

# 05-1400 Abandoned Pesticides Project – L'Anguille Watershed



Suzanne Smith Hirrel

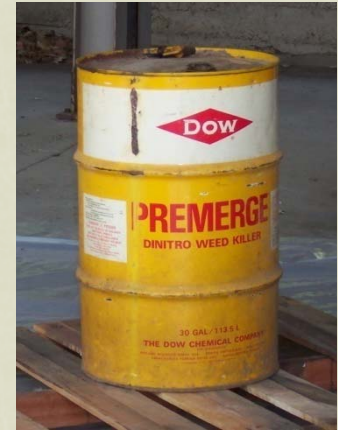


UNIVERSITY OF ARKANSAS  
DIVISION OF AGRICULTURE  
Cooperative Extension Service

# Goals

**Educate producers** of the dangers and risks of old abandoned pesticides and of the opportunity to participate in Agricultural Pesticide Collection Event(s).

**Partner** with the State Plant Board (SPB) and the Abandoned Agricultural Pesticide Board to facilitate the collection of old/abandoned pesticides.



# Goals

**Define a protocol for self-assessments** to ensure privacy of producer, but provide a list of types, quantities, and packaging characteristics of pesticides - to insure that pesticides posing the greatest risk are disposed of.

**Determine cost projection for collection and disposal** of surveyed pesticides utilizing the *Abandoned Agricultural Pesticide and Plant Regulator Disposal Trust Fund* of the SPB.

**Measure the effectiveness** of the educational program based on pounds of pesticides collected and producer/landowner participation.



# Educational Materials Developed

- Posters
- Letters
- Flyers
- Handouts
- News releases
- Radio scripts
- PowerPoints
- Displays
- Web site
- Incorporated into PAT
- News articles
- Info in newsletters
- Fact sheets

# Educational Materials

## L'ANGUILLE WATERSHED

### OLD AND ABANDONED PESTICIDE COLLECTION AND DISPOSAL PROJECT

Our goal is to help farmers and landowners in the six counties of the L'Anguille watershed (Craighead, Cross, Lee, Poinsett, St. Francis, Woodruff) with the disposal of unwanted and unusable agricultural pesticides in a safe, legal way that is also economical and convenient. This is a non-regulatory service that poses no consequences to participants.

**THE LONGER A WASTE PESTICIDE IS KEPT, THE MORE LIKELY A:**

- Container will **deteriorate** and leak
- Product label will become **destroyed**
- An **accidental exposure** to chemical will occur
- Location of stored pesticide will be **forgotten**

These chemicals pose a threat to surface and groundwater in the event of fires, floods, earthquakes and tornados.

This program is **free** to all participants. There will be no penalties and strict **confidentiality** of participants is maintained.



This program is funded by Arkansas pesticide registration fees.

For more information contact:

**Billie Majors**  
Multi-County Extension  
Agent-Pesticide  
Disposal Coordinator  
870-261-1730  
bmajors@uaex.edu

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University of Arkansas Cooperative Extension Service, Arkansas Natural Resources Commission - 319 Grant, and the Abandoned Pesticide Advisory Board

United States Department of Agriculture, University of Arkansas, and County Governments Cooperating  
The Arkansas Cooperative Extension Service offers its programs to all eligible persons regardless of race, color, national origin, gender, age, disability, marital or veteran status, or any other legally protected status, and is an Affirmative Action/Equal Opportunity Employer.

## RELAX, IT'S EASY.

THIS PROGRAM IS **FREE** TO ALL PARTICIPANTS.

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## L'ANGUILLE WATERSHED

### OLD AND ABANDONED PESTICIDE COLLECTION AND DISPOSAL PROJECT

#### What is the Project Goal?

To assist farmers and landowners in the L'Anguille Watershed with the safe collection and lawful disposal of banned, outdated, or unwanted pesticides.

#### Who Can Participate?

Agricultural producers and landowners can participate. Participation in the waste pesticide collection program is strictly voluntary. Those who plan to bring waste pesticides in for disposal are asked to fill out a pre-registration form (strict confidentiality of participants is maintained).

The program is NOT open to COMMERCIAL pesticide applicators and dealers. NO HOUSEHOLD chemicals or pesticides, PLEASE.

#### What is the Cost?

It's FREE and CONFIDENTIAL. The collection is funded by pesticide registration fees.

#### Why Should You Pre-register?

Submitting an inventory form is critical in helping the organization of the event. By knowing the organization of the event, pesticides being brought, adequate resources, storage and transportation will be available.

Inventory Survey Forms are available from your County Extension Office, County Farm Bureau office, farm supply stores, co-op, or gin. For further information contact:

**Billie Majors**  
Multi-County Extension Agent - Pesticide  
Disposal Coordinator  
870-261-1730  
bmajors@uaex.edu

#### What is Accepted?

Both known and unknown chemicals will be accepted, including outdated, discontinued, or unwanted agricultural pesticides (insecticides, herbicides, and fungicides). Of particular interest are older pesticides known to be toxic such as Arsenicals, DDT, Silvex, Heptachlor, Dieldrin, Lindane, Toxaphene, and 2,4,5-T.

#### What is NOT Accepted?

Products other than pesticides will not be accepted at the collection sites. Specific materials that will not be accepted include, but are not limited to: explosives or ordinance materials, petroleum products, paints, medical wastes, and radioactive materials.

#### What Containers are Accepted?

Farm chemicals in all forms and sizes of containers, (e.g. drums, wooden casks, bottles, plastic containers) will be accepted. Chemicals in deteriorated or leaking packaging may need to be over packed - please indicate condition of the container on the Inventory Form. In some cases on-farm pickup by the hazardous waste contractor may be necessary.

#### Where Will the Wastes Go?

The old pesticides are collected and disposed of through the Arkansas Abandoned Agricultural Pesticide Disposal Program. The pesticides are collected by licensed hazardous waste professionals and disposed of at licensed hazardous waste incinerators.

#### Where Are the Collections?

Collections will be scheduled in the six counties of the L'Anguille Watershed, (Craighead, Cross, Lee, St. Francis, Poinsett, and Woodruff)

#### What Can You Do to Help?

Fill out inventory survey, mail form to your local Farm Bureau office, and then mark the collection day on your calendar as a reminder. Discuss the pesticide collection program with neighboring farmers and encourage their participation. Help us spread the message about the program and its value through friends, farm and community organizations, and agribusiness associates.



Arkansas Natural Resources Commission - 319 Grant, and the Abandoned Pesticide Advisory Board.  
United States Department of Agriculture, University of Arkansas, and County Governments Cooperating  
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# Educational Materials

## Pesticide Storage, Safety and Disposal

Suzanne Smith Hirrel  
Extension Specialist/  
Associate Professor -  
Environmental  
Management

Billie Majors  
County Extension Agent -  
4-H

No matter how well agricultural producers calculate their pesticide needs, there is always the possibility they will end up with chemicals that cannot be used. The most common reasons for these unusable pesticides are lost labels, registration cancellation and exposure to extreme cold or heat.

While it is not illegal to possess canceled or unusable pesticides if properly stored, it is often illegal to use canceled pesticides. Caution should be taken with these chemicals, or users may be subject to fines and/or cleanup costs if containers leak and contaminate soil, water or other resources.

The Arkansas State Plant Board, with support from the Arkansas Natural Resource Commission, the University of Arkansas Division of Agriculture Cooperative Farm Service and the Arkansas Farm Bureau, have piloted a program to help Arkansas farmers dispose of unwanted pesticides at no cost. In 2006 and 2007, the Abandoned Pesticide Trust Fund the Abandoned Pesticide Trust Fund collection events in nine counties. These events collected and

disposed of 231,712 pounds of unwanted and unusable pesticides.

This program is open to all agricultural producers and landowners free of charge. Commercial pesticide applicators and dealers do not qualify for the program.

Funding for this program comes from pesticide registration fees paid by chemical manufacturers. However, funding is limited, so the program has not yet been offered statewide. Counties with large agricultural production are being targeted first for collection events.

Waste pesticides are collected by licensed hazardous waste professionals and disposed of in licensed hazardous waste incinerators or landfills.

### Guidelines for Safely Storing and Disposing of Waste Pesticides

Take an inventory of all waste pesticides. A sample inventory form is in this fact sheet or can be obtained from [www.uaex.edu](http://www.uaex.edu) or from your

Accepted Materials	Materials Not Accepted
<p>Pesticides will be accepted in any containers:</p> <ul style="list-style-type: none"> <li>• Pesticides</li> <li>• Pesticide mixes</li> <li>• Unknown pesticides</li> <li>• Metal pesticide containers</li> </ul>	<p>Any non-pesticide material such as:</p> <ul style="list-style-type: none"> <li>• Explosive or ordnance materials</li> <li>• Radioactive materials</li> <li>• Household chemicals</li> <li>• Petroleum products</li> <li>• Medical wastes</li> <li>• Fertilizers</li> <li>• Solvents</li> <li>• Paints</li> </ul>

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## Helpful Tips and Insight Into Making an Agricultural Waste Pesticide Collection Event Successful

Suzanne Smith Hirrel  
Associate Professor -  
Environmental  
Management

Billie Majors  
County Extension Agent\*

Concerns about unknown quantities of abandoned and outdated pesticides stored on Arkansas farms led to the creation of the Abandoned Pesticide Advisory Board and Trust Fund in 1999. The Board and Trust Fund operate under the authority of the Arkansas State Plant Board. Financial support for the trust fund comes from registration fees paid by chemical companies that register pesticide products in the state.

The Abandoned Pesticide Advisory Board selects counties for collection events. They base the selection on kind and amount of agriculture in the county, watershed location and inquiries and input from county agents, farmers and local officials. Over the past two years, approximately six to nine counties have hosted collection events each year.

Once a county is chosen to host an old and abandoned agricultural pesticide collection, a little organization can go a long way in being prepared for a successful event.

Planning in advance can help relieve much of the stress that comes with organizing any event, and the most important thing is to give yourself plenty of time to advertise and promote the collection.

This project will take place in four (4) phases:

1. Phase one is the planning phase.
2. Phase two is publicity and promoting the program.
3. Phase three is the collection and evaluation of inventory forms.
4. Phase four is the collection day.

### Phase 1 - Planning

The State Plant Board representative or an Abandoned Pesticide Advisory Board member will contact county officials about holding a pesticide collection in the county. Forming an advisory or coordinating committee to provide local input, buy-in and coordination is a good way to keep an open line of communication. Committee members may include the county judge, Office of Emergency Services, Cooperative Extension Service, Conservation District, NRCS, Farm Bureau representative, producers and other agriculture support organizations/agencies (i.e., watershed groups, cattlemen's associations, agricultural consultants, chemical suppliers, well service companies, banks, etc.).

The committee will want to select a site to hold the event. The site should be a well-known location.

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# Program Outreach

- Mailing/phone/personal communication
- Presentations
- Exhibits displays
- Poster presentation at the Southern Regional Extension Water Conference

**L'Anguille River Watershed Agricultural Waste Pesticide Disposal Project**  
Billie Majors, Multi-County Extension Agent – Pesticide Disposal Coordinator and Suzanne Hinesl, Associate Professor/Extension Specialist – Environmental Management, University of Arkansas Division of Agriculture Cooperative Extension Service

**Background**  
Concerns of unknown quantities of abandoned and outdated pesticides stored on Arkansas farms led to the creation of Abandoned Pesticide Advisory Board and Trust Fund in 1999. The Board and Trust Fund operate as part of the Arkansas State Pesticide Board. Collection events in two counties were conducted with varied success.  
Concluding that an educational program could alleviate skepticism among farmers, help organize events, and increase the effectiveness of the program, the UNCES obtained a Nonpoint Source Pollution (15) Grant from the Arkansas Natural Resource Commission (ANRC). The project would develop an educational program for producers and landowners in the L'Anguille Watershed to explain the abandoned pesticide program, help organize collection events, and to encourage participation in the events.  
The L'Anguille River Watershed, in the Arkansas Delta is identified by ANRC as a Priority Watershed. It is an area of high row crop agriculture production. The watershed encompasses six counties: Craighead, Poinsett, Woodruff, Cross, St. Francis, and Lee Counties.



**Project Description**  
The grant provided funding for a county agent to direct the program delivery and organize events.  
Educational meetings explaining the program were held in conjunction with annual commodity production and Pesticide Applicators Trainings in each county. Approximately 1300 producers were reached during the fall and winter at the county meetings.  
Displays, handouts, powerpoints, and posters were utilized to help get the message out.  
In each county a Committee was established. Committees included County Agents, local officials (County Judges, emergency management personnel, etc.), County Farm Bureau Agents, and in some cases other natural resource agency personnel and farmers. The Committees provided assistance selecting the dates and locations for the collection events, and publicity.  
The collection program is conducted to provide confidentiality and anonymity to participants bring pesticides to the collection events.

**Inventory or Self-Assessment Process**  
Inventory Forms for producers to conduct a self-environmental assessment were developed. The form is used to record the chemicals, formulations, container type and size, the condition of the containers, and estimated quantities.  
Posters explaining the program and Inventory Forms were placed at various locations frequented by farmers. A letter explaining the program and an Inventory Form were mailed by the County Extension Office a few weeks prior to collections. Also, news releases for print and radio media were distributed before collections.  
In order to provide confidentiality, the forms were designed to an identifying information would be removed after it was submitted to the County Farm Bureau Office.  
The lower half of the completed forms, with no identifying information, were reviewed by the Collection Priority Committee (CPC). The CPC met with the hazardous waste contractor in each county to determine pesticide amounts, toxicity, transportability, and an estimated cost for the collection.  
Applicants that require overpack supplies or were deemed unsafe for transport were contacted by Farm Bureau with further instructions. In some cases on-site pickup was arranged.  
Collection sites are designed for easy in and out access. The hazardous waste contractor directs those delivering materials to the drop off area where the vehicle is unloaded.  
Participants were surveyed to provide input and feedback into the program and process. In all cases, the feedback was positive.

**Results:**

County	Date	Quantity	Total
Craighead County	June 3	4,386 lbs*	
Woodruff County	June 28 & 29	4,802 lbs*	
Poinsett County	Sept. 26	27,208 lbs	
Lee County	Oct. 10	10,018 lbs	
St. Francis County	Oct. 11	1,018 lbs	
Cross County	Oct. 12	10,252 lbs	
<b>Total</b>		<b>58,181 lbs</b>	<b>= \$123,190.35</b> (estimated cost)

**2007 Collections:**

County	Date	Quantity	Total
Woodruff County	March 13	6,311 lbs.	
Craighead County	March 14	8,706 lbs.	
Poinsett County	March 26	10,569 lbs.	
Lee County	Nov. 7		
St. Francis County	Nov. 8		
Cross County	Nov. 9		
<b>Total</b>		<b>25,586 lbs</b>	<b>= \$38,422.75</b> (estimated cost)

**Footnote:** \* These amounts were included in the program's annual reports.

**Logos:** UVA UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE Cooperative Extension Service

# Assessment Forms

- Survey forms
  - Top half with farm name, etc.
  - Bottom half pesticide info
    - Amount, container condition, chemical type, chemical name
- Survey forms were submitted to County Farm Bureau Office
  - Top info separated from bottom info
  - Only FB agent knew the identities
- Somewhat problematic
  - Inaccuracies in estimating amounts



# Accomplishments



# Pesticides Collected in L'Anguille Project

<b>County</b>	<b>2006</b>		<b>2007</b>	
Craighead	6/3	4,986 lbs.*	3/14	8,705 lbs.
Woodruff	6/28	4,602 lbs.*	3/13	6,311 lbs.
Poinsett	9/28	27,298 lbs.	3/28	10,569 lbs.
Lee	10/10	10,898 lbs.	11/7	11,785 lbs.
St. Francis	10/11	1,018 lbs.	11/8	15,925 lbs.
Cross	10/12	10,259 lbs.	11/9	19,471 lbs.
<b>Total</b>	<b>131,827 lbs</b>	<b>59,061 lbs.</b>	<b>72,766 lbs.</b>	

\* No education prior to these collections



# Collection Dates/Costs

<b>County</b>	<b>2006</b>		<b>2007</b>	
Craighead	6/3*	\$8,734	3/14	\$13,011
Woodruff	6/28*	\$9,179	3/13	\$10,258
Poinsett	9/28	\$38,390	3/28	\$15,154
Lee	10/10	\$16,807	11/7	\$16,553
St. Francis	10/11	\$4,171	11/8	\$23,614
Cross	10/12	\$27,998	11/9	\$25,392
Total	\$209,261	\$105,279		\$103,982

# Staffing & Local Support

- A multi-county agent coordinator
    - working in 6 counties
  - County agents – 6 counties
  - Extension Specialists
- 
- Local planning committees – Co. Judge, Emergency Services, Farm Bureau, Co. Agents, others (CD, NRCS, farmers)



# Do Different

- More lead time in the early collection
- No collections during planting or harvest
- Discontinue use of Assessment Forms



# Challenges

- Gaining the producer/landowner trust of the process
- Finding suitable locations for collection events
- Keeping staff in “soft money” positions



# Questions ???

