CRAWLSPACE ENCAPSULATION

A New Way to Solve an Old Problem!

For many decades, building codes and builders have prescribed ventilation with outside air as the standard method of moisture control in crawlspaces. However, in our Mid-Atlantic climate, ventilation with outside air only tends to makes moisture problems worse.

Houses that have a vented crawlspace are prone to a host of moisture issues, such as moisture on the insulation, condensation on air-conditioning equipment and ducts, and damp soil.

This excessive moisture creates a fertile ground for mold and mildew, wood rot, metal corrosion, poor indoor air quality, and insect/pest infestation.

Problems also include excessive energy loss, higher energy bills, and greater wear-and-tear on typical HVAC equipment. Engineers have revised designs to finally find a way to eliminate many of the issues.

This revised design is called ***"crawlspace encapsulation."***

A POORLY MAINTAINED CRAWLSPACE

Research by ***Advanced Energy*** (sponsored by the ***US Dept. of Energy***) indicates that crawlspace encapsulation provides:

- **Improved Moisture Conditions**
- **Improved Climate Control**
- **Considerable Energy Savings**

In fact, as a result of the outcome of this research, many building codes are currently under review or are actively being changed.

THE STACK EFFECT

Exfiltration
+ Infiltration
Comfort & Energy Problems

WHAT IS *"THE STACK EFFECT?"*

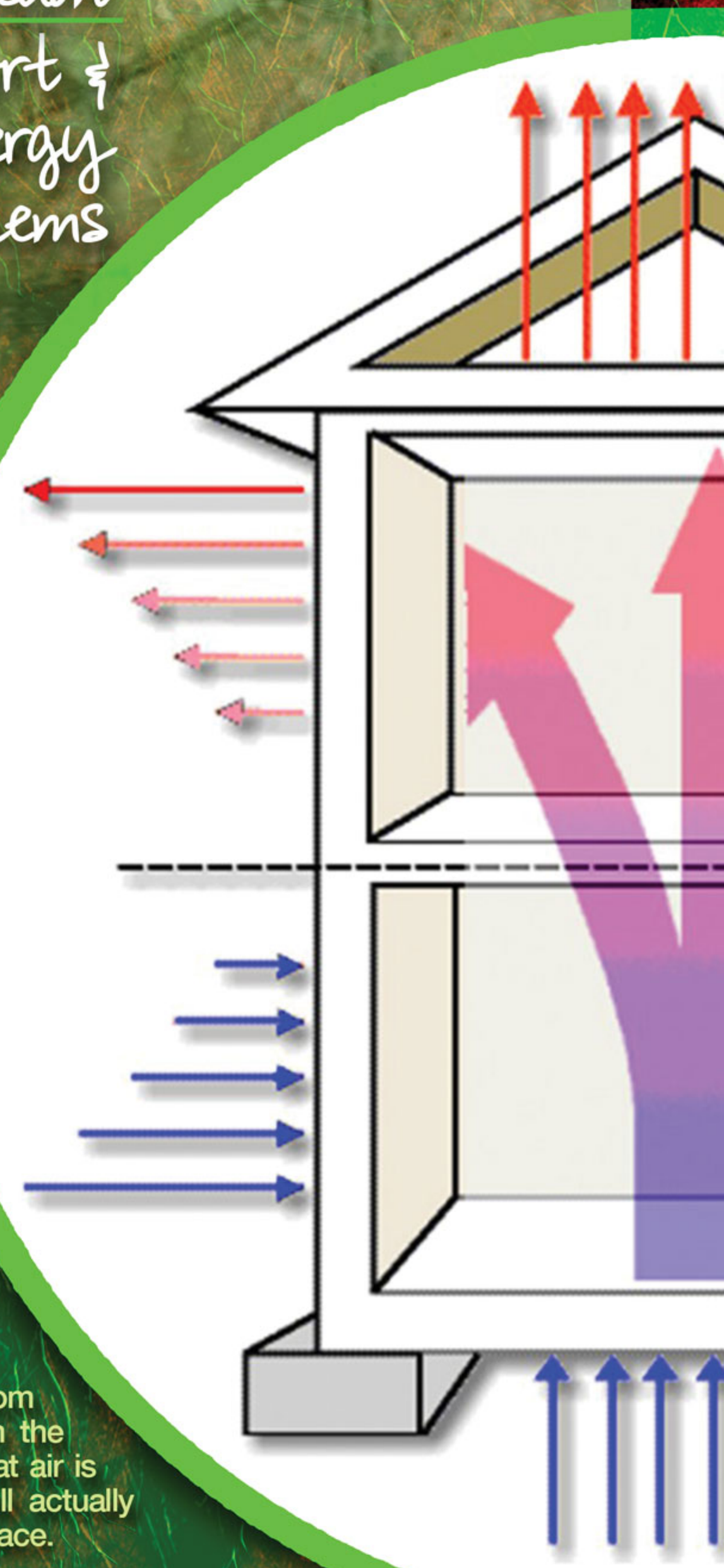
The Stack Effect is simply engineering shorthand to describe air being pulled into and out of your home due to leakage. Warm air leaks out near the top of the house, causing outside air to be sucked back into the house through your crawlspace.

The Stack Effect is the reason why building experts, engineers, and building codes now recognize that vented crawlspaces can create hazardous moisture conditions.

As air enters the crawlspace, it moves upwards into the house. This is caused by temperature differentials between the exterior and the interior of a home.

This creates a continuous airflow through the home from bottom to top. Your house sucks air in and up from the ground to replace the escaping air. In the summer that air is humid or moisture laden. Open crawlspace vents will actually increase the moisture and humidity levels in the crawlspace.

High humidity levels promote mold and mildew growth, leading to wood decay and structural wood rot and possibly infestation of wood-destroying insects. A crawlspace left in this state will become musty, moldy, and foul smelling, poorly impacting the air in your home.



Breathe Easy with Cleaner Air...

AIR QUALITY MATTERS

LIKE IT OR NOT, YOUR FAMILY IS BREATHING CRAWLSPACE AIR...

Since air is being drawn up into your living area from your crawl due to the natural air flow of the Stack Effect, then whatever is in your crawlspace air is in your house and affecting you. If there is high humidity downstairs, there is higher humidity upstairs than there would be otherwise. If there are mold and dust mites in the crawlspace, there are mold spores and dust mite feces in the air upstairs. If there are foul, musty odors in your crawlspace - well you get the idea. This can cause a variety of respiratory problems, including severe allergies and triggering asthma attacks. In fact, experts state that on average, 40% - 50% of the air you breathe in your home originates in your crawlspace or basement. ***Shouldn't that air be as fresh and clean as might be possible?***

*"Your home might even be a **'high priority public health risk.'** This is probably where you are exposed to most allergens and irritants."*
~ Asthma and Allergy Foundation of America, 2016

INSTALLATION PROCESS

All of Our Work is Performed by Licensed & Insured Professionals!

BEFORE

CLEANING THE CRAWLSPACE

1 CLEANING & PREP

First, we clean out the crawlspace by removing all old insulation and poly, as well as any debris. We indentify points of concern, such as wood rot or structural degredation. If any of these issues are discovered, we will evaluate the situation and proceed accordingly. Once those issues have been adequately addressed, we return to do a final full-scale cleaning. Then we move on to the second step, which is...

DSV GROUND TREATMENT

2 *DSV* GROUND TREATMENT

Next, we liberally apply a ground treatment using ***DSV*** ***(Disinfectant Sanitizer Virucide™)***. ***DSV*** is a very broad spectrum disinfectant, sanitizer, virucide, mildewstat, fungicide and deodorizer that kills 34 strains of bacteria and 21 viruses. It is sprayed directly on the raw ground and allowed a cure time to allow the ***DSV*** to work its "magic".

BORA-CARE WOOD TREATMENT

3 *BORA-CARE™* WOOD TREATMENT

After the ***DSV*** has had ample time to cure, we then treat with ***Bora-Care™*** by spraying all exposed wood in the crawlspace. ***Bora-Care™*** is a proven termiticide, insecticide, fungicide, and wood preservative. It provides long lasting protection and treatment against fungal decay and wood destroying insects.

INSTALLATION (CONT'D) PROCESS

As With All of Our Work, No Harmful Pesticides Are Ever Used in Your Home!

4 SEALING VENTS

We then seal existing vents and penetrations into the crawlspace using 100% silicone sealants and other building materials such as steel plates, aluminum sheeting, masonry filler, and expansion foam (as needed). This is a critical step to keeping the humidity – and critters – out of your crawlspace, thus ensuring your home's air quality improvement.

5 INSULATION

Next, we insulate the crawlspace walls with one-inch rolled fiberglass insulation or two-inch ***Bora-Foam***™ termite resistant insulation sheeting.* This step is crucial to maintaining even temperatures in your crawlspace year-round to combat moisture build-up and inefficient heat loss.

(*) Bora-Foam™ is the more expensive option, but it offers 300% more protection than untreated fiberglass.

6 POLY WRAP / MOISTURE BARRIER

For the final steps, we wrap the entire crawlspace with an 8 mil poly vapor barrier. This is wrapped up walls & piers, then soundly attached. Lastly, we cover the entire crawlspace floor with a premium, string-reinforced moisture barrier.

BENEFITS OF ENCAPSULATION

Eliminates
MOISTURE, MOLD, & MILDEW

Decreases
WEAR-AND-TEAR ON HVAC

Increases
INDOOR COMFORT LEVEL

Impedes
COSTLY PEST INFESTATIONS

Improves
INDOOR AIR QUALITY

Lowers
ENERGY COSTS UP TO 18%

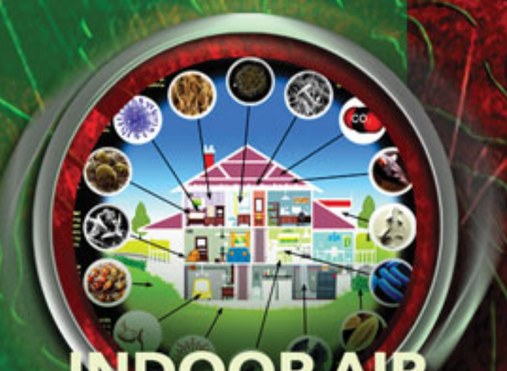
Any Questions!?!?

MILDEW & WOOD ROT

DECREASED HVAC WEAR

INDOOR COMFORT

INFESTATION PREVENTION



INDOOR AIR QUALITY

LOWER ENERGY CONSUMPTION

KNOWING ...is Half the Battle!

1 KNOWING

DID YOU KNOW:
That the various plumbing, electrical, and ventilation penetrations through the floor into your crawlspace are equal to the size of a typical clipboard?

2 KNOWING

YOU CAN SAVE
up to 18%
ON YOUR
HOME ENERGY COSTS

Which Crawlspace DO YOU WANT TO COME HOME TO?

Before

After