

# Foreign Drywall Complainant Questionnaires

2/20/09 - 7/31/10

*Louisiana Department of Health and Hospitals*

## **Background**

The Louisiana Department of Health and Hospitals, Office of Public Health, Section of Environmental Epidemiology and Toxicology (SEET), Indoor Air Quality Hotline began receiving calls from Louisiana residents concerned about foreign drywall on 2/20/09. Approximately 1,010 drywall calls<sup>1</sup> were received by SEET between February 20, 2009 and July 30, 2010, an overwhelming majority of which were from Louisiana residents living in the Southeastern region of the state. A phone questionnaire created by Florida's Department of Health, reviewed by the Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (CDC/ATSDR) and modified for Louisiana was administered to callers by SEET staff (Attachment 1). The questionnaire captured information on the physical characteristics of the home, health effects experienced by members of the household, and some demographic information. Questionnaire responses were entered into a Microsoft Access database, duplicates were removed, the data was analyzed, and a descriptive report was developed.

The report summarizing the questionnaire responses is descriptive rather than analytic of the information provided by residents. SEET did not draw any conclusions from the self-selected respondents and self-reported complaints, but rather attempted to characterize the scope and nature of the drywall issues in Louisiana. Between 2/20/09 and 7/31/10, 532 households were surveyed.

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<sup>1</sup> The number of calls received may not represent the number of households that contacted SEET during this period of time as some individuals called more than once and more than one household member may have called SEET to inquire about the drywall issue.

## Survey Results

### I. Location of Home

All but 21 of the households surveyed were located in Southeastern Louisiana with a majority (N=446, 84%) from the Greater New Orleans Metropolitan Area, which includes Orleans, St. Tammany, Jefferson, St. Bernard, Tangipahoa, St. Charles, Washington, Plaquemine, St. John the Baptist, and St. James parishes. Approximately 26% (N=139) of households surveyed are located in Orleans Parish (Table 1). See Attachment 2: Map.

<b>Table 1</b>		
<b>Parish</b>	<b>N</b>	<b>%</b>
Orleans	139	26.1
St. Tammany	121	22.7
Jefferson	85	16.0
St. Bernard	72	13.5
East Baton Rouge	27	5.1
Ascension	17	3.2
Tangipahoa	12	2.3
Livingston	9	1.7
Calcasieu	6	1.1
St. Charles	6	1.1
Lafourche	5	0.9
Washington	5	0.9
Lafayette	4	0.8
Plaquemines	4	0.8
Terrebonne	3	0.6
Iberville	2	0.4
St. John The Baptist	2	0.4
West Baton Rouge	2	0.4
Ouachita	2	0.4
Acadia	1	0.2
Allen	1	0.2
Bossier	1	0.2
Rapides	1	0.2
Missing Parish Info	5	0.9
<b>TOTAL</b>	<b>532</b>	<b>100.0</b>

**Note:** Five questionnaires are missing residence address information.

## II. Case Definition Identifying Homes with Potential Foreign Drywall Issues

Case criteria have been identified by Florida's Department of Health and reviewed by the CDC/ATSDR:

- There is presence of sulfur-like or other unusual odors
- Confirmed presence of Chinese manufactured drywall in the home
- Observed copper corrosion, indicated by black, sooty coating of un-insulated copper pipe leading to the air handling unit present in the garage or mechanical closet of home
- Documented failure of air conditioner evaporator coil (located inside the air handling unit)
- Confirmation by an outside expert or professional for the presence of premature copper corrosion on un-insulated copper wires and/or air conditioner evaporator coils (inside the air handling unit)

Nearly 91% of households surveyed met one or more of the case criteria (N=483) (Table 2). Fifty-nine percent of respondents (n=316) reported that presence of Chinese drywall in the home was confirmed; 61% reported odors (n=327); 61% reported copper corrosion (n=323); 56% reported air conditioner failure (n=299) and 24% reported confirmation by an outside expert of copper corrosion (n=129) (Table 3).

<b>Number of Criteria Met</b>	<b>Households (N)</b>	<b>%</b>
0	49	9
1	108	20
2	92	17
3	97	18
4	119	22
5	67	13
<b>TOTAL</b>	<b>532</b>	<b>100</b>

<b>Criteria Met</b>	<b>Households (N)</b>	<b>%</b>
Unusual odors	327	61
Blackening of copper	323	61
Confirmed Chinese drywall	316	59
A/C evaporator failure	299	56
Expert confirmed premature copper corrosion	129	24

Note: Questionnaires with blanks in these fields but "Yes" responses in other fields were assumed to be "No".

### III. Household Information

Eighty-seven percent (N=464) of respondents are currently living in the home about which they are concerned (Table 4). Sixty-five percent (N=348) of households reported having natural gas service (Table 5). Over half of the households surveyed had a child/children under the age of 18 (N=270, 51%); and 19% of households had at least one elderly individual 65 years of age or older (N=100) (Table 6).

<b>Table 4</b>		
<b>Currently living in home</b>	<b>Households (N)</b>	<b>%</b>
Yes	464	87
No	68	13
<b>Total</b>	<b>532</b>	<b>100</b>

Note: Questionnaires with blanks in this field but responses in other fields were assumed to be "No".

<b>Table 5</b>		
<b>Natural gas service to home</b>	<b>Households (N)</b>	<b>%</b>
Yes	348	65
No	184	35
<b>Total</b>	<b>532</b>	<b>100</b>

Note: Questionnaires with blanks in this field but responses in other fields were assumed to be "No".

<b>Table 6</b>		
<b>Households with Sensitive Populations</b>	<b>Households (N)</b>	<b>%</b>
Households with Children (<18 Years)	270	51
Households with Pets	236	44
Households with Elderly ( $\geq$ 65 Years)	100	19

Note: Questionnaires with blanks in this field but responses in other fields were assumed to be "No".

#### IV. Reported Health Effects<sup>2</sup>

The four most common symptoms reported by adults are headache (138, 26%), respiratory infection (96, 18%), eye irritation/redness (89, 17%) and dry cough (77, 14%) (Table 7). The most common symptoms reported among children (< 18 years of age) are respiratory infection, dry cough, headache, nosebleeds and eye irritation /redness (Table 8). Tables 9 and 10 show the “other medical history information”. For both adults and children the most common “other” symptom reported was allergies/respiratory problems.

<b>Table 7</b>		
<b>Health effect (adults)</b>	<b>N</b>	<b>%</b>
Headache	138	26
Respiratory infection	96	18
Eye irritation /redness	89	17
Dry cough	77	14
Irritated throat	58	11
Nosebleeds	44	8
Rash	22	4
Nausea	22	4
Dizziness	18	3
Asthma development	10	2
Diarrhea	11	2
Runny Nose	10	2
Asthma exacerbation	8	2
Dry mouth	7	1
Vomiting	8	2
Shortness of breath	10	2

Note: Runny Nose and Shortness of breath added after 06-12- 2009. Blanks were assumed to be "No" replies.

<b>Table 8</b>		
<b>Health effect (children)</b>	<b>N</b>	<b>%</b>
Respiratory infection	51	18.9
Dry cough	40	14.8
Headache	37	13.7
Nosebleeds	31	11.5
Eye irritation /redness	25	9.3
Irritated throat	16	5.9
Rash	13	4.8
Asthma development	11	4.1
Asthma exacerbation	7	2.6
Nausea	7	2.6
Diarrhea	5	1.9
Runny Nose	4	1.5
Vomiting	4	1.5
Dizziness	3	1.1
Shortness of breath	1	0.4
Dry mouth	1	0.4

Note: Runny Nose and Shortness of breath added after 06-12- 2009

<sup>2</sup> Inconsistencies among survey respondents and survey takers in reporting health effects were identified. Confidently distinguishing between health effects that occurred within the last two weeks and those that occurred over a longer period of time could not be accomplished, so it was decided that all health effects recorded would be included in this descriptive report.

<b>Table 9</b>		
<b>Other medical history information (adults)</b>	<b>N</b>	<b>%</b>
Allergies	41	7.7
Respiratory Problems	38	7.1
Breathing Problems	19	3.6
Cardiac Problems	17	3.2
Congestion	15	2.8
Headache	15	2.8
Coughing	12	2.3
Fatigue	11	2.1
Sneezing	9	1.7
Nosebleed	9	1.7
Eye Irritation	8	1.5
Irritated Throat	8	1.5
Asthma	6	1.1
Bronchitis	5	0.9
Burning Sensation	5	0.9
Immune Deficiency	5	0.9
Rash	5	0.9
High Blood Pressure	4	0.8
Insomnia	4	0.8
Seizures	4	0.8
Gastrointestinal Pain	4	0.8
Ear Infection	3	0.6
Heart Palpitation	3	0.6
Itching	3	0.6
Runny Nose	3	0.6
Sleeping Problems	3	0.6
Skin Discoloration	3	0.6
Arthritis	2	0.4
Chemical Taste	2	0.4
Cold	2	0.4
Dehydration	2	0.4
Emphysema	2	0.4
Miscarriage	2	0.4
Nausea	2	0.4
Neurological Damage	2	0.4
Skin Irritation	2	0.4
Body Aches	1	0.2
Blackouts	1	0.2
Bladder Infection	1	0.2
Blurred Vision	1	0.2
Cancer	1	0.2
Depression	1	0.2
Dizziness	1	0.2
Dry Skin	1	0.2
Elevated Blood Count	1	0.2
Fever	1	0.2
Frequent Urination	1	0.2
Gout	1	0.2
Hair Loss	1	0.2
Joint Pain	1	0.2
Light Headed	1	0.2

Losing Voice	1	0.2
Loss of Tooth Enamel	1	0.2
Lung Problems	1	0.2
Mouth Sores	1	0.2
Multiple Sclerosis	1	0.2
Numbness	1	0.2
Panic Attack	1	0.2
Phlegm	1	0.2
Pneumonia	1	0.2
Pregnancy Difficulty	1	0.2
Regurgitation	1	0.2
Scarring	1	0.2
Stiff Limbs	1	0.2
Stroke	1	0.2
Swallowing Problem	1	0.2
Sweating	1	0.2
Thyroid Problem	1	0.2
Vertigo	1	0.2
Weight Loss	1	0.2

<b>Table 10</b>		
<b>Other medical history information (children)</b>	<b>N</b>	<b>%</b>
Respiratory Problems	24	8.9
Allergies	10	3.7
Congestion	8	3.0
Ear Infection	8	3.0
Fever	7	2.6
Nosebleed	6	2.2
Breathing Problems	5	1.9
Asthma	4	1.5
Coughing	4	1.5
Sneezing	4	1.5
Cold	3	1.1
Rash	3	1.1
Flu-like Symptoms	3	1.1
Chest Pain	2	0.7
Headache	2	0.7
Runny Nose	2	0.7
Weight Gain	2	0.7
Bloody Mucus	1	0.4
Cerebral Palsy	1	0.4
Diarrhea	1	0.4
Dizziness	1	0.4
Hoarse Throat	1	0.4
Nausea	1	0.4
Pulmonary Problems	1	0.4
Seizure	1	0.4
Spotting of Blood	1	0.4
Hair loss	1	0.4
Stomach problem	2	0.7

Note: Population based on the households surveyed that had a child or children under the age of 18 (n=270)

The proportion of households reporting one or more selected<sup>3</sup> health effects generally increased with the number of case criteria that the household met (Table 11). Almost half of all households surveyed reported that a member in their household had a selected health effect (n=286; 54%) (Table 11).

<b>Table 11</b>		
<b>Households reporting one or more selected health effects</b>		
<b>Number of Case Criteria Met</b>	<b>Households Reporting Health Effect (N)</b>	<b>% of Households Meeting the Same Number of Criteria that Reported Selected Health Effect</b>
<b>0</b>	17	35
<b>1</b>	48	44
<b>2</b>	46	50
<b>3</b>	45	46
<b>4</b>	80	67
<b>5</b>	50	75
<b>Total</b>	<b>286</b>	<b>54</b>

Note: The denominator for the "Percent of Households" is the number of households meeting the same number of criteria (i.e., 35% of the 49 households meeting 0 criteria reported a selected health effect).

#### V. Medical Treatment Sought

Approximately one third of questionnaire respondents (N=165; 31%) reported that an adult in their household had sought medical treatment (Table 12). Twenty-two percent of households with children sought medical treatment for a child (N=60). Eleven percent of households with pets sought medical treatment for a pet (N=25).

<b>Table 12</b>		
<b>Medical Treatment Sought</b>	<b>Households (N)</b>	<b>%</b>
Adults	165	31
Children	60	22
Pets	25	11

<sup>3</sup> Selected health effects include headache, nosebleed, dry cough, irritated throat, eye irritation/redness, and asthma exacerbation.

VI. Households That Meet the Case Definition

Households were included if they met all 5 criteria or met 4 out of 5 criteria (all except “confirmed Chinese drywall” or “expert confirmed premature copper corrosion”). Tables 13-15 provide a description of the 146 households that met the defined criteria.

<b>Table 13</b>	
<b>Parish</b>	<b>N</b>
St. Tammany	62
St. Bernard	17
Orleans	17
Jefferson	14
East Baton Rouge	13
Ascension	6
Livingston	4
St. Charles	3
Washington	2
Tangipahoa	2
Plaquemines	2
Lafourche	2
West Baton Rouge	1
Ouachita	1
<b>Total</b>	<b>146</b>

<b>Table 14</b>	
<b>Year Built or Remodeled</b>	<b>N</b>
2008	4
2007	26
2006	96
2005	11
Before 2005	8
Unknown	1
<b>Total</b>	<b>146</b>

Note: Where responses in other fields indicated home rebuilt after Katrina but year not indicated in these fields assumed rebuilding / remodeling occurred in 2006.

<b>Table 15</b>	
<b>Households:</b>	<b>N</b>
With 1 or more children < 18 years	83
With 1 or more adults 18-64 years	134
With 1 or more adults ≥ 65 years	24
With 1 or more pets	72
Reporting 1 or more selected health effect	107

**Attachment 1: Questionnaire**

Name of Interviewer: \_\_\_\_\_ Date: \_\_\_\_\_

Name of Interviewee: \_\_\_\_\_ Interviewee's Phone Number: \_\_\_\_\_

Alternate contact information: \_\_\_\_\_

1. Are you willing to participate in a survey that includes health questions? Yes \_\_\_ No \_\_\_

Please contact: US CPSC 800-638-2772

Louisiana Office of the Attorney General 800-351-4889

Louisiana Free Legal Aid 800-310-7029

2. Type of facility: Residential \_\_\_\_\_ Non residential \_\_\_\_\_ Describe \_\_\_\_\_

3. Address, City, Parish; Zip: \_\_\_\_\_

4. Do you rent \_\_\_\_\_ or own \_\_\_\_\_ ? When did you move into this property? Year \_\_\_\_\_

5. In what year was the property built? \_\_\_\_\_ Remodeled? \_\_\_\_\_

Has suspected Chinese drywall been installed since 2000? Yes \_\_\_ No \_\_\_ If yes, what year(s) \_\_\_\_\_

6. Are you currently at this address? Yes \_\_\_ No \_\_\_ If no, date moved out \_\_\_\_\_

7. Have you noticed any sulfur-like or other unusual odors? Yes \_\_\_ No \_\_\_

8. Has it been confirmed that Chinese manufactured drywall is present in the property? Yes \_\_\_ No \_\_\_

9. Have you observed any blackening of copper? Yes \_\_\_ No \_\_\_

10. Have you had an outside expert or professional confirm the presence of premature copper corrosion?

Yes \_\_\_ No \_\_\_

11. Have you experienced air conditioner unit problems/failure? Yes \_\_\_ No \_\_\_

12. Was the A/C problem due to copper coil failure? Yes \_\_\_ No \_\_\_ How many times have the copper coils been replaced? \_\_\_\_\_

13. Does the property have natural gas service? Yes \_\_\_ No \_\_\_

14. Number of adults 18-64 \_\_\_\_\_ Number of adults  $\geq 65$  \_\_\_\_\_ Number of minors  $< 18$  \_\_\_\_\_ Number of males \_\_\_\_\_ Number of females \_\_\_\_\_ Number of pets \_\_\_\_\_

15. Check any symptoms adults have experienced in the last 14 days **OR**, if moved, out in the last 2 weeks of occupancy.

Headache	Yes___No___	Pre-existing___
Nosebleeds	Yes___No___	Pre-existing___
Runny nose	Yes___No___	Pre-existing___
Dry cough	Yes___No___	Pre-existing___
Irritated throat	Yes___No___	Pre-existing___
Respiratory infection	Yes___No___	Pre-existing___
Diarrhea	Yes___No___	Pre-existing___
Vomiting	Yes___No___	Pre-existing___
Dry mouth	Yes___No___	Pre-existing___
Eye irritation and/or redness	Yes___No___	Pre-existing___
Dizziness	Yes___No___	Pre-existing___
Nausea	Yes___No___	Pre-existing___
Rash	Yes___No___	Pre-existing___
Shortness of breath	Yes___No___	Pre-existing___
Asthma exacerbation	Yes___No___	Pre-existing___
Asthma development	Yes___No___	Pre-existing___

Other medical history information:

\_\_\_\_\_

16. Check any symptoms minors <18 have experienced in the last 14 days **OR**, if moved, out in the last 2 weeks of occupancy.

Headache	Yes___No___	Pre-existing___
Nosebleeds	Yes___No___	Pre-existing___
Runny nose	Yes___No___	Pre-existing___
Dry Cough	Yes___No___	Pre-existing___
Irritated throat	Yes___No___	Pre-existing___
Respiratory infection	Yes___No___	Pre-existing___
Diarrhea	Yes___No___	Pre-existing___
Vomiting	Yes___No___	Pre-existing___
Dry mouth	Yes___No___	Pre-existing___
Eye irritation and/or redness	Yes___No___	Pre-existing___
Dizziness	Yes___No___	Pre-existing___
Nausea	Yes___No___	Pre-existing___
Rash	Yes___No___	Pre-existing___
Shortness of breath	Yes___No___	Pre-existing___
Asthma, exacerbation	Yes___No___	Pre-existing___
Asthma development	Yes___No___	Pre-existing___

Other medical history information: \_\_\_\_\_

17. When do these symptoms occur Morning \_\_\_\_ Afternoon \_\_\_\_ All day long \_\_\_\_ Certain seasons (e.g. winter, summer) \_\_\_\_ No noticeable pattern \_\_\_\_

18. Have you felt better when you are away from the property? Yes \_\_\_ No \_\_\_

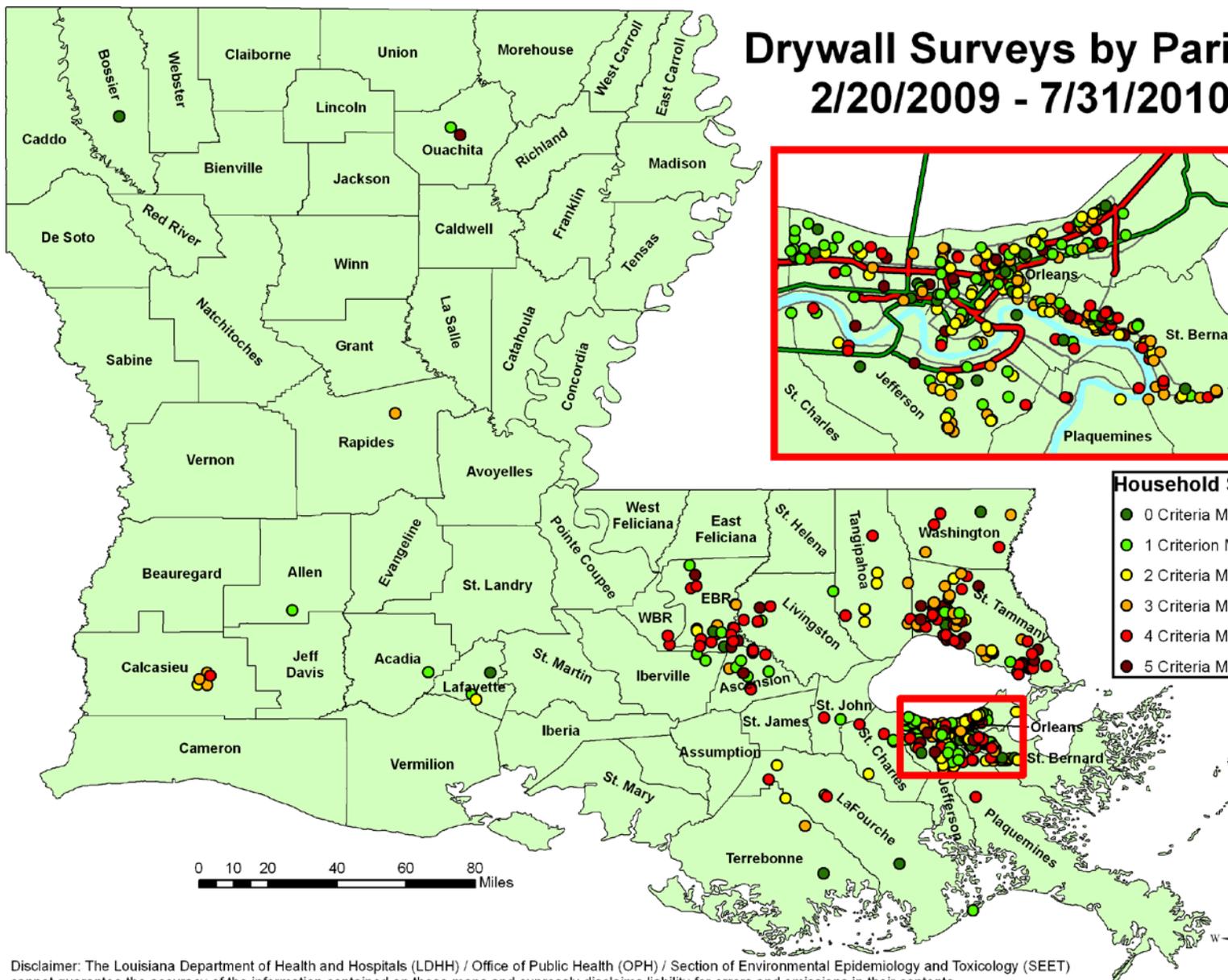
19. Has any adult sought medical treatment for these conditions in the last 2 weeks **OR**, if moved out in the last 2 weeks of occupancy? Yes \_\_\_ No \_\_\_ Any minors? Yes \_\_\_ No \_\_\_

20. Have you brought any of your pets for breathing or eye problems to your veterinarian within the last 2 weeks **OR**, if moved out in the last 2 weeks of occupancy? Yes \_\_\_ No \_\_\_

**Attachment 2: Map**

# Drywall Surveys by Parish

## 2/20/2009 - 7/31/2010



Disclaimer: The Louisiana Department of Health and Hospitals (LDHH) / Office of Public Health (OPH) / Section of Environmental Epidemiology and Toxicology (SEET) cannot guarantee the accuracy of the information contained on these maps and expressly disclaims liability for errors and omissions in their contents.

\* Map produced August 18, 2010 using surveys completed between 2/20/2009 and 7/31/2010.

A total of 532 surveys were completed; however, only 525 could be mapped due to lack of location information.

Each dot is approximately 4 miles wide (1 mile in insert map); and therefore dots are placed on top of each other with priority given to those with the most criteria met.