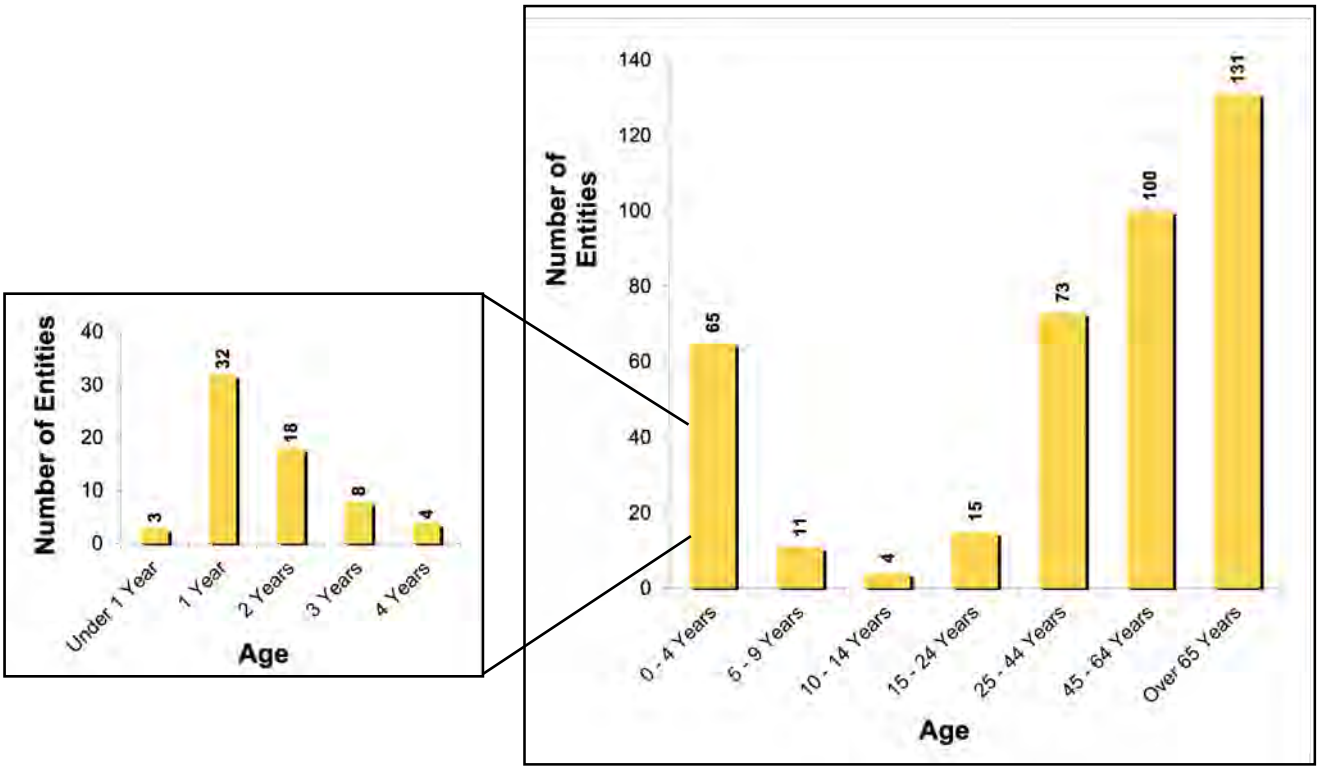


Table 18. Age distribution in reported incidents

Age Category	Total
Under 1 year	3
1 year	32
2 years	18
3 years	8
4 years	4
Total (0 - 4 years) =	65
5 - 9 years	11
10 - 14 years	4
15 - 24 years	15
25 - 44 years	73
45 - 64 years	100
Over 65 years	131

19. Notable Exposures

Figure 19.1

Of 1,002 human and animal entities, 666 involved reported exposure to one or more known active ingredients.

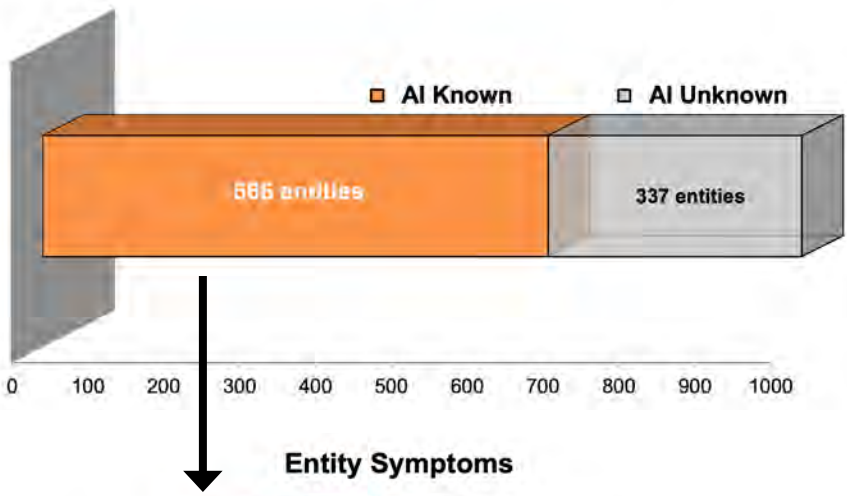


Figure 19.2

Human and animal entities exposed to a pesticide with at least one known active ingredient, with reported signs/symptoms.

Total = 333 entities

Signs and symptoms are compared to the open literature, including fact sheets, case reports, textbooks, and articles. Furthermore, the timing of onset and duration are considered.

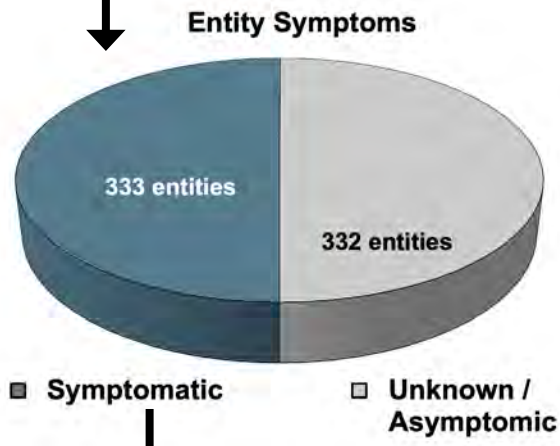


Figure 19.3

Human and animal entities exposed to a known pesticide with reported signs/symptoms that were **consistent** with reports in the literature.

Total = 251 entities

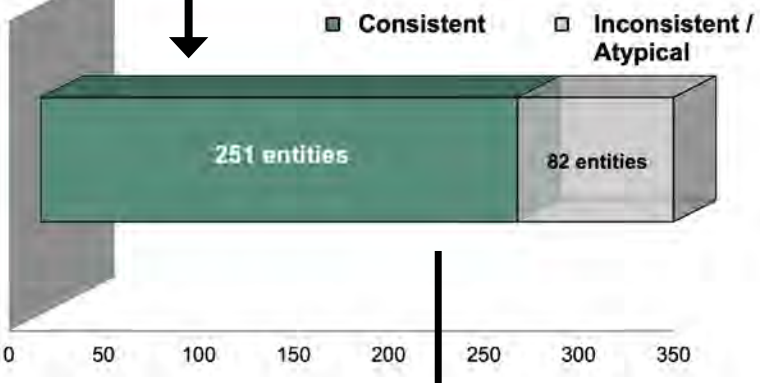
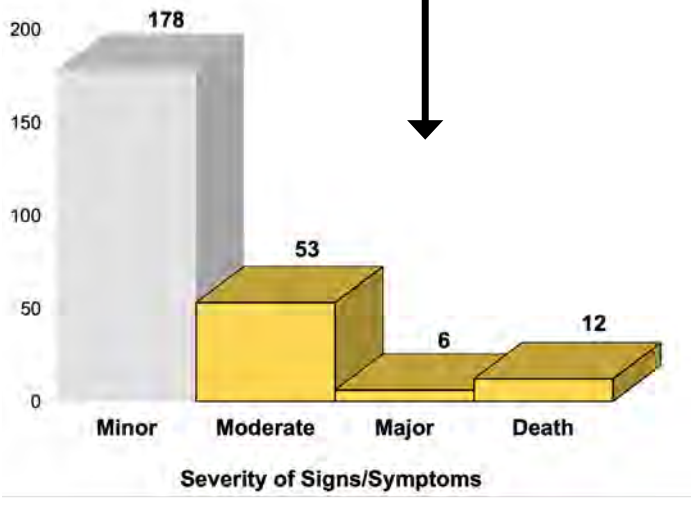
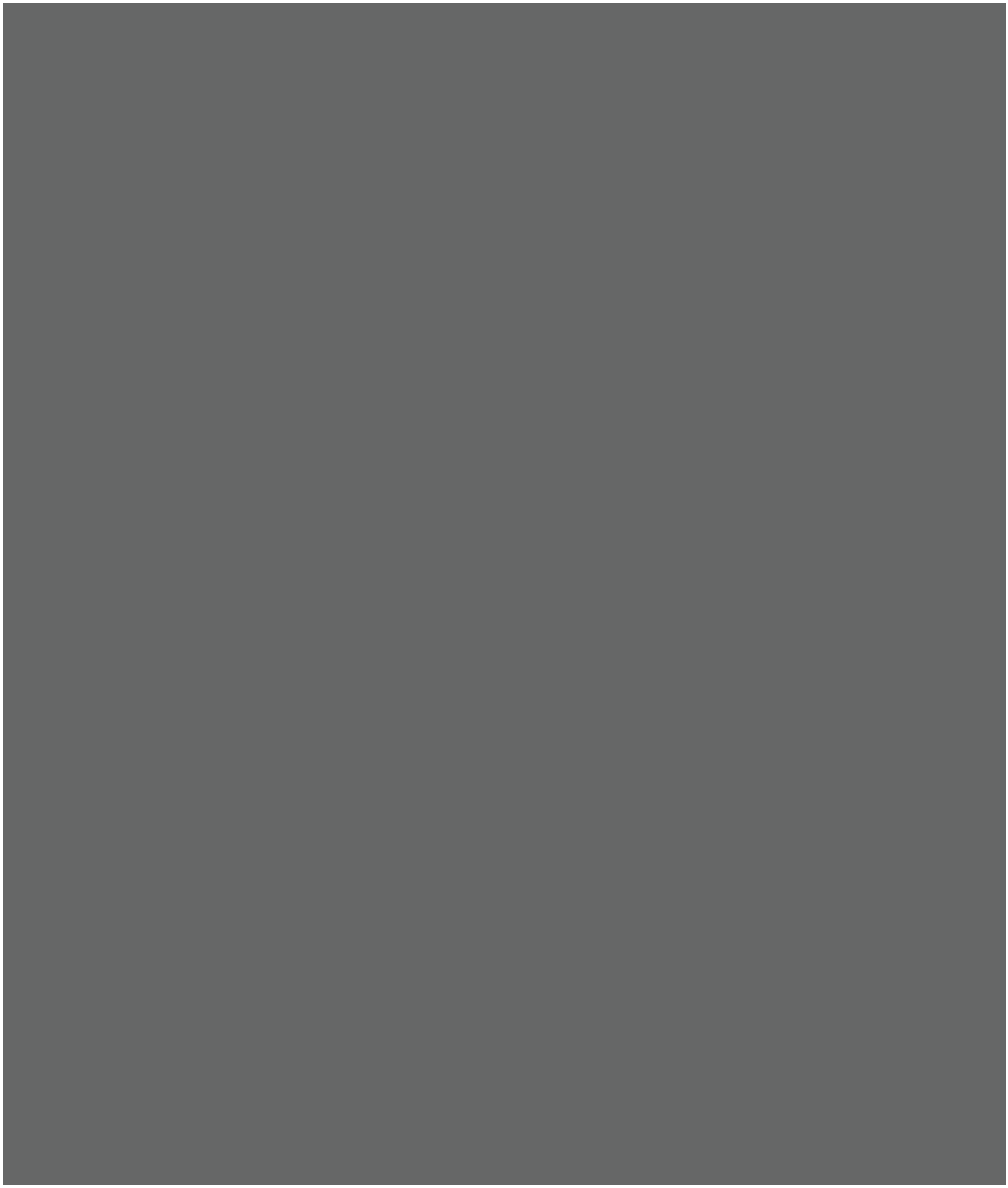


Figure 19.4

Human and animal entities with consistent signs or symptoms greater than minor in severity (71) are represented by the yellow bars. Details are described in Table 20 on pages 37-41.





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