

INTRODUCTION

What Is *Kansas Home*A*Syst*?

*Kansas Home*A*Syst* is a confidential, self-assessment program you can use to evaluate your home and property for pollution and health risks. In every home—large or small, new or old, city or country—there are potential pollution sources that can affect the health of your family, your community, or the environment.

Your drinking water, for example, can be affected by many potential contaminant sources: poorly maintained septic or sewage systems, leaky fuel tanks, lead pipes, fertilizers, pesticides, and hazardous household products. Hazards such as lead-based paint exist in older homes, while in newer, tightly sealed homes, indoor air pollution is often a problem. These and other risks can be reduced or eliminated if proper steps are taken. Even simple changes in household practices can prevent pollution and help reduce consumption of water, energy, and other resources.

Who Should Use *Kansas Home*A*Syst*?

This easy-to-use assessment program will be a valuable reference for residents of rural and suburban homes. It is for those who care about their health and the environment and who are willing to take steps—no matter how small—to improve how they manage their homes. Whether you rent a room or own a house, this evaluation can show you how to reduce your affect on natural systems and cut back your use of the earth's resources. *Kansas Home*A*Syst* also can help you protect your investment by identifying pollution risks on your property before expensive problems occur.

What Is Inside?

The 11 chapters in *Kansas Home*A*Syst* cover essential topics that every resident or homeowner should understand. Each chapter contains key points, along with tables of assessment questions, to help you understand which risks may apply to your situation. For some topics, this guidebook offers all the information you need to minimize or eliminate a pollution risk. For others, it provides a starting point

and helps you locate further information and assistance. Keep in mind that laws and regulations can vary by state, county, city, or town. Check with local officials to make sure that your home practices or changes you plan to make comply with the law.

Getting Started

You can do *Kansas Home*A*Syst*'s assessment exercises one at a time or all together—it's up to you. The main idea is to take the time to identify any risks to your family's health or pollution threats to your local environment; then, where feasible, to take voluntary actions to reduce those risks and prevent problems.

This guide helps you accomplish three important objectives:

- ✓ Objective 1: Identify environmental risks, concerns, or problems in and around your home.
- ✓ Objective 2: Learn about better home and property management and find further information.
- ✓ Objective 3: Take preventive actions to safeguard your health and the environment.

These objectives are further explained below and illustrated using excerpts from Chapter 6, "Lead In and Around the Home: Identifying and Managing Its Sources." This will help you become familiar with how *Kansas Home*A*Syst* works before starting the assessments.

Objective 1: Identify environmental risks.

Do you have pollution or health risks at home? Each *Kansas Home*A*Syst* chapter explains what risks to look for and why you should be concerned about certain conditions around your home. Here is an example from Chapter 6 on sources of lead:

- ***Does your interior paint contain lead, and what is its condition?*** *Lead-based paint (LBP) is the most common source of high lead exposure for children. Most exposure, however, comes from contact with contaminated household dust rather than from eating paint chips. As paint ages or*

as painted surfaces rub against each other, lead-containing dust is created. If your LBP is perfectly intact, then the potential risk of accidental ingestion is greatly reduced. But if lead paint is cracking, chipping, flaking, or being rubbed by contact, then the danger of lead exposure is much higher.

In each chapter, assessment tables like the sample one below help you determine your potential level of risk.

Objective 2: Learn about managing your home and property.

Each chapter describes safe practices and gives recommendations for reducing or eliminating risks. To help you find further information on a topic, each chapter also recommends books, publications, telephone hotlines, and other resources. Here is what Chapter 6 says about dealing with lead-based paint:

- *If you find lead . . . Remodeling or renovating in areas having LBP is especially risky. Scraping, sanding, or burning LBP creates extremely hazardous conditions, and strict precautions need to be taken especially if children, pregnant women, or pets are present. If possible, homeowners*

should use the services of a certified lead inspector and lead-abatement contractor. Paint removal, replacement of lead-painted parts (such as windows, door jambs, and moldings), liquid encapsulants (special paint-like products that cover a surface), and removal off-site of leaded surfaces are some of the options for dealing with lead paint. LBP removal by untrained workers who do not use the proper methods and equipment can create much greater health hazard than just leaving the paint alone.

Objective 3: Take preventive actions.

With *Kansas Home*A*Syst*, nobody is looking over your shoulder to make sure you take preventive or corrective action. It is always your choice. At the end of each chapter is an Action Checklist where you can write the risks you identified and the actions you plan to take. If you have lead-based paint in your residence, yours might look like the checklist on the following page.

Why Is It Important to Take Action?

Simply identifying risks will not prevent problems. Consider the following reasons for making voluntary improvements, particularly for responding to medium and high risks identified at your home.

SAMPLE ASSESSMENT TABLE (from Chapter 6, "Lead In and Around the Home")

For each question in the table below, indicate your risk level in the right-hand column. Although some choices may not correspond exactly to your situation, choose the response that best fits.

	LOW RISK	MEDIUM RISK	HIGH RISK	YOUR RISK
Lead-based paint (LBP) on exterior of house	No LBP, or LBP is present but intact. There is a lawn or dense landscape plantings around the side of the home.	LBP is weathered or chalking. There is LBP in the soil around the home, but foot traffic is kept away.	LBP is chipping, peeling, or chalking. There is bare soil or foot traffic below painted walls.	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High
Major roadways	No major roadway nearby		Major roadway within 85 feet.	<input type="checkbox"/> Low <input type="checkbox"/> High
Lead-related industry	No lead-related industry or incinerators in the area.		Lead smelter, battery manufacturer or recycler, or other lead-related industry nearby.	<input type="checkbox"/> Low <input type="checkbox"/> High

SAMPLE ACTION CHECKLIST (from Chapter 6, “Lead In and Around the Home”)

Write all high and medium risks below.	What can you do to reduce the risk?	Set a target date for action.
Interior paint has moderate levels of lead. Plan to remodel bedroom this spring.	Contact licensed lead abatement contractor about project assessment and cost. Contact local or state health department for recommendations and information.	One month from today: April 22
High level of lead in tap water.	Get information and install treatment system to remove lead.	One week from today: March 29

To safeguard your health

If you are like most people, you spend a great deal of time in your home. If there are dangers in the air you breathe, in the water you drink, or from hazardous chemicals in your home, they need to be eliminated quickly and effectively. Unfortunately, many people do not know about their potential risks until it is too late and problems have occurred.

To prevent contamination of our water supply and other natural resources

Protecting groundwater and surface-water quality is essential to you, your neighbors, and others “downstream.” This is important whether your drinking water comes from a private well or from a municipal system. Because everything is connected, what you do and what others do will affect someone else. If we are not good stewards of our water, land, and natural resources, who will be?

To protect your financial investment

Your home is often your most valuable investment. Most states have property disclosure laws standards that require environmental assessments

before owners can sell or transfer their property. Knowing about risks or problems today may help prevent costly cleanups, repairs, and legal troubles in the future. And it pays not only to take care of your own property, but also to make sure others around you are using good management practices. Property values and tax burdens can be affected by pollution problems on your property as well as in your neighborhood or city. In addition, taking steps to cut your use of energy, water, or other resources can save you money in the long run.

Now It's Up to You.

These *Kansas Home*A*Syst* chapters are not difficult to complete, and doing them can result in important benefits. For example, if you have children at home, working together on the assessments can be a worthwhile educational experience for everyone. And actions you take to eliminate risks may improve your property's resale value. If you value a clean environment and healthy surroundings, then using *Kansas Home*A*Syst*—and making changes—will be a real investment in your family's and your community's future.

Checklist for Pollution Risks In and Around the Home

Purpose

This checklist is a way to quickly scan for potential problem areas in your home. It will help you identify possible risks and introduce you to many of the topics discussed in this book. The chapters cover many other assessment questions about situations and practices not included in the checklist. If you identify potential concerns using this checklist, or even think there may be risks or areas needing improvement, please turn to the chapter on the appropriate topic.

Instructions

Using a pencil, answer the questions yes or no. If you don't know the answer, try to find out by looking inside at the corresponding *Kansas Home*A*Syst* chapter. You may need to locate your home maintenance records, ask family members or neighbors, or seek assistance and further information. The answers you give on this checklist—and on the assessment tables inside—are confidential. They are for your eyes only and are meant to help you take action.

Chapter 1. Site Assessment: Protecting Water Quality Around Your Home	Yes	No
Is your soil sandy or gravelly, allowing water to drain through quickly?		
Is there a potential source of contamination—such as manure, pesticide or fertilizer storage, a fuel tank, septic system soil absorption drainfield, or eroding soils—on your property located within 100 feet of a well, lake, stream, or wetland?		
Is the water table less than 20 feet below the soil surface?		
Chapter 2. Stormwater Management	Yes	No
Do the downspouts from your roof gutters empty onto paved surfaces instead of grass, mulch or gravel, and thus keep rain from soaking into the ground?		
Are fertilizers, pesticides or salts stored where floodwaters might reach them?		
Are some parts of your property, particularly slopes, sparsely planted and without mulch, exposing the soil to erosion?		
Chapter 3. Drinking Water Well Management	Yes	No
Has it been more than 2 years since your water was tested for bacteria and nitrates?		
Do you have a dug or driven well instead of a drilled well?		
Does your well casing extend less than 12 inches above the ground, or is there it in a low area where surface runoff can collect around the well casing?		
Do you have abandoned wells on your property that are not properly filled and capped and recorded?		

Chapter 4. Household Wastewater: Septic Systems and Other Treatment Methods	Yes	No
Has it been more than 3 years since your septic tank was last pumped or inspected?		
Have you noticed any signs of a failing septic system, such as slow drains, odors or soggy ground over the soil absorption drain field?		
Do you have standard toilets and faucets, instead of water-conserving fixtures?		
Chapter 5. Managing Hazardous Household Products	Yes	No
Do you use products without knowing whether or not they are hazardous?		
Do you ever pour hazardous substances—such as antifreeze, oil, paints, stains, polishes or solvents—down the drain, in a ditch or on the ground?		
Do you burn plastics, batteries or chemicals that could contaminate the air?		
Chapter 6. Lead In and Around Your Home: Identifying and Managing Its Sources	Yes	No
Was your home built before 1978 (the year when lead was banned from paint)?		
Do children under the age of six live in your home?		
Are painted surfaces inside and outside your home peeling, chipping or chalking?		
Is your drinking water delivered through pipes made of lead or soldered with lead solder?		
Chapter 7. Yard and Garden Care	Yes	No
If you use fertilizer, has it been longer than 3 years since you had your soil tested for nutrients?		
Do you ever use pesticides without reading the label or following the recommended doses or application instructions?		
Do you have bare areas of soil on your property that are susceptible to erosion?		
Chapter 8 Liquid Fuels: Safe Management of Gasoline, Heating Oil, Diesel and Other Fuels	Yes	No
Do you store fuel for your lawnmower or other gas-powered equipment in unlabeled or non-approved containers—such as glass jars, plastic jugs or rusted cans?		
Do you store fuel or heating oil in an underground fuel tank?		
If you have an above-ground fuel tank, does it lack protection against leaks or spills (for example, a catch basin or concrete spill pad)?		

Chapter 9 Indoor Air Quality: Reducing Health Risks and Improving the Air You Breathe	Yes	No
Do odors such as those from cooking linger in the air in your home?		
In winter, do you often notice condensation on the inside of your windows?		
Have you noticed symptoms—such as headaches, or irritated eyes, or coughing, or sneezing—that most often develop when you stay indoors at home?		
Chapter 10 Heating and Cooling Systems: Saving Energy and Keeping Safe	Yes	No
Has it been 2 or more years since your fuel-burning heating system was inspected for proper ventilation and energy efficiency?		
Are your energy bills relatively large for the size of your home?		
Do you feel cold drafts around windows and doors in winter?		
Does your attic lack the recommended amount of insulation?		
Chapter 11. Managing Household Waste: Preventing, Reusing, Recycling and Composting	Yes	No
Do you purchase products that you do not really need?		
Do you buy products wrapped in excessive packaging?		
Do you throw away yard and food waste that could be composted?		

Where do you go from here?

If you answered *yes* to any of the questions, there may be pollution risks or special health concerns you will want to investigate. Turn to the appropriate *Kansas Home*A*Syst* chapter to find out how to reduce these risks in and around your home. We recommend that you begin with Chapter 1, “Site Assessment: Protecting Water Quality Around Your Home,” because it gives basic information that will be useful as you work on other

topics. Creating a site map, which is explained in Chapter 1, can help you understand important relationships between your land, buildings, nearby water resources, and other features.

This introduction is based on original materials by Barbara Keen Avery, College of Human Ecology, Cornell Cooperative Extension and David J. Eagan, *Home*A*Syst* Editor

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