CAPS Survey Accomplishment Survey Report Template

Appendix P-2

CAPS Survey Report

Year:	2011
State:	Louisiana
Cooperative Agreement Name:	Pine Commodity Survey (PCS)
Cooperative Agreement Number:	11-8434-1301-CA
Project Funding Period:	January 1, 2011 through December 31, 2011
Project Report:	**CAPS Survey Report**
Project Document Date:	December 31, 2011
Cooperators Project Coordinator:	State Survey Coordinator (SSC)
Name:	J. Brett Laird
Agency:	Louisiana Department of Agriculture and Forestry
Address:	P.O. Box 3596
City/ Address/ Zip:	Baton Rouge, Louisiana 70821 - 3596
Telephone:	985 – 543 - 4024
E-mail:	brett_l@ldaf.state.la.us

Quarterly Report	☐
Semi-Annual Accomplishment Report	☐
Annual Accomplishment Report	☒

A. Write a brief narrative of work accomplished. Compare actual accomplishments to objectives established as indicated in the work plan. When the output can be quantified, a computation of cost per unit is required when useful.

The Louisiana Department of Agriculture and Forestry (LDAF) entered into a Cooperative Agreement with the United States Department of Agriculture (USDA), Animal Plant Health Inspection Service (APHIS), Plant Protection and Quarantine (PPQ) in 2011 to conduct a trap and visual survey for 9 Pine Pests. LDAF conducted this survey according to survey guidelines set forth by the USDA, APHIS, PPQ in 2011. LDAF's Agriculture and Environmental Science (AES) division is divided into 7 districts across the state and 5 of those districts were utilized to conduct this survey. There were 15 locations selected in 15 of the highest pine producing parishes in the state. There was 4 traps deployed at each location and a visual inspection performed each time traps were checked. There were 2 cross vane panel traps, 1 lindgren funnel trap and 1 milk carton trap deployed at each location. Traps and lures were set according to the 2011 approved methods for each pest. Traps were deployed in July, 2011, serviced once per month and then picked up in November, 2011. Trap collections were shipped to Karen Jenkins (PSS, Louisiana) for the initial screening and then transported to Eric White (identifier, PPQ, Louisiana) for final determination of pests. All trap collections were negative for the 9 pests targeted in this Pine Commodity Survey. Outreach efforts were accomplished by LDAF AES inspectors to property owners and concerned stakeholders at each trap location. Louisiana State University (LSU) county agents and United States Forest Service (USFS) were informed of LDAF's activities pertaining to this survey during the prior CAPS committee meeting in order for them to field any calls from concerned stakeholders.

Funding Amount	Total Number of Traps	Cost Per Unit
Proposed = ?	Proposed = 60	Proposed= ?
Actual = $17,328.00	Actual = 60	Actual = $363.85

1. **Survey methodology (trapping protocol):**

	Common Name	Scientific Name
Pest:	Great Spruce Bark Beetle	*Dendroctonus micans*
	Siberian Silk Moth	*Dendrolimus sibiricus*
	Large Pine Weevil	*Hylobius abietis*
	Sakhalin Pine Sawyer Beetle	*Monochamus saltuarius*
	Small White Marmorated Longhorned Beetle	*Monochamus sutor*
	European Wood Wasp	*Sirex noctilio*
	Pine Shoot Beetle	*Tomicus destruens*
	Brown Spruce Longhorned Beetle	*Tetropium fuscum*
	Slender Banded Pine Cone Longhorn Beetle	*Chlorophorus strobilicola*

	Proposed	Actual
Sites (Locations):	**15**	**15**
Traps:	**60**	**60**

Number of Counties:	15
Counties:	**Beauregard, Bienville, Caldwell, Claiborne, DeSoto, East Feliciana, Grant, Jackson, LaSalle, Lincoln, Livingston, Sabine, Union, Vernon, Winn.**

2. Survey dates:

	Proposed	Actual
Survey Dates:	**July, 2011 through October, 2011**	**July, 2011 through November, 2011**

3. Benefits and results of survey:

	Positive	Negative	Total Number
Traps	**0**	**60**	**60**

4. Database submissions:
All negative data was entered into the NAPIS database at the conclusion of the survey by Brett Laird (SSC, Louisiana).

B. If appropriate, explain why objectives were not met.

The Pine Commodity Survey performed as expected and all objectives were met.

C. Where appropriate, explain any cost overruns or unobligated funds in excess of $1,000.

LDAF extended the survey and kept the traps in the field for an extra month (November) in order to absorb all funds awarded in this Cooperative Agreement. This extra month provided some good information to PPQ due to the fact that Pine pests are rarely collected in the month of November. LDAF incurred expenses of $ 4,503.00 over what the CA provided.

*****Below is a copy of Karen Jenkins (PSS for Louisiana) Lab report:**

2011 - LOUISIANA PINE BASED COMMODITY SURVEY

In 2011, Fifteen Modified Green Milk Carton Traps with Dendrolimus sibiricus/Dendrolimus pini Lure were placed and monitored across the state of Louisiana from Late July thru November for the Siberian Silk Moth (Lepidoptera: Lasiocampidae). Trap sites focused on saw mills, campgrounds in parks and high tourism areas. This is the second year for the Pine Based Commodity Survey. No insects have been found in two years.

Wood boring insects are some of the most dramatically destructive invasive species that have been introduced into the forest and urban landscape of the US (e.g. Chrysomeloidea: Ceambycidae: Lamiinae: Monochamini: Asian Long horned Beetle, Buprestoidea: Buprestidae: Agrilinae: Agrilini: Emerald Ash Borer and Hymenoptera: Siricidae: Exotic Wood wasp). Some native wood boring insects (e.g. Curculionoidea: Curculionidae: Scolytinae: Hylesinini: Tomicina: Pine Shoot Beetle and Scarabaeoidea: Scarabaeidae: Rutelinae: Anomalini: Japanese Beetle) causing significant damage to Louisiana's' forest resources, the continued threat of exotic wood borers does significant damage annually to the state tourism, recreation, and aesthetic beauty.

The Pine Based Commodity Survey: Exotic Wood Borer and Bark Beetle (EWBBB) Survey targets primarily two Orders (Coleoptera and Hymenoptera) of insects; Beetles (Chrysomeloidea and Curclionoidea,) and Wood Wasps (Siricidae). Within these groups eight species are specifically targeted including the Slender- banded Pine Cone Long horn Beetle (Cerambycidae: Cerambycinae: Clytini: *Chlorophorus strobilicola*) , Japanese Pine Sawyer Beetle (Ceambycidae: Lamiinae: Monochamini: *Monochamus saltuarius*), Small White- marmorated Long horn Beetle (Ceambycidae: Lamiinae: Monochamini: *Monochamus sutor*), Brown Spruce Long horn Beetle (Cerambycidae: Spondylidinae: Asemini:*Tetropium fuscum*), Large Pine Weevil (Curculionidae: Molytinae: Hylobiini: *Hylobius abietis*), Great Spruce Bark Beetle (Curculionidae: Scolytinae: Hylesinini: Tomicina: *Dendroctonus micans*), Pine Shoot Beetle (Curculionidae: Scolytinae: Hylesinini: Tomicina: *Tomicus destruens*) and Sirex Wood Wasp (Siricidae: *Sirex noctilio*). None of the target insects were found in the 2011 Pine Based Commodity Survey. Target insects were not found in the previous year.

The survey is conducted using Lindgren Funnel (8) Traps and Cross Vane Panel Traps. According to CAPS Approved Methods, the wet cup (anti-freeze solution) collection method was used for both trap designs and placed 30 meters (98 feet apart). Sixteen Lindgren Funnel Traps were baited with α-pinene ultra high release (UHR) and ethanol (UHR) for the Order: Curculionoidea. Fifteen Cross Vane Panel Traps were baited with α-pinene ultra high release (UHR) and ethanol (UHR) for the Order: Buprestoidea and Chrysomeloidea and fifteen Cross Vane Panel Traps were baited Sirex Lure. Funnel Traps and Cross Vane Panel Traps, have passive flight intercept capabilities, and the resulting trap catches include many native wood boring beetles and a wide range of non-target families. Lindgren Funnel Traps do capture beetles in the Insect Orders:

Buprestoidea, Elateroidea and Scarbaeoidea. Significant reportable insects can be found in the initial screening process that is non- target insects for this survey.

In 2011, sixteen Lindgren Funnel Traps and thirty Cross Vane Panel Traps were placed and monitored across the state from August thru November. Trap sites focused on tree nurseries, saw mills, campgrounds in parks with large stands of pine trees and high tourism areas. A visual site survey was done monthly in conjunction with lure change of the Lindgren Funnel and Cross Panel Traps. No adult beetles were hand catch during the survey.

Parishes

Beauregard	DeSoto	LaSalle	Union
Bienville	East Feliciana	Lincoln	Vernon
Caldwell	Grant	Livingston	Winn
Claiborne	Jackson	Sabine	☺ ☺ ☺

The forty six traps yielded one hundred and eighty suspect samples in a four month period. A total of four hundred plus Native Beetle and Native Wood wasp suspect samples were identified by Eric White: USDA-APHIS-PPQ Entomology Identifier, New Orleans, LA.

Pine Sawyer Beetle:
Monochamus carolinensis

Twenty five vials of native Beetles and native Wood wasps were added to the USDA-APHIS-PPQ Plant Inspection Station, New Orleans, LA Collection.
Emerald Ash Borer (Buprestoidea: Buprestidae: Agrilinae: Agrilini: *Agrilus planipennis*), Gold spotted Oak Borer (Agrilus coxalis) and Oak Splendor Beetle (*Agrilus biguttatus*), significant reportable non- target insects were not found.
Native Louisiana Metallic Wood Boring Species:

Subfamily	**Tribe**	**Genus**	**Species**
Buprestinae	Buprestis	Buprestis	lineata
Buprestinae	Chrysobothrini	Chrysobothris	femorata
Chrysochroinae	Chrysochroini	Chalcophora	virginiensis
Chrysochroinae	Dicercini	Dicerca	lurida

Bamboo Borer (Chrysomeloidea: Cerambycidae: Cerambycinae: Clytini: *Chlorophorus annularis*) and Chinese Long horn Beetle (Chrysomeloidea: Cerambycidae: Hesperophanini: *Trichoferus campestris*), significant reportable non- target insects were not found.

Native Louisiana Longhorned (Cerambycidae) Beetle Species:

Subfamily	**Tribe**	**Genus**	**Species**
Cerambycinae	Bothriospilini	Knulliana	cincta
Cerambycinae	Clytini	Neoclytus	mucronatus
Cerambycinae	Clytini	Neoclytus	scutellaris
Cerambycinae	Clytini	Xylotrechus	colonus
Cerambycinae	Clytini	Xylotrechus	sagittatus
Cerambycinae	Eburiini	Eburia	quadrigeminata
Cerambycinae	Elaphidiini	Elaphidion	mucronatum
Disteniinae	Elytrimitatrix	(Distenia)	undata
Lamiinae	Acanthocinini	Acanthocinus	nodosus
Lamiinae	Acanthocinini	Acanthocinus	obsoletus
Lamiinae	Acanthocinini	Astylopsis	arcuata
Lamiinae	Acanthocinini	Astylopsis	collaris
Lamiinae	Acanthocinini	Leptostylus	asperatus
Lamiinae	Acanthocinini	Leptostylus	trasversus
Lamiinae	Acanthocinini	Urographis	fasciatus
Lamiinae	Desmiphorini	Eupogonius	tomentosus
Lamiinae	Monochamini	Monochamus	carolinensis
Lamiinae	Monochamini	Monochamus	titillator
Lamiinae	Trachyderini	Ancylocera	bicolor
Lepturinae	Lepturini	Tyocerus	zebra
Lepturinae	Lepturini	Xestoleptura	crassicornis
Prioninae	Prionini	Orthosoma	brunneum
Prioninae	Prionini	Prionus	debilis
Spondylidinae	Asemini	Arhopalus	rusticus

Cnestus (Xylosandrus) mutilatus

Oak Ambrosia Beetle (Curculionoidea: Curculionidae: Platypodinae: *Platypus quercivorus*), Lesser Spruce Shoot Beetle (Curculionoidea: Curculionidae: Scolytinae: Hylesinini: Hylastina: *Hylurgops palliates*), Red-haired Pine Bark Beetle (Curculionoidea: Curculionidae: Scolytinae: Hylesinini: Tomicina: *Hylurgus ligniperda*), Pine Shoot Beetle and Lesser Pine Shoot Beetle (Curculionoidea: Curculionidae: Scolytinae Hylesinini: Tomicina: *Tomicus* spp. of) and Six- toothed Bark Beetle (Curculionoidea: Curculionidae: Scolytinae Scolytini: Ipina: *Ips sexdentatus*), European spruce Bark Beetle (Curculionoidea: Curculionidae: Scolytinae Scolytini: Ipina: *Ips typographus*), Mediterraneran Pine Engraver (Curculionoidea: Curculionidae: Scolytinae Scolytini: Ipina: *Orthotomicus erosus*), Six-toothed Spruce Bark Beetle (Curculionoidea: Curculionidae: Scolytinae Scolytini: Ipina: *Pityogenes chalcographus*),Walnut Twig Beetle (Curculionoidea: Curculionidae: Scolytinae Scolytini: Pityophthorina: *Pityophthorus juglandis*), European Oak Bark Beetle (Curculionoidea: Curculionidae: Scolytinae Scolytini: Scolytina: *Scolytus intricatus*) and Red bay Ambrosia Beetle (Curculionoidea: Curculionidae: Scolytinae Scolytini:Xyleborina: *Xyleborus glabratus*), significant reportable non- target insects were not found.

<u>Native Louisiana (Curculionidae) Ambrosia and Bark Beetles:</u>

Family	**Subfamily**	**Tribe**	**Sub-tribe**	**Genus**	**Species**	
Brentidae	Apioninae			Fallapion	sp.	
Curculionidae	Conoderinae	Lechriopini		Eulechriops	spp. of	
Curculionidae	Cossoninae	Cossonini		Cossonus	spp. of	
Curculionidae	Cossoninae	Rhyncolini		Rhyncolus	spp. of	
Curculionidae	Cossoninae	Rhyncolini		Tomolips	quercicola	
Curculionidae	Curculioninae	Curculionini		Curculio	spp. of	
Curculionidae	Dryopthorinae	Dryophthorini		Dryophthorus	spp. of	
Curculionidae	Entiminae				spp. of	
Curculionidae	Entiminae	Sitonini		Sitona	spp. of	
Curculionidae	Molytinae	Conotrachelini		Epacelles	sp.	
Curculionidae	Molytinae	Hylobiini		Hylobius	pales	
Curculionidae	Molytinae	Hylobiini		Pachylobius	picivorus	
Curculionidae	Molytinae	Lymantini		Pissodes	strobi	
Curculionidae	Platypodinae			Myoplatypus	flavicornis	
Curculionidae	Scolytinae	Hylesinini	Hylastina	Hylastes	porculus	
Curculionidae	Scolytinae	Hylesinini	Hylastina	Hylastes	salebrosus	
Curculionidae	Scolytinae	Hylesinini	Hylastina	Hylastes	tenius	
Curculionidae	Scolytinae	Hylesinini	Hylastina	Hylurgops	rugipennis	pinifex
Curculionidae	Scolytinae	Hylesinini	Tomicina	Dendroctonus	terebrans	
Curculionidae	Scolytinae	Hylesinini	Tomicina	Dendroctonus	valens	
Curculionidae	Scolytinae	Scolytini	Corthylina	Gnathotrichus	materiarius	
Curculionidae	Scolytinae	Scolytini	Corthylina	Monarthrum	fasciatum	
Curculionidae	Scolytinae	Scolytini	Ipina	Ips	avulsus	

Curculionidae	Scolytinae	Scolytini	Ipina	Ips	calligraphus	
Curculionidae	Scolytinae	Scolytini	Ipina	Ips	grandicollis	
Curculionidae	Scolytinae	Scolytini	Ipina	Orthotomicus	caelatus	
Curculionidae	Scolytinae	Scolytini	Pityophtorina	Pityophorus	sp.	
Curculionidae	Scolytinae	Scolytini	Xyleborina	Cnestus	(Xylosandrus)	mutilatus
Curculionidae	Scolytinae	Scolytini	Xyleborina	Xyleborinus	saxeseni	
Curculionidae	Scolytinae	Scolytini	Xyleborina	Xyleborus	affinis	
Curculionidae	Scolytinae	Scolytini	Xyleborina	Xyleborus	celsus	
Curculionidae	Scolytinae	Scolytini	Xyleborina	Xyleborus	ferrugineus	
Curculionidae	Scolytinae	Scolytini	Xyleborina	Xyleborus	pubescens	
Curculionidae	Scolytinae	Scolytini	Xyleborina	Xyleborus	volvulus	
Curculionidae	Scolytinae	Scolytini	Xyleborina	Xylosandrus	crassiusculus	

Euphoria sp.

Japanese Beetle (Scarabaeoidea: Scarabaeidae: Rutelinae: Anomalini: *Popillia japonica*), a significant reportable non- target insects were not found.

Native Louisiana Scarab Beetles:

Family	**Subfamily**	**Tribe**	**Genus**	**Species**
Scarabaeidae				spp. of
Scarabaeidae	Centoniinae	Cetonini	Euphoria	spp. of
Scarabaeidae	Dynastinae	Phileurini	Phileurus	spp. of
Scarabaeidae	Dynastinae			spp. of
Scarabaeidae	Melolonthinae	Diplotaxini	Diplotaxis	spp. of
Scarabaeidae	Melolonthinae	Melolonthini	Fosscarus	spp. of
Scarabaeidae	Scarabaeinae	Canthonini	Deltochilum	gibbosum
Scarabaeidae	Scarabaeinae	Oniticellini	Onthophagus	spp. of

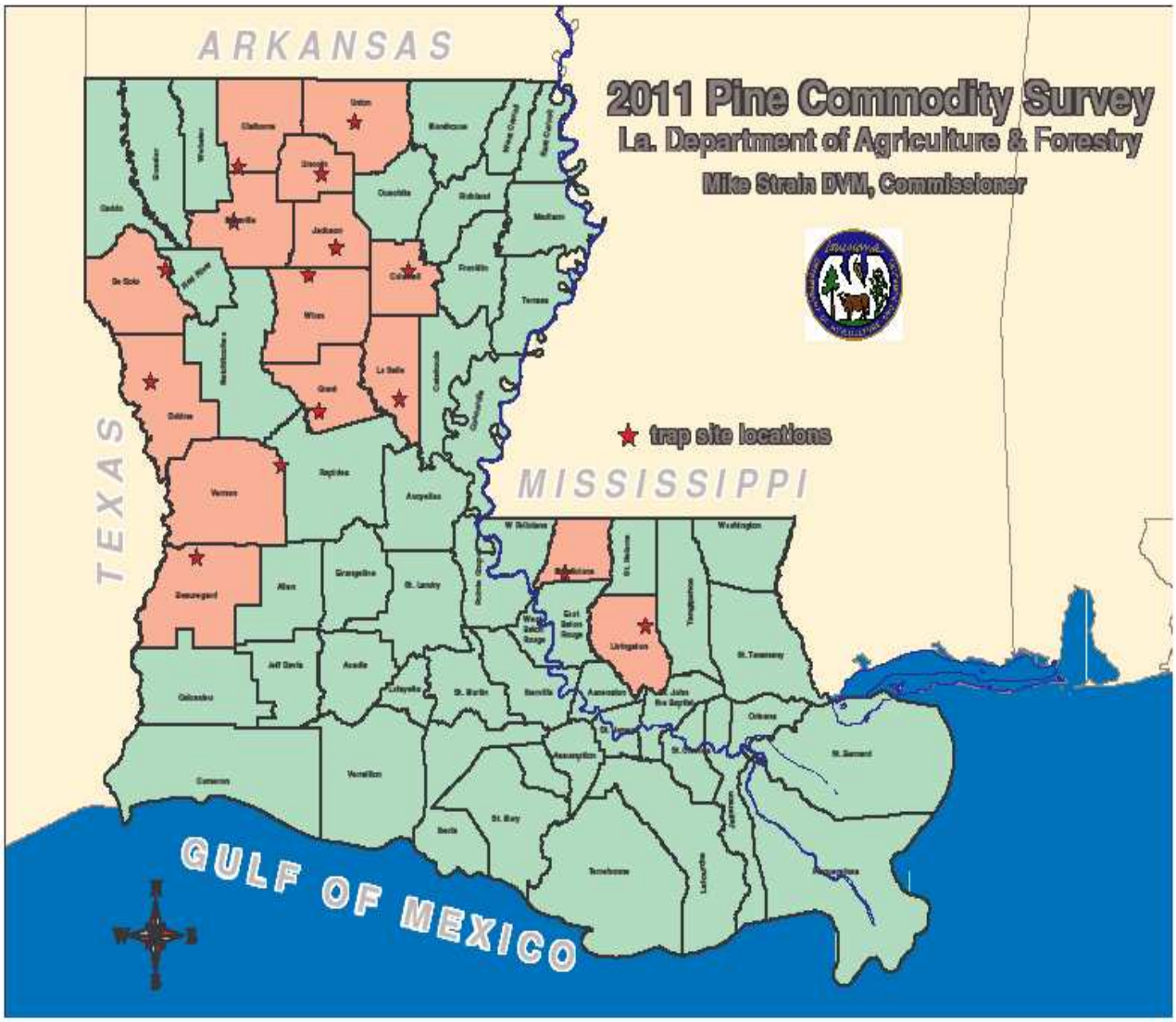
Sirex edwardsii

Sirex Wood wasp (Hymenoptera: Siricidae: *Sirex noctilio*), the target species was not found. This is the first year we have found wood wasps (October/November) in Louisiana. I believe it is due to the fact that the program was started later in the year. The first year (2010) the LDAF completed the project in September, no wood wasps were found.

Native Louisiana Wood wasps:

Family	**Genus**	**Species**
Siricidae	Sirex	edwardsii
Siricidae	Sirex	nigricornis
Siricidae	Urocerus	cressoni

The two year study has provided the state of Louisiana personnel with the knowledge of the known native insect species in the state. The native insects are found in the same *Genus* as the target insects. The climate in the native range of the exotic insects is similar to Louisiana and will attack similar hosts. Therefore the exotic insects would have a high likelihood of reproducing and becoming established if introduced. However, since there is an abundance of native insects in the same sub- family/tribe the exotic insects would have to successfully compete with the indigenous insect complex. The adult exotic insects are similar in appearance to the indigenous species. Consequently, infestations would be difficult to detect, especially at low levels. Attempts to contain or eradicate infestations would be logistically difficult. Due to the Pine Based Commodity Survey, Eric White: USDA-APHIS-PPQ Identifier has become very familiar the native beetles and wasps. The state of Louisiana has a better than average chance of an identification being made if an exotic insect is found.
In addition to target (Genus and Species) of insects surveyed; the Order: Coleoptera: Sub-Orders: Archostemata, Myxophaga, Adephaga and Polyphaga recorded 30 families were screened out initially before taken to Eric White from the forty- five traps. In addition to the Order: Coleoptera the Order: Heteroptera: Sub- Order: Achenorrhyncha and Heteroptera, recorded eight families that was screened out. The Order: Hymenoptera: Symphyta, Aculeata, Parasitica recorded a variety of insects that was added to the USDA-APHIS-PPQ Plant Inspection Station Collection.
KEJ


ARKANSAS
2011 Pine Commodity Survey
La. Department of Agriculture & Forestry
Mike Strain DVM, Commissioner
trap site locations
TEXAS
MISSISSIPPI
GULF OF MEXICO