

NATIONAL SELECTIVE REMEDIATION PROTOCOL FOR PROPERTIES CONTAINING CORROSIVE DRYWALL



Backed by the 10-Year National CDW Clearance Warranty
National Construction Warranty Corporation

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Overview

The following report details the tactics, costs, and benefits of the National Selective Remediation Protocol (NSRP), which was developed for the repair of homes containing corrosive drywall (CDW). The NSRP combines the existing remediation protocols that require complete removal of all interior elements of the home, with an option for qualifying homes for a selective removal protocol that requires repairs only within the areas of the home damaged by corrosive drywall.

The balance of these two protocols is accomplished by strict guidelines used to determine the application of the appropriate repair protocol. The NSRP requires onsite inspections by a qualified third-party inspector to assure compliance with applicable guidelines for each protocol within the NSRP.

Upon completion of the repairs, a home remediated using the NSRP qualifies for a 10-year warranty with up to \$500,000 of protection for any problems that may arise from the repairs, including remaining CDW or the presence of excess levels of residual sulfur gasses associated with CDW.

By applying the benefits of the NSRP, billions of dollars can be saved or more efficiently applied to expedite the repair of all CDW homes. The NSRP has the real potential to save tens of thousands of homeowners from financial ruin and prolonged emotional stress caused by the ownership of a CDW-afflicted home.

An Absolutely Critical Need

Estimates for the repair of homes affected by CDW range from \$8 billion up to \$25 billion. With thousands of potential defendants and possibly hundreds of thousands of plaintiffs, the challenge of settling and funding the repairs for all of these devalued homes is daunting on a scale previously unmatched in residential construction defect history.

In addition to the challenge of funding the repair of known CDW homes, it must be assumed that the reported cases to date do not accurately represent the true number of affected homes. National has projected the number of affected homes to be close to 350,000.

A study conducted by National Construction Warranty provided reasonable arguments to support an estimate of three to four times the original estimate of 100,000 affected homes. The heaviest concentrations remain in Florida, Louisiana, Mississippi, and Texas.

The potential exists through the NSRP to balance out this dramatic increase in CDW homes with the fact that the majority of these homes contain lower quantities or isolated areas of CDW on average than the amounts calculated in the projections published in 2009 by the Miami Herald Tribune. On average, a CDW home contains approximately 18% CDW as a percentage of the total drywall in the home, most of which is domestic or non-corrosive drywall (source: Jack Frost's data from over 400 CDW inspections in Florida). Original assumptions figured the amount of CDW within an average home at 65% to 100%. Such a high percentage of CDW has been found only in a small fraction of the hundreds of CDW homes studied, and is typically isolated to homes by large builders known to have purchased massive inventories of CDW for use in new homes being constructed from 2005 to 2007. The appendix of this report has additional data on the number of CDW homes, hurricane damage counts, patterns, and other supporting data.

With the addition of at least two hundred thousand CDW homes, it is absolutely imperative to have a remediation protocol that allows for repair of the specific areas of the qualifying homes containing limited or isolated amounts of CDW. .

Time Is Of The Essence

Every day that passes is another day that afflicted homeowners suffer the financial and emotional stress of dealing with their CDW homes. Many of these homeowners are facing serious financial stress, including potential foreclosure or bankruptcy brought on largely by the effects of owning a CDW home.

National's projections indicate that approximately 50% to 65% of the 350,000 homes expected to contain CDW would qualify for selective repairs within the NSRP. By having a National warranty in place on these homes, the stigma and associated loss of value will be significantly lessened. The NSRP incorporates the guidelines advanced by the Consumer Products Safety Commission, but distinguishes the unique needs of each individual CDW home. This optimization of funds allows for a reasonable, but effective remediation, thereby enticing settlement and expediting recovery for these homeowners.

By aggressively advancing the NSRP, embattled homeowners could see their CDW problem resolved, often at a fraction of the cost of the original estimates based on a full tear-out protocol. Thousands of CDW homeowners could proceed with self-funded repairs or with limited contributions from participating defendants due to the potentially dramatic reduction in repair costs offered by the NSRP. With proper documentation provided by a qualified third-party inspector, homeowners could potentially recover the cost of their self-funded remediation if monies become available from holdout defendants or other sources at a later date. The NSRP would also reduce ancillary costs suffered by CDW homeowners, such as the prolonged leasing of a substitute residence due to the uninhabitable condition of their CDW home. Waiting for reimbursement for reasonable out-of-pocket repair costs while living comfortably in their own homes is far more desirable to most homeowners than waiting, possibly for years, for unknown funding while living in a leased home and making mortgage payments on an unoccupied CDW home.

In approximately 10% to 15% of the CDW homes that qualify for the selective repairs within the NSRP, limited scopes and isolated locations of CDW would allow the homeowners to remain in their homes while repairs are made to the affected area or areas. This considerable convenience and cost savings is not possible when a full tear-out protocol is uniformly applied to all CDW homes.

Defendants and the defendant's insurance carriers are much more likely to participate in a voluntary settlement that specifies the NSRP, which would reduce the average exposure that defendants would be agreeing to fund. By making the funding requirements more reasonable, defendants can be enticed to participate in a settlement more quickly, avoiding further delays in class litigation. Additionally, requirements for Claimant participation in a class

action utilizing the NSRP are likely to be less restrictive. This would allow more homeowners to participate in the settlement and reduce their burden of proof to join the class.

Indirect damages caused by CDW can be easily observed by the devaluation of non-CDW homes located in areas with known concentrations of CDW homes. This residual CDW effect can be offset by the availability of a National Clearance Warranty. While the National Warranty returns a significant portion of the value to these location-challenged properties, a protocol that reduces the potential remediation cost of the average CDW home to less than half of the current average cost would lessen the overall stigma of the problem. The NSRP has the potential to quickly bring the real and perceived CDW issue back to a reasonable level that more accurately reflects the true risks and costs associated with the problem.

When the risk of testing a home for the presence of CDW is no longer a guaranteed “death sentence” for the value of the home when CDW is actually found, homeowners who have been ignoring the potential problem are much more likely to proceed with having their home tested.

Existing CDW homeowners who had been told that the remediation cost was automatically equal to more than 30% of the value of the home can now use the NSRP, and may be able to proceed with selective repairs costing only a fraction of the original full remediation estimate, while still qualifying for a National Warranty.

By removing the instant loss of value associated with CDW discovery, the slow recovery of CDW home values can and will be accelerated. This change in perception will also have residual benefits for homes without CDW that are located in communities burdened by the CDW stigma.

Third-Party Warranty Protection from National

By backing the NSRP with a full 10-year warranty, which would protect homeowners from the possible cost of removing CDW missed during the original remediation, homeowners can rest assured that the safety, value, and marketability of their homes will be substantially restored.

National’s CDW clearance Warranty is underwritten by Western Pacific Mutual Insurance Company, A Risk Retention Group (WPMIC). As an A.M. Best rated “Excellent” insurer with 25 years of quality home warranty experience, Western provides the solid backing necessary to underwrite a problem as significant as CDW. By providing a warranty established under a risk retention group, the

National warranty can be offered throughout the United States through certified contractors utilizing a qualified third-party inspector.

In addition to solid underwriting, National has partnered with RWC (Residential Warranty Corporation) to manage the administration and claim processing of National's CDW Clearance Warranty. RWC is one of the largest independent home warranty companies in the country. They currently have more than one million home warranties in force. With 28 years of warranty experience, RWC offers excellent customer service aimed at resolving claim issues for homeowners quickly and fairly.

Both WPMIC and RWC have participated in other construction defect-related warranty programs through affiliates of National Construction Warranty Corporation. Moisture Warranty Corporation provided the field services and warranty program backing the national class-action settlement for Dryvit Systems (the country's largest manufacturer of EIFS - Exterior Insulation Finish Systems.) The Dryvit national class-action settlement represented a successful implementation of a reasonable repair program for a specific construction defect. MoistureFree Warranty, a predecessor to National, was responsible for the administration of this warranty to great success. National brings this experience to the implementation and administration of the CDW Warranty.

For the majority of CDW homeowners, peace of mind and a return to their original equity position is all they wish to gain from a settlement. The NSRP and National Warranty provide that assurance at a fraction of the cost of current repair protocols.

Efficient Use of Available Funds

The NSRP addresses the very real problem of funding the repair of 300,000 to 400,000 homes believed to contain CDW. As of this writing, no significant announcements relative to funding for the repair of CDW homes have been announced. Knauf, the German parent company of several China-based drywall manufacturers known to have produced corrosive board, is in settlement discussions with U.S. attorneys to address repairs to homes proven to contain Knauf-associated drywall. However, while Knauf is believed to represent an estimated 25% to 40% of the tainted drywall shipped into the United States, it is highly unlikely that Knauf will fully fund the repair of more than a

small fraction of CDW homes, due to restrictions that are likely to accompany any settlement. These restrictions are likely to include proof of qualifying product, relative percentage of qualifying product, jurisdictional limits, Claimant contribution requirements, or one of several other common limits and restrictions associated with construction defect class-action settlements.

The NSRP concentrates available dollars where they make the most impact towards resolving the homeowner's problems, without wasting dollars that would be better used to repair additional selective removal homes or to fund homes requiring full tear-out.

All defendants involved with CDW are much more likely to discuss participation in a settlement requiring the NSRP since their contributions would be applied to resolving the problems in significantly more homes by the lowering the average remediation cost, possibly by more than 50%. Reductions in litigation costs will be another benefit of the NSRP since defendants are more likely to volunteer to participate in a settlement rather than litigate.

There is currently a direct correlation between the increased number of suspected CDW homes and the cost to repair these homes. By incorporating the NSRP as an element of a global settlement strategy, repair funds could be much more efficiently applied, reducing the total funding requirements by potentially billions of dollars.

The Step by Step Process For Applying The NSRP

National has introduced the following NSRP as an option for those homeowners wishing to repair their homes and receive a warranty to back those repairs.

Step 1: Initial Home Inspection Confirming CDW

- All homes must be confirmed to contain some amount of corrosive drywall using the guidelines recommended by the Consumer Products Safety Commission (CPSC).
- Preservation of evidence performed in compliance with the guidelines outlined by Pre-Trial Order 1(B) in MDL 2047

Step 2: Initial XRF Inspection to Determine The Proper Protocol Within The NSRP

- An initial XRF (X-Ray Fluorescence) survey of the home, using the published standard XRF inspection protocol by National, is completed to prequalify homes for possible inclusion in the Selective Removal option of the NSRP.
- Homes determined to have any quantity of CDW distributed in over 25% of the Rooms of the home do not qualify for Selective Removal within the NSRP. A “Room” is defined as all separated interior spaces, excluding closets. Closets are to be considered part of the space that provides access. If a closet contains CDW, then the associated Room is counted as containing CDW.
- Homes where the CDW is isolated to a single floor, such as homes with flood damage to a lower floor, can qualify for the Selective Removal protocol within the NSRP provided that no other area of the home has CDW and there is no evidence of copper corrosion found on the floors without CDW.

Step 3: Complete XRF Mapping of Homes Believed to Qualify For Selective Removal

Homes believed to qualify for the Selective Removal protocol within the NSRP must be mapped with XRF following the latest XRF Mapping protocol published by National, including these general guidelines:

- XRF readings in a uniform pattern not to exceed 36” from any other XRF reading.
- Ceilings are to be included in the survey unless they are of uniform thickness other than 1/2”.
- Tag all targeted CDW areas using the Copper Pin method.
- All initial readings exceeding 1850 ppm must be confirmed by board markings, labels, S8 testing, corrosion testing or other means accepted by the CPSC or the Copper Pin method accepted by National.
- Readings by handheld XRF with less than 200 ppm Strontium variance will be considered to be from the same manufacturer and either tagged to be removed or remain.
- When in doubt, the boards are to be marked for removal.
- All outlet, switch, and other accessible areas of copper wire are to be opened and the condition of the copper ground wire is to be

documented and photographed. Areas of copper corrosion are to be XRF mapped and tagged using the Copper Pin method.

- Unlike a standard XRF clearance survey protocol, the XRF Mapping Survey requires access to all drywall for testing. Ladders or scaffolding may be necessary to access vaulted areas.

NOTE: Copper Pin Mapping and Testing Method: Copper tacks or nails are pushed into the suspect drywall to a depth of at least 3/8" to indicate an area of removal. After a period of no less than 10 days, only the inspector may remove the Copper Pins. Upon removal, the end of the copper pin inserted into the drywall should be darkened by corrosion consistent with CDW exposure. If the copper pins are not corroded when removed, further testing should be done to establish that the boards in the suspect area are in fact corrosive drywall. (Copper Pin method developed and provided courtesy of Howard Ehram of Chinese Drywall Screening, LLC, Port St. Lucie, FL.).

Step 4: Selective Removal Report Submitted to National for Approval.

- Inspector forwards the Selective Removal Report to National along with payment for the National CDW Warranty.
- National reviews the inspector's report to verify qualification for Selective Removal.
- Authorization to proceed with the Selective Removal is forwarded to the Inspector by National.

Step 5: Inspector Oversight and Documentation of the Selective Removal Process

- Inspector meets with the Repair Contractor to confirm the areas to be repaired and review Selective Removal repair requirements, including inspection of all areas prior to removal of the drywall in the selected areas to assure proper containment, a negative pressure working area, and debris containment and removal.
- Inspector observes and photo documents the selected area following drywall removal, HEPA cleaning, and the application of approved neutralizing agent prior to the installation of any replacement materials.
- Pre-Rebuild Inspection is submitted to National for approval prior to rebuild. Any and all deficiencies are noted and require modification prior to proceeding with the rebuild.

Step 6: Inspector Submits Final Report For Warranty

- National reviews final report submitted by the inspector.
- The National CDW Clearance Warranty is issued on the home.

General Select Removal Requirements

- All smoke and alarm sensor units must be replaced throughout the entire home.
- Copper gas lines with any detectable level of corrosion must be replaced.
- Any copper element of the liquid HVAC systems with any signs of corrosion must be replaced.
- Mechanical elements of the HVAC do not require replacement unless recommended by the inspector due to direct exposure to corrosive board.
- Plumbing connections that show any significant amount of corrosion must be replaced.
- Wiring within the remediated areas must be replaced and re-terminated at least 12 feet from the edge of the closest corrosive board or 12 feet from the location of any observed copper corrosion, whichever is farther.
- Any other copper corrosion in the home that is not in the vicinity of the CDW to be removed (within 12 feet) must be investigated to determine the source of the corrosion.
- Any flexible return or supply line duct within 12 feet of the corrosive board will be removed back to the nearest hard duct plenum.
- All porous insulation located within 12 feet of the corrosive board will be replaced, except for attic or ceiling insulation above ceilings that are to remain intact throughout the entire area of repair.
- All open wall cavities created by the removal of the CDW must be treated using a National-approved surface-neutralizing chemical prior to rebuild.
- Appliances throughout the home can remain, at the discretion of the homeowner. Appliances and other electrical equipment near the location of the CDW to be removed should be more carefully assessed to determine if corrosion may have affected their performance or service life.
- All corrosive drywall or suspected corrosive drywall must be removed regardless of location in the home, including garages, outbuildings, or any other structure on the property.

Suspect Board Removal Requirements

- Area of remediation should be sealed sufficiently to prevent dust transfer to unaffected areas.
- Negative pressure should always be present in the work area with exhausted air HEPA filtered to the exterior and clear of the home to avoid reintroduction of dusts.
- Hard floors should be completely sealed with 3mm plastic.
- Any cabinetry or other items that can not be removed from within the work area should be completely sealed in plastic wrap prior to starting repairs.
- Carpet and pads in affected area must be removed and discarded.
- Remaining walls in the affected area should be covered and sealed with plastic.
- Any penetration through the remaining drywall ceiling (fixtures, vents, speakers, outlets, etc.) must be covered and sealed with plastic.
- All debris to be removed from the affected area must be placed in 3mm plastic bags and sealed prior to removal from the affected area.
- Entry and regress from the affected area should be minimized and staged to reduce migration of corrosive dust particles from the affected area.

How Big Is The Problem?

CDW Shipment and Affected Home Estimates

Drywall shipments from China

Since 2006, more than 550 million pounds of drywall were imported from China into the United States, enough to make tens of thousands of houses. Sixty percent of Chinese drywall came into Florida, through seven ports, including Port Manatee.

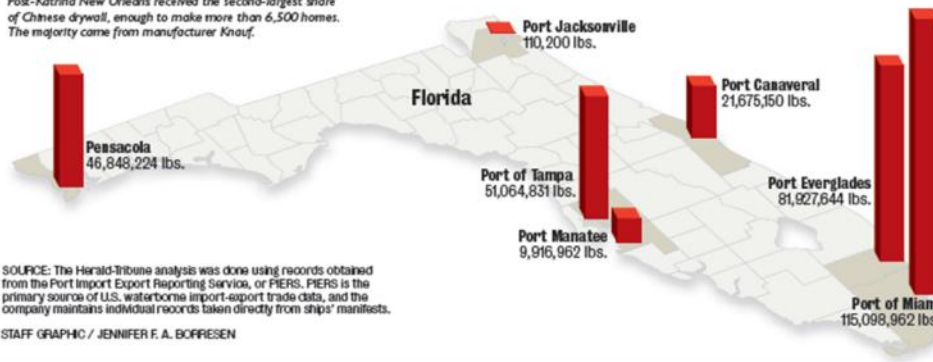
States importing at least 1 million pounds of drywall from China since Jan. 1, 2006.



Drywall experts say a standard 12-foot by 4-foot drywall board weighs about 90 pounds on average. A typical 2,000-square-foot home uses about 100 such boards. By that estimation, enough Chinese drywall entered the U.S. since 2006 to potentially make more than 61,000 homes, and more than 36,000 in Florida alone.

	Number of pounds	Est. number drywall boards	Est. number of homes
FL	326,641,973 lbs.	3,630,000	36,000
LA	60,153,501 lbs.	668,000	7,000
CA	51,934,137 lbs.	577,000	6,000
MS	27,261,276 lbs.	303,000	3,000
TX	18,908,997 lbs.	221,000	2,000
SC	18,797,475 lbs.	209,000	2,000
NC	18,050,760 lbs.	201,000	2,000
NY	15,894,470 lbs.	176,000	1,800
GA	6,050,370 lbs.	67,000	670
WA	2,437,491 lbs.	27,000	270
PA	2,173,144 lbs.	24,000	240
NJ	1,520,760 lbs.	17,000	170

Post-Katrina New Orleans received the second-largest share of Chinese drywall, enough to make more than 6,500 homes. The majority came from manufacturer Knauf.



SOURCE: The Herald-Tribune analysis was done using records obtained from the Port Import Export Reporting Service, or PIERS. PIERS is the primary source of U.S. waterborne import-export trade data, and the company maintains individual records taken directly from ships' manifests.

STAFF GRAPHIC / JENNIFER F. A. BORRESEN

36,000 FL Homes?

Assumes **100%** of the Home is CDW. (Herald Tribune 2009)

Actual Average Amount In Homes is About **18%**.

Total Number of Florida Homes Is Likely to Be Closer to

140,000

This is a graphic produced by the Herald Tribune which some of you may be familiar with. It does an excellent job of showing the locations and quantity of drywall that was imported from China beginning in 2006. The chart shows the estimated number of homes affected by state with Florida being the largest with an estimated 36,000 homes. What the creators of this graphic couldn't have known at the time was that their estimate of the number of homes was off by an estimated factor of about four times, which increases the estimated number of homes with CDW to over 140,000 in Florida alone. The reason for this increase is that very few homes contain 100% CDW. In fact, the average amount of CDW found in a home is less than 20%. Ceilings are rarely done with CDW because the code requires 5/8" drywall in Florida and CDW was only shipped as 1/2" drywall. Ceilings account for about a third of the drywall used in a home. Additionally, it was very common for a supplier or distributor to randomly mix the CDW with the domestic drywall through the normal flow of the supply chain. Builders typically didn't ask for a particular brand of drywall, just a particular thickness and size. A home might receive four or more deliveries of drywall over the course of a few weeks while the drywall work was being completed. One load might be CDW while the rest were domestically produce board.

HURRICANE DAMAGE REQUIRING DRYWALL

FEMA Homes Damaged Data - 2005 Hurricane Season (Hurricanes Katrina, Wilma and Rita Only)

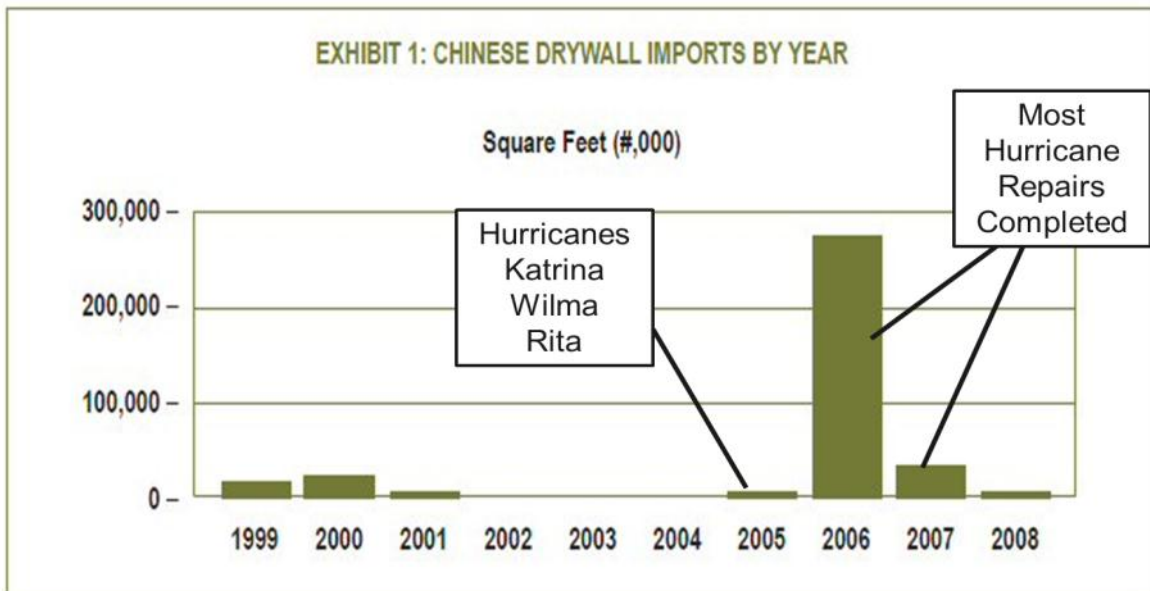
Housing Unit Damage Estimates as of February 12, 2006*
Hurricanes Katrina, Rita, and Wilma - Total Housing Units with Damage

	Owner-Occupied Housing Units				Renter-Occupied Housing Units				TOTAL
	Owner-Occupied	Renter-Occupied	Owner-Occupied	Renter-Occupied	Owner-Occupied	Renter-Occupied	Owner-Occupied	Renter-Occupied	
Total Requiring Drywall	338,417								
Homes With Major Flood Damage	250,386								
Additional Homes With Major Wind Damage	88,031								
Homes with flood damage									
Homes in FEMA 1									
Minor Damage	39,785	13,981	3,012	8,860	9,378				19,887
Major Damage	51,980	24,047	3,932	8,469	38,348				63,418
Severe/Destroyed									87,328
Subtotal	102,254	43,909	8,707	15,763	68,379				170,633
Homes outside 100 yr. fl plain									
Minor Damage		4,048	728	1,527	6,303				13,421
Major Damage		9,310	1,420	3,915	14,645				38,751
Severe/Destroyed		7,981	1,117	1,730	10,808				27,581
Subtotal		21,319	3,265	7,172	31,756				79,753
Homes with no flood damage (generally wind damage)									
Minor Damage		161,994	31,461	29,427	232,882				859,832
Major Damage		12,255	3,174	8,610	24,039				77,209
Severe/Destroyed		2,333	359	1,104	3,796				10,822
Subtotal		176,582	34,994	49,141	260,717				947,113
TOTAL	186,134	398,558	251,955	836,647	241,810	46,966	72,076	360,852	1,197,499

* See Methodology for explanation of how these damage estimates were calculated

Source: FEMA Hurricane Data

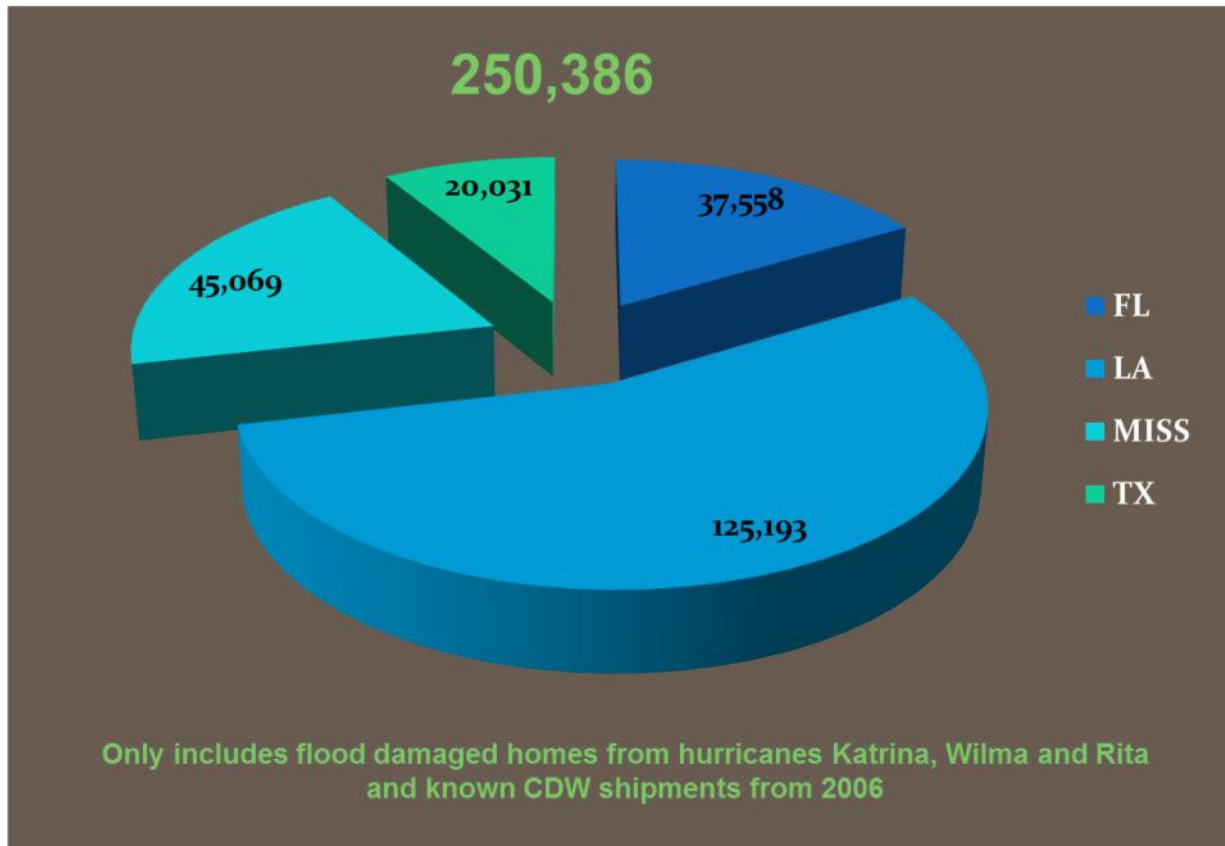
Confirmed Shipments of CDW



Shipment Data Source: Navigant Consulting

DEFINING THE MARKET

Possible Number of Hurricane Damaged Homes With CDW



Source: FEMA

In 2005, two things happened that were the catalyst for the CDW problem. The first was the continuation and acceleration of the building boom. The second event was three major hurricanes occurring in the later part of 2005, including Wilma, Rita and the big, not-so-easy, Katrina. These storms damaged over one million homes, nearly half of which required drywall to repair. The result was a nation wide shortage of drywall starting in late 2005 and lasting until the later part of 2007. 2006 was the biggest year by far, but homes started in 2005 may have used CDW depending on the timing of the construction. Homes built in 2006 and 2007 are the highest risk with the risk dropping as supplies of CDW diminished and awareness of the problems began to circulate through the industry.