

AIR AND WATER PURIFICATION FOR A HEALTHY HOME

The Whole Home Benefit

Clothing & Detergent
preserve clothing color
& use less detergent

Shower & Bath
healthier skin & hair

Plants & Flowers
Chemical-free
water for indoor
& outdoor plants

Improved Air Quality
throughout the house

Healthier, Happier Pets
de-chlorinate drinking water & protect against giardia & other cysts

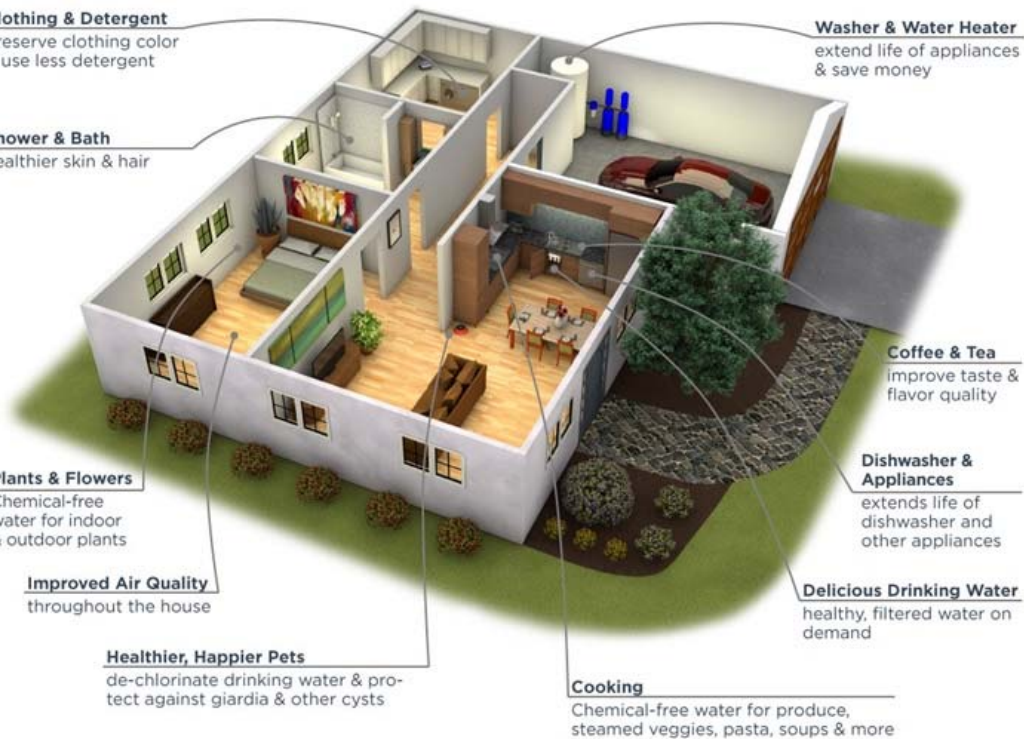
Cooking
Chemical-free water for produce,
steamed veggies, pasta, soups & more

Washer & Water Heater
extend life of appliances
& save money

Coffee & Tea
improve taste &
flavor quality

Dishwasher & Appliances
extends life of
dishwasher and
other appliances

Delicious Drinking Water
healthy, filtered water on
demand



Webinar – User Guide

This meeting will be recorded

Everyone is muted to ensure sound quality

Put questions in chat box as you have them –
don't wait



Sound or video issues?

1. Try headset instead of phone
2. Click the quick start tab
3. Click audio type and select phone or headset
4. A good restart webex works most of the time

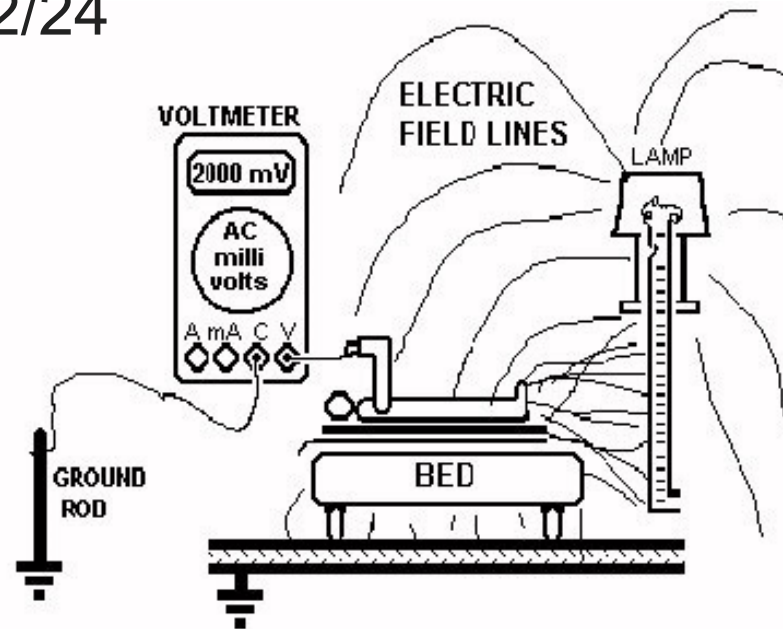
The screenshot shows a Webex event interface. At the top, there are two tabs: 'Quick Start' (highlighted in yellow) and 'Event Info'. Below the tabs, the event title is 'Introduction the Water Eff'. The host is listed as 'brett little' and the event number is '626 005 082'. There are two buttons: 'Record' (with a red dot icon) and 'End Event'. Below these buttons, there is a notification box with a green headset icon and the text 'Connected to Audio'. A blue arrow points to the top-left corner of this notification box. At the bottom of the notification box, there are three dots indicating a menu.

How do I get my CEUS?

1. Watch the entire session
2. Check your spam for a follow up email with a survey & certificate.

Weekly Webinars Continue

Reducing occupant exposure to EMFs in residential construction Pt 3: Assessing and Mitigating AC Electric Field EMFs – Wed 2/24



[greenhomeinstitute.org / events](http://greenhomeinstitute.org/events)



Weekly Webinars Continue

Home Energy Score: An affordable, reliable, easy way to understand homes' energy performance - free ce webinar
Wed March 2nd

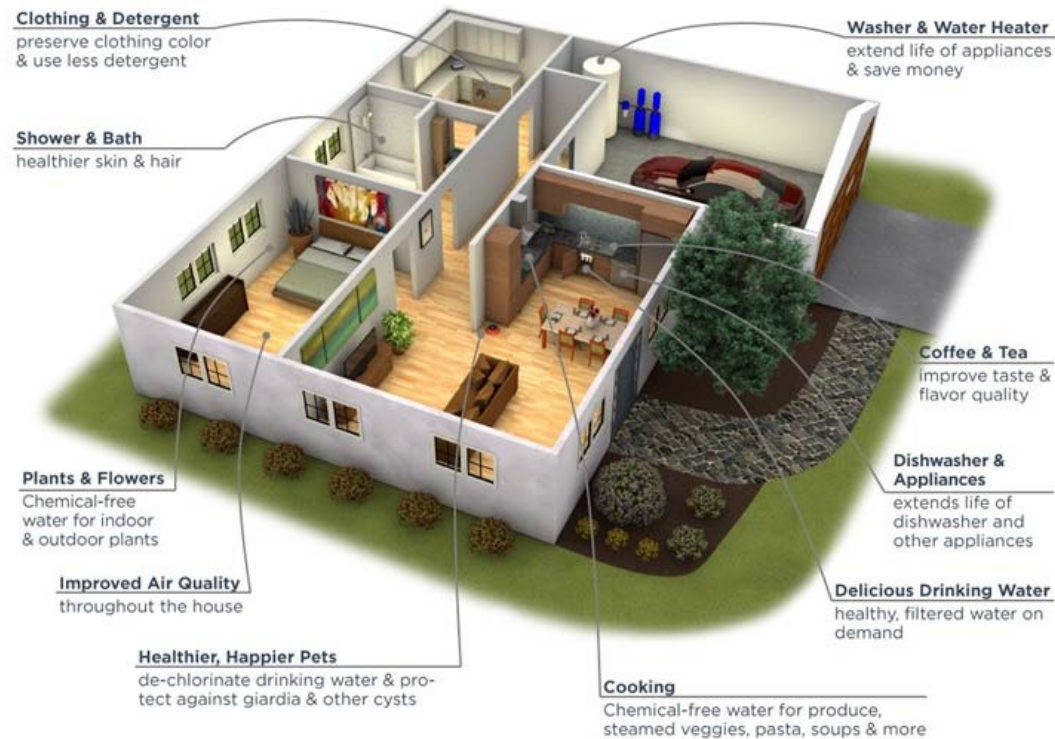


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The Whole Home Benefit



1 Hour – Continuing Education Units



**EDUCATION
PARTNER**



CONTINUING EDUCATION
PROVIDER



Health - Welfare - Safety
(HSW) Approved



Host & Moderator

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- Since 2000
- Nearly 20,000 educated
- Over 7,000 homes green certified
- non-profit; mission:



We exist to empower people to make healthier and more sustainable choices in the renovation and construction of the places we live.

GreenHomeInstitute.org

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greenhomeinstitute.org/get-involved/



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- ✓ Latest in Green Building Science
- ✓ On demand / just in time training & education
- ✓ Works with BPI credential as an option
- ✓ Open book / open note exams for associates level
- ✓ Certify a residential building project to go pro!
- ✓ Get the job!





AIR AND WATER PURIFICATION FOR A HEALTHY HOME

February 17 2016
GREEN HOME INSTITUTE



Agenda

- Assessing the clients needs for Air & Water purification
- Determining the proper choice of air filtration media
- Point of use water purification VS whole house systems
- Choosing the correct water filtration media



What does the client need?

- Well Water - <http://www.epa.gov/privatewells/private-drinking-water-wells-your-state-or-region>
- industrial chemicals, pesticides, herbicides, turbidity, volatile organic compounds (VOC's), microorganisms, bad tastes and odors.
- Arsenic and radium are of major concern from wells, especially for those with chemical sensitivities.



What does the client need?

- City Water typically contains high amounts of chlorine for disinfection, but doesn't always do the job.
- City of Milwaukee 1993 Cryptosporidium outbreak. over 400,000 were affected... over 100 deaths. While the cause was never positively determined, snowmelt runoff and cattle were the most agreed upon theory.
- Current issues in Flint MI... Caused mainly by lead and now a sudden outbreak of Legionnaires' disease

Water Filtration - Point of Use

- Small refrigerator filters are typically an activated charcoal with a fabric wrap
- Designed to last about 6 months (250-350 gallons)
- Filters down to an average of .5 microns



Water Filtration - Point of Use

- Counter top units are typically carbon block
- Rated for up to 6 months or 5000 gallons* down to .5 microns



- * far less for most VOC's and hazardous chemicals

Water Filtration – Point of Use

- Under counter filter units use a 1 to 3 stage system consisting of Sediment Filter, Pre-Carbon Filter, Carbon Block Filter
- Rated for up to 6 – 12 months



Water Filtration – Point of Use

- Reverse Osmosis systems consist of a sediment filter, carbon filters and an RO Membrane Filter
- Rated for up to 6 – 24 months depending on the system.
- Can be installed above or below the counter
- Can be water wasting
- * far less for most VOC's and hazardous chemicals



Water Filtration – Whole House Systems

- Rated for up to 1,000,000 gallons, whole house filtration systems can use a multi-stage tank (or tanks), RO or UV.
- Will provide filtration for drinking water, showers and in-line water and ice making





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Water Filtration – Specialty Systems

- Shower filters to reduce chlorine and balance pH
- Water pitchers and faucet filters only help to reduce taste and odor issues – no real reduction





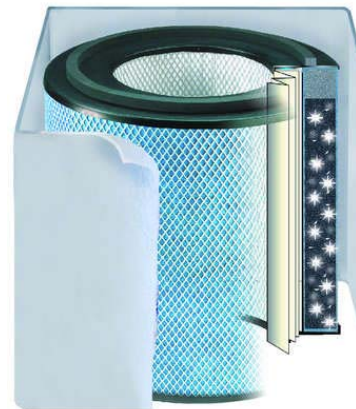
IAQ-What does the client need?

- Type of HVAC system
- New Construction or rehab
- Known Indoor Air quality issues



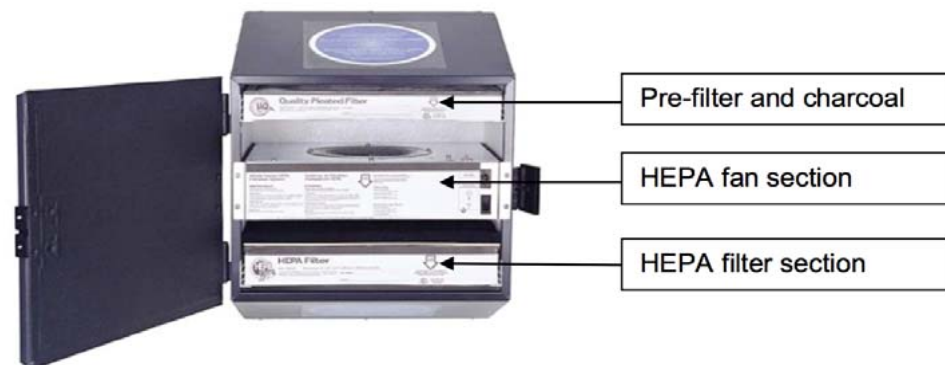
Air Filtration Systems - Portable

- Portable units typically consist of carbon, zeolites or military-grade carbon cloth.
- HEPA (High Efficiency Particulate Arrestance) is the “standard” term used, but is rarely explained properly
- Potassium Iodide can be used chemical and odor removal
- High quality units will cover 700-1500 square foot rooms/homes





Air Filtration Systems Whole House

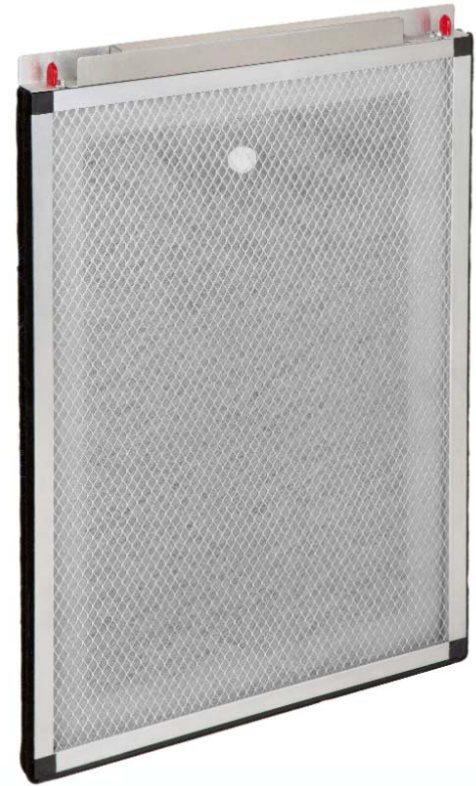




Air Filtration Systems

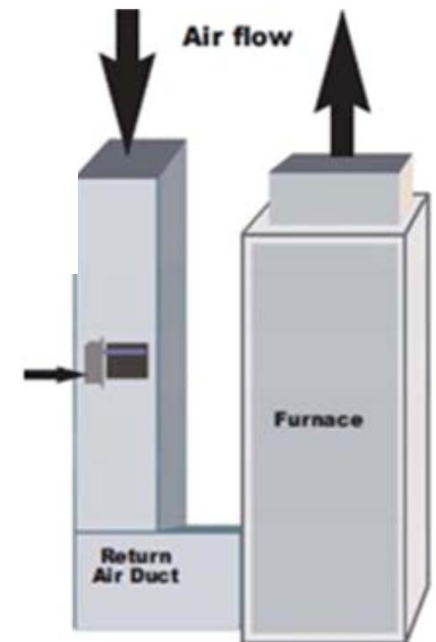
Whole House Filter Replacement

- Electrostatic Air Filters



Air Purification Ducted or in Portables

- UV purification





Specialty Air Purification

- Ionization
- Ozone



LEED Platinum Smart House

- Unit sensors remove particulates from air as needed
- <http://www.smarthaus.org/northbrook-leed-home.php>