



BAY MILLS INDIAN COMMUNITY

# Homeowners Guide

BE A BETTER NEIGHBOR TO NATURE

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# HOMEOWNERS TIPS: In The Garden (Gi-ti-gaan)

## PLAN FOR DROUGHTY SUMMERS



The average summer temperature has increased by about 2F° over the past century. Simultaneously, spring and summer precipitation has decreased 8-10%. In the future, temperature may further increase by 4-6F°, increasing the growing season by 1 month. Choose

## PLAN FOR INTENSE STORMS



Heavy storms may continue to increase in number and intensity. Stormwater runoff may increase erosion. Choose deep-rooted species. Use fertilizer sparingly.

## UNDERSTAND THE SPECIES



Know what you are planting. Many invasive plants are still sold at nurseries.

## PLAN FOR WET AUTUMNS & WINTERS



Winter precipitation may fall more often as rain, while snow depth may decrease. Wet snow may break branches.

## MAKE THE MOST OF MICHIGAN NATIVES



Work with your yard instead of against it; place Michigan wetland plants in that low spot; drought-loving plants on high spots; and deep-rooted plants on shorelines.

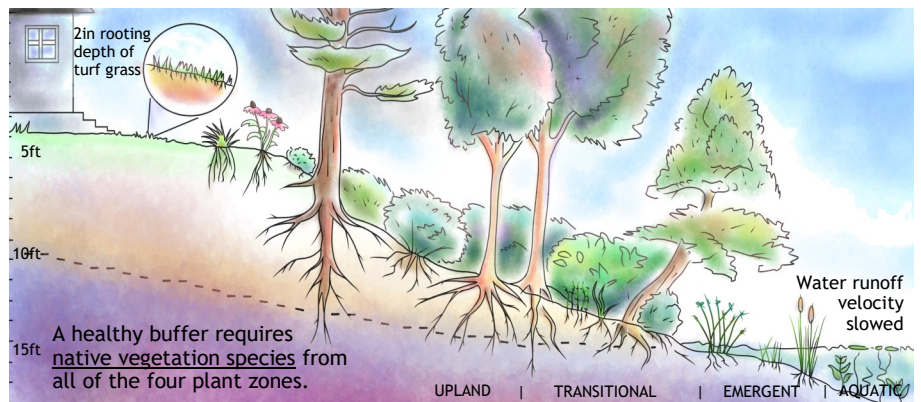
## Garden for a Changing Climate and Severe Weather

Spring is a time of year that gets people thinking about landscaping and flower gardens. Many plan their gardens around showy flowers, but should also consider our changing climate and increase in severe weather.

Climate models specific for the eastern Upper Peninsula predict more droughty summers with wider gaps between showers; more torrential storms that drop rain quickly; wetter autumns and winters.

So what is a gardener to do? Turning to Michigan native plants is the answer! Michigan hosts many drought-tolerant species that also thrive in our winters. Deep-rooted species also survive droughts better and soak up water during intense storms. Homeowners with a shoreline especially should consider planting deep-rooted species who can stabilize shorelines against floods and strong wave action. Leave a wide buffer of natural vegetation between the water and lawn around a home. Research plants carefully before buying them as many nurseries continue to sell invasive plants that degrade the environment.

For more information and species suggestions, contact Biological Services.



For more climate information, refer to the report by Inter-Tribal Council of Michigan, Inc. (2016). [Michigan Tribal Climate Change Vulnerability Assessment and Adaptation Planning: Project Report.](#)

## AVOID HUMAN/ WILDLIFE CONFLICTS IN THE BACKYARD

- Avoid insecticides, especially neonicotinoids, which harm bees and butterflies.
- Take down bird feeders temporarily if bears are seen nearby.
- Secure garbage cans and empty frequently.
- Dispose of fish and game carcasses properly, away from residences.
- When managing nuisance wildlife, avoid use of poisons.

# HOMEOWNERS TIPS: On The Boat (Jii-maan)



## Take Care of the Water with These Boating Tips

Time on the water is ideal for connecting with nature, but must be carefully handled. Unintentionally, commercial and recreational boats may be vectors for aquatic invasive species or pollution. Measures should be taken to take care of the water. For example, if a fuel spill happens anywhere, clean up with kitty litter (on land) or absorbent pads (in the water). Store in a sealed container in a safe place for eventual disposal with a household hazardous waste collection event. Even spills far from water may be washed into storm drains, rivers, and lakes.

At the end of the season: drain old fuel and send to Household Hazardous Waste collection event. Do not burn old fuel. Contact Bay Mills Biological Services Dept for the dates of the spring and fall collection events.

Lastly, it's crucial to report any spill, large or small to the [National Response Center at 800-424-8802](#) or the US Coast Guard at 906 635-3217.

### WITH EVERY EXCURSION:

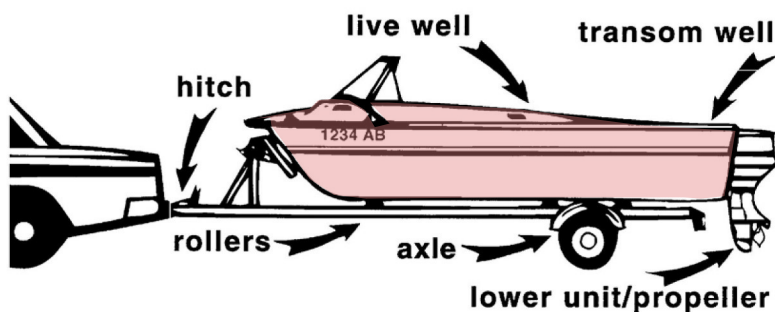
- Check fuel lines for leaks
- Watch the surrounding water for sheen
- Remove hitch-hiking plants
- Clean, drain, and dry before moving boat to a new lake or river



### INSPECT EQUIPMENT FOR INVASIVE SPECIES BEFORE AND AFTER EVERY USE

CLEAN. DRAIN. & DRY equipment. Don't DUMP BAIT

Michigan law currently bans the possession of a select list of aquatic invasive species and expressly prohibits the possession, sale, transport or transfer of those prohibited species. That list includes, but is not limited to: Asian long-horned beetle, bighead carp, black carp, grass carp, silver carp, curly-leaf pondweed, emerald ash borer, Eurasian ruffe, Eurasian water-milfoil, feral pigs, flowering rush, Japanese knotweed, Phragmites, purple loosestrife, quagga mussel, round goby, rudd, rusty crayfish, snakehead fish, starry stonewort, zebra mussel and more.

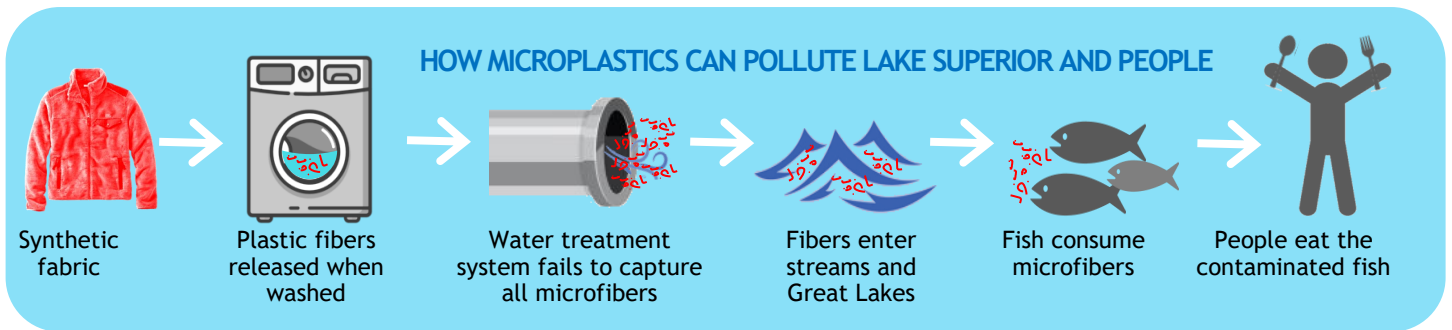


# HOMEOWNERS TIPS: IN THE LAUNDRY ROOM

## (Gizii-biiga'-igewi-gamig)




### The Huge Threat of Tiny Monsters... Microplastics



Everything in time breaks down into smaller particles, even plastic. Plastic litter breaks down until it becomes microplastics and microfibers. Every time that clothing is washed, small particles of plastic shed into the water and out into the world. These small plastic fibers collect in lakes, rivers, oceans, drinking water, and even in food! It starts when a small plastic particle is eaten by plankton or other microorganisms, then that particle and many others make their way up through the food chain and onto our plates. This issue has just started to surface on the mainstream media, and the effects on human health are yet to be determined, but they are anything but good.

#### Ways You can Help Reduce Microplastic!

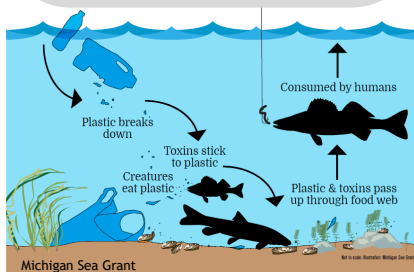


- Reduce the frequency of washing nylon, spandex, polar fleece, and other synthetic fabrics.
- Choose delicate wash cycle.
- Trap plastic during the washing cycle with in-machine laundry balls or drain filters.

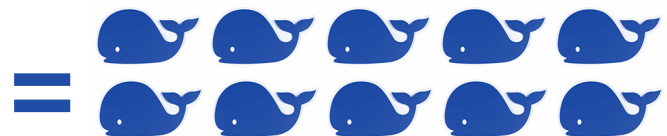
Our everyday choices to reduce the plastic in our homes will also reduce the plastic in our waters. Choose to use organic-based fibers like cotton, wool, or linen and reduce the frequency of washing nylon, spandex, polar fleece, and other synthetic fabrics. Fluffy polyester sheds the most, while 'performance' nylon sheds less. You can also reduce your plastic output by trapping fibers during washing. This can be done with laundry balls or drain filters.

Pilot studies by BMCC and the Biological Service Department have shown microplastics to be present in the water and sediment of the Bay Mills' streams and Waishkey Bay. In other studies in Michigan for microplastics, every site, even along our Lake Superior coastline, have tested positive for microplastics, 97% of which were fibers or filaments. As a community that thrives on the fishing industry, we need to take precaution on what we put into our water for the sake of everyone who lives near our beautiful waters.

Sources: [Quantification of Microplastics on National Park Beaches.pdf](#); <https://marinedebris.noaa.gov/sites/default/files/publications-files/>



**3.5 QUADRILLION**  
microfibers reach  
environment per year  
in North America



880 tons of fibers = 10 blue whales

# HOMEOWNERS TIPS: In The Kitchen

## (Jii-baak-wewi-gamig )



### *Will Vinegar or Baking Soda do the Job?*

Common cleaning products have negative effects on flora and fauna of our planet. When people clean their homes, dishes, or clothes with cleaning products containing unsafe ingredients, these harmful substances will wash down the drain and into our wastewater treatment system. Most ingredients break down quickly in or soon after the wastewater treatment facilities, but not all. Some cleaning products may also can kill the beneficial bacteria of septic systems, stop the water separation and ultimately poison the surrounding waterways with untreated wastewater. A 2002 study conducted by the United States Geological Survey found persistent detergent traces in 69% of streams sampled across the United States of America, and 66% contained disinfectants!

There are over 1000 different ingredients in cleaning products, when most cleaning and even disinfection in the house can be done with vinegar, water, and baking soda. First, ask: is this harsh cleaner really necessary for my situation? For example, the use of antibacterial cleaning products, wipes or lotion might seem useful, but are over-the-top for wiping up spilled milk. Unless we need sterile hands, for example when giving an insulin shot or in case of an immune system deficiency, the excess use of antibacterial products causes more harm than good by killing beneficial bacteria.

When aggressive cleansers are required, make sure they leave as little environmental impact as possible. Avoid products marked “Danger” or “Poison” completely, and try to reduce your use of products marked “Caution” or “Warning” as much as possible, since exposure to these products can still lead to skin and eye irritation. When possible avoid these ingredients: triclosan, 1,4-Dioxane, ethoxylated alcohol, sodium laureth sulfate, nonylphenol ethoxylates (NPEs), phosphates detergent, phthalates, Quaternary Ammonium Compounds (QUATs or QACs), Volatile Organic Compounds (VOCs), Methylisothiazolinone (MI).

See the next page for eco-friendly cleanser recipes.



### *Reduce Food Packaging & Single-Use Products*

Every year over 30 million tons of food packaging is produced and discarded into landfills. Single use plastic products are a plague to aquatic health and are for the most part, unnecessary. Do your part to stop the waste by trying some of these simple techniques.

- Reusable Tupperware (or similar product)
- Reusable beeswax wraps.
- Pass on drinking straws or try reusable straws.
- Skip produce bags in grocery store.
- Try reusable shopping totes.
- Reduce your use of plastic culinary utensils.



**Buy in bulk, or better yet, make your own!**





### Window Cleaner

- 2 tsp. vinegar
  - 1 qt. warm water
- Rub dry with newspaper to avoid streaking.

### Air/Fabric Refresher

Mix 1 cup rubbing alcohol, 1 cup vinegar and 10-20 drops essential oil into a clean spray bottle. Shake and test on small area.

### Oven Cleaner

- 1/4 C Baking Soda
  - 2 tbsp Salt
  - Hot Water as needed (paste)
  - Let paste sit for 5 minutes
- (Caution: Keep off of wires/ heating elements)*

### Tub, Tile & Basin:

- ◇ ▫ 1/2 C. Baking Soda
- ◇ ▫ 2-3 tbsp. Liquid Soap (castile)

### All-Purpose Cleaner Recipe:

- 3 tbsp white vinegar
- 1/2 tsp baking soda
- 1/2 tsp veg. oil based liquid soap
- 2 cups of hot water

### Drain Cleaner

- 1/2 C. Borax in drain
  - 2 C. Boiling Water
- OR
- 1/4 C. Baking Soda in drain
  - 1/2 C. Vinegar
- (Cover drain and let sit for 15min, and follow with 1 qts boiling water)*

### Disinfectant Solution:

- 1/4 C. Borax
- 1/2 Gallon Hot Water

### Mold & Mildew Remover:

- 1/2 C Vinegar
  - 1/2 C Borax in warm water
- Apply with sponge or spray bottle.

### Hardwood Floor Cleaner

- 1/2 C. White Vinegar
  - 1 Gallon Warm Water
- (Polish with skim milk after floor is dry, will make the floor glow)*

### Homemade Laundry Soap

- ◇ 1 bar soap (natural or Ivory)
- ◇ 1/2 c Borax
- ◇ 1/2 c washing soda (not baking soda)
- ◇ water
- ◇ 5 gallon bucket

### Carpets & Rugs:

Sprinkle corn meal, baking soda or corn starch on dry rugs and vacuum.

.....

Use club soda or soap based rug shampoo.

### Toilet Bowls Cleaner

Pour:  
1/2 C Baking Soda into bowls and drizzle with vinegar  
Let sit for 1/2 hour. Scrub and flush.

Grate soap with a cheese grater, mix in saucepan with water, and heat until dissolved. Stir in Borax and washing soda until dissolved. Pour into 5-gallon bucket and fill 3/4 full with hot water. Stir and allow to set overnight. Can also add 1/2 ounce of essential oil of choice (optional). Soap will be a chunky gel. Use 1/4 to 1/2 cup per load of laundry (ok for HE washers and septic systems).

*Recipes from Tribal Healthy Homes Network <http://thhnw.org/materials/thhn-green-cleaning-recipes/>*

# HOMEOWNERS TIPS: In The Office

## (Ozhi-bii'-igewi-gamig )



### Reduce Electricity Use, Reduce Emissions

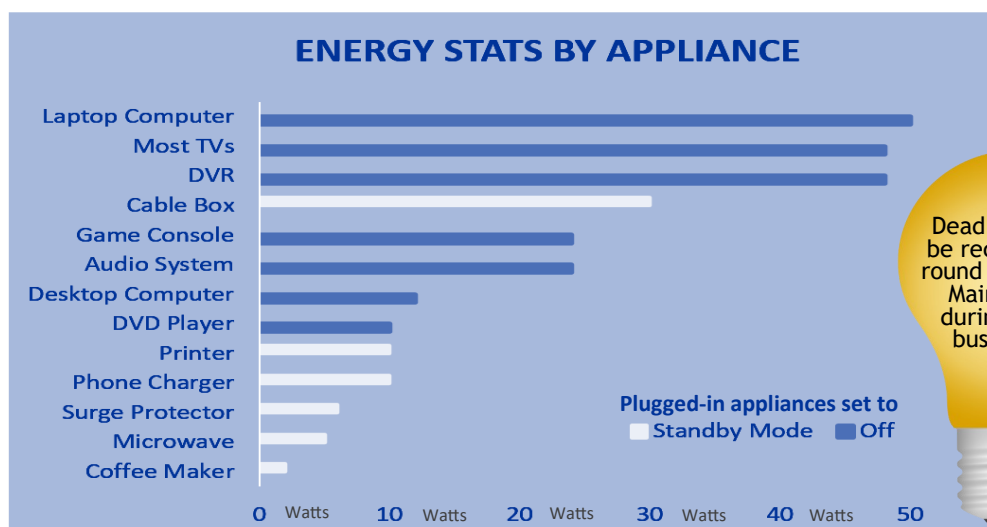
Lights left on when no one is home is an obvious waste of energy, but other electronics maybe be sipping electricity even when turned off. TVs, computers, and game consoles that are left plugged in can draw power even without being turned on. Recognize these energy vampires!

A typical US home has about 40 products continuously drawing power. This combined phantom energy use can account for 13% of an electric bill.

**\$1,444**



- Computers:
  - Adjust computer settings to go to “sleep” after 15 minutes of unused.
  - Disable slideshows and screensavers.
  - Remember to fully shut-down at the end of the workday.
- Move devices to a “smart” power strip to kill power to all devices when the primary device is shut-off.
- Adjust a programmable thermostat to reflect your schedule.
- Turn down water heater settings a notch.
- Switch to LED light bulbs.
- Install a solar light or device charger.
- Turn the game console off when not in use.
- Disable “quick start,” which can double the TVs annual energy use
- Use a cable or satellite box that meets Energy Star version 4.1.
- Watch movies internet-ready TV or a streaming device, not game consoles, which use about 10-20 times more energy.



Dead bulbs may be recycled year round at Bay Mills Maintenance during regular business hrs



Batteries may be recycled at Biological Services

See other recycling info on Page 9

# HOMEOWNERS TIPS: In The Garage

(Odaabaa-miiwi-gamig )



## Properly Dealing With Household Hazardous Waste

Although very easy to acquire, many over-the-counter household products can be difficult to dispose of. This is because many contain hazardous substances that landfills can't manage. Household hazardous waste is any kind of waste product that can harm humans in any dose amount. Things such as pesticides, fertilizer, lead paint, old cleaners, used motor oil, and batteries are all considered to be household hazardous waste products.

Toxic chemicals that are carelessly dumped into the woods, thrown into the garbage, or left in ditches will damage the environment. Liquids can seep into the groundwater and work their way back into the food chain which eventually affects humans. Animals can easily be injured and killed while also spreading the chemicals further. Also, these substances cannot simply be tossed in a regular garbage can and need to be taken to a waste disposal site.

The Bay Mills Indian Community holds household hazardous waste collection events in the spring and fall. Community residents may drop off unwanted items free of charge during the advertised hours. From there, a special contractor takes them downstate where they are safely destroyed. Chippewa county also offers sporadic collection events, so make sure to keep an eye out for notifications online or posted flyers.

You can also contact Bay Mills Biological Services at 906-248-8652 for dates of the next scheduled collection event.

**Remember to  
NEVER combine  
chemicals when  
disposing of  
hazardous  
waste!**

## Say No to Backyard Burn Barrels

Burn Barrels are slowly becoming more and more restricted in the United States, for a good reason. Backyard burning is a more serious threat to public health and the environment than previously believed and has been banned by many state and local governments. Burning household waste produces many toxic chemicals, such as Dioxins. Dioxins are highly toxic, long-lasting organic compounds. They are dangerous even at extremely low levels and have been linked to several health problems, including cancer and developmental and reproductive disorders. The ash residue from backyard burning can also

### *Current State Rules*

*In April 2012, Michigan passed Public Act 102 prohibiting the open burning of household trash that contains plastic, rubber, foam, chemically treated wood, textiles, electronics, chemicals or hazardous materials. The law is currently in effect. \*Note that additional local ordinances may apply. For more information, download the Michigan Open Burning Guide available at [www.michigan.gov/egle](http://www.michigan.gov/egle).*

contain toxic pollutants, such as mercury, lead, chromium, and arsenic, which can contaminate vegetables if scattered in gardens. Children can accidentally swallow toxic materials from dirt on their hands while playing near discarded ash. Dioxins accumulate in the food chain. Airborne dioxins can settle onto feed crops, which are then eaten by domestic meat and dairy animals. Airborne dioxins also can settle on water or enter waterways through soil erosion. These dioxins accumulate in the fats of animals, and then in humans when



# HOMEOWNERS TIPS: By The Dumpster

## (Ziigwe-bina-kik )



### Recycling Opportunities at Bay Mills— (moving to Plantation Rd in 2022)

Blue Trailers: open 24hr				White Garage: open Tues-Sat 10am-6pm	Trash Compactor: open Tues - Sat 10am-6pm	Mntnc Dept Bulb Crusher: during business hours
<b>Plastic</b>	<b>Glass</b>	<b>Metal</b>	<b>Paper</b>	<b>Cardboard</b>	<b>Trash</b>	<b>Light Bulbs</b>
Soda bottles Produce containers Condiment bottles	Glass bottles Canning jars Wine bottles etc	Soda cans Aluminum cans etc	Computer paper Newspaper etc	Cereal boxes Amazon boxes Soda can boxes etc	Food waste DRY latex wall paint Diapers Greasy pizza boxes etc	Incandescent bulbs CFL bulbs LED bulbs

Mntnc parking lot: May-Oct	Goodwill in Soo: during regular business hours <i>*Special fees apply for certain items</i>	Special Events: spring and fall only	Bay Mills Pharmacy MedSafe: Mon-Fri 8am-6pm
<b>Old Tires</b>	<b>eWaste</b>	<b>Household Hazardous Waste</b>	<b>Old Medication</b>
Tires on rim Tires off rim	Old computers and accessories Old TVs Small kitchen appliances Humidifiers/ dehumidifiers Microwaves	Batteries Motor oil Aerosol cans Pesticide/herbicide Cleaning products Paint Thinner/ stains	Pain killers Cough syrup Vitamins Pet medication

*Last updated 10/31/19*

we consume meat, fish, and dairy products. Backyard burn barrels may be popular in your community, but popular doesn't necessarily mean okay. Don't let toxic chemicals seep into your life. Toss out or recycle garbage, never burn it. Recycling is the best way to reduce the amount of waste on the planet. Everyone in small communities, just like Bay Mills, can make a huge difference if they take the time to recycle. Plastic food containers, cans, and glass bottles can all be recycled at local recycling plants. Soda cans and bottles are also a great way to save up some extra cash on the side. The benefits to recycling are endless, so ditch that bio-toxic burn barrel and see what recycling can do for you.

Reducing Backyard Burning, USEPA

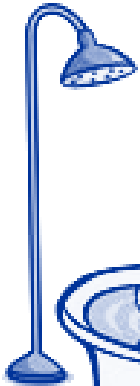


*Dioxins are just one toxic chemical produced from burn barrels. Burning garbage puts these chemicals into the air, into our food, and ultimately, on our plates.*

# HOMEOWNERS TIPS: In The Bathroom



## (Bagi-zoowi-gamig )



A shower leaking at 10 drips per minute wastes more than 500 gallons per year!



### Leaking Pipes May be Wasting Precious Water

Leaks in plumbing may go unnoticed for years causing basement mold, high water bills, and trickling away priceless water.

Minor household leaks account for vast amounts of wasted water. A leaky pipe or faucet dripping at the rate of one drip per second can waste more than 3,000 gallons per year. Approximately 10% of homes have leaks that waste 90 gallons or more per day!

Toilets can be a serious offender. A running toilet wastes about 25x more water than a shower leak and about 4x as much water as a faucet leak. Running toilets are often a simple fix and brought on by a faulty flapper or floater in a toilet's water tank (parts that cost a few dollars). It may waste thousands of gallons of water per month, which translates to approximately \$200/month or \$2,500/year!

A cracked pipe or fitting dripping onto wood or drywall may become significant water damage and make a perfect place for mold to grow. Early action is necessary to prevent this from becoming an indoor air problem.



**REPAIR** leaks by checking faucet washers and gaskets for wear and replacing them if necessary.

### Is Your Home's Septic System On-Site or Municipal?

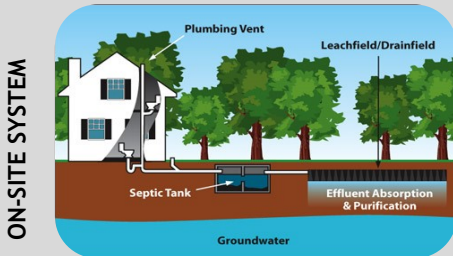
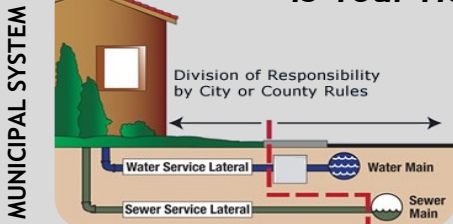


Figure by Garfield County, Colorado

At Bay Mills, even neighboring homes may be different. Know your home's system & maintain it! Homeowners have a responsibility to protect and maintain their septic system. This protects the environment and human health! Cut back woody vegetation, avoid parking heavy objects on septic tanks, and limit what goes down the drain.

#### Know the Signs of Septic System Failure

- Water and sewage from toilets, drains, and sinks are backing-up into the home.
- Bathtubs, showers, and sinks draining very slowly.
- Gurgling sounds in the plumbing system.
- Standing water or damp spots near the tank or drainfield.
- Bad odors around the septic tank or drainfield.
- Bright green, spongy lush grass over the tank or drainfield, even during dry weather.
- Algal blooms in nearby ponds or lakes.
- High levels of nitrates or coliform bacteria in water wells.

Tank & Drain Field *Pump septic*

Tank & Mound *tank every*

Tank & Sand Filter **3 years**

Tank & Lagoon

# HOMEOWNERS TIPS: In The Medicine Cabinet

## (Mash-kiki Mak-ak )



### Dispose of Unwanted or Expired Drugs Responsibly

When drugs are discarded into landfills or flushed down toilets, they can be almost impossible to filter out of the water, even at sophisticated treatment facilities. The contaminated water can travel into streams, lakes, and groundwater then back into drinking water. Water monitoring across the nation has indicated the presence of pharmaceuticals in our surface, ground, and drinking water. Medications in the environment can have adverse effects on fish and wildlife.

Keeping medicine around the home can lead to possible poisoning from accidental ingestion, particularly among young children and pets. Unused or expired drugs left in the medicine cabinet are easily available and appealing to potential drug abusers and can lead to illegal use or theft.

Why should you properly dispose of unwanted medications? To protect our waters, to protect our families, and to protect our community. Drop-off locations offer a safe and viable disposal option to keep drugs out of our waters. Bay Mills drug disposal is part of a network of free and safe disposal locations.

For our ENVIRONMENT. For our FAMILIES. For our COMMUNITY.



Located at the Bay Mills Health Center Pharmacy. Disposal available during regular pharmacy hours. Contact Bay Mills Pharmacy with questions.

MEDSAFE is Located at the Bay Mills Health Center and Pharmacy.

Disposal available during regular pharmacy hours.

Contact Bay Mills Pharmacy with questions.

(906) 248 2031

Bay Mills Health Center  
12124 Lakeshore Dr.  
Brimley, MI 49715



**UNWANTED,  
UNUSED,  
EXPIRED  
MEDICATIONS**



This program made possible by the Great Lakes Restoration Initiative



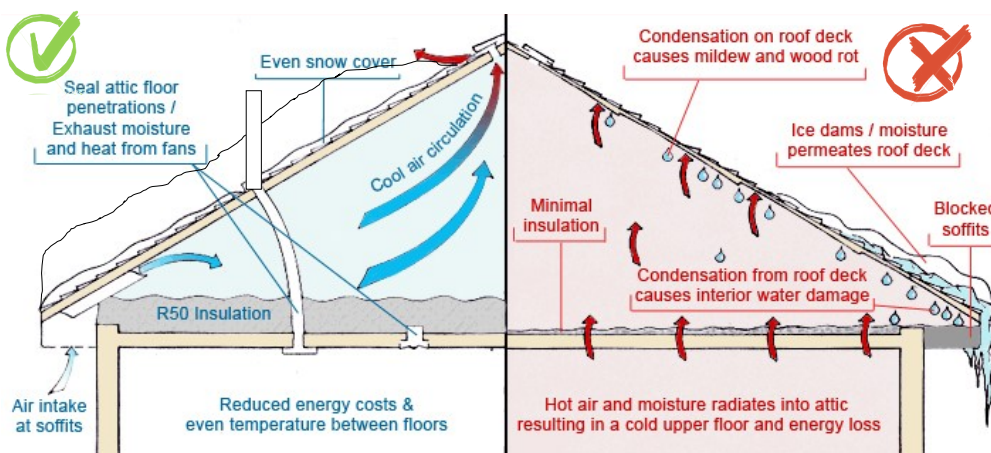
# HOMEOWNERS TIPS: Up In The Attic

## (Ish-pi-mi-sag)



### Insulate the Attic to Lower Energy Costs and Reduce Growth of Mold

Insulation acts as a barrier to heat flow and is essential for keeping homes warm in winter and cool in summer. This proper balance of temperatures also prevents condensation build-up and mold growth. A well-insulated and well-designed home provides year-round comfort. And proper insulation assists in the reduction of greenhouse gas emissions by using less energy to operate. Find more tips by clicking on the Tribal Healthy Homes links on Page 14.



#### COMMON CAUSES OF ATTIC MOLD GROWTH

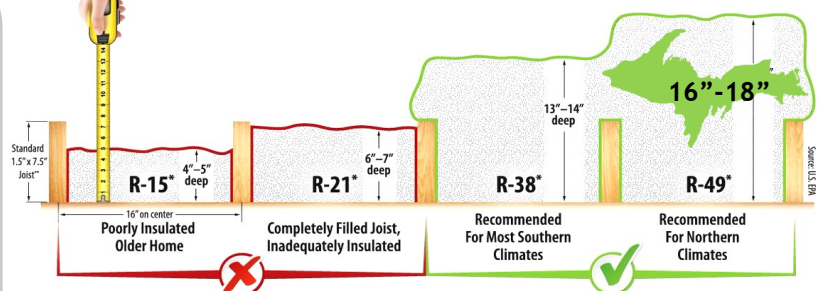
1. Leaking roof
2. Missing insulation or improperly installed insulation
3. Inadequate attic ventilation
4. Dryer vents, plumbing vents, kitchen or bathroom fans vented into the attic
5. Ice damming

#### Mold Clean-up and Treatment



- Remove all standing water from the area using a wet vacuum. (Should be cleaned quickly; mold will grow within 24 to 48 hours.)
- Scrub off the mold with detergent, hydrogen peroxide, or borax with water. BLEACH is not necessary and is lung irritant, so should be avoided.
- Identify and correct the moisture source (e.g., leaky roof or window). Clean and dry the wet area. If you can SMELL mold, but not see it, chances are it is growing in the drywall, flooring, or attic.
- For larger mold problems or for floods, sewage spills or other contaminated water leaks, contact a professional inspector.

#### Does Your Attic Insulation Measure Up?



\*Recommended Dept. of Energy attic insulation levels for commonly used fiberglass, mineral wool, and cellulose insulation assuming about R-3 per inch.

16-18 inches of insulation recommended for the Upper Peninsula.

Refer to many great resources available through the EPA and Tribal Healthy Homes program <http://thhnw.org/wp-content/uploads/2016/08/Preventing-the-Common-Mold.pdf>

# HOMEOWNERS TIPS: In The Basement

## (Anaa-mi-sak)

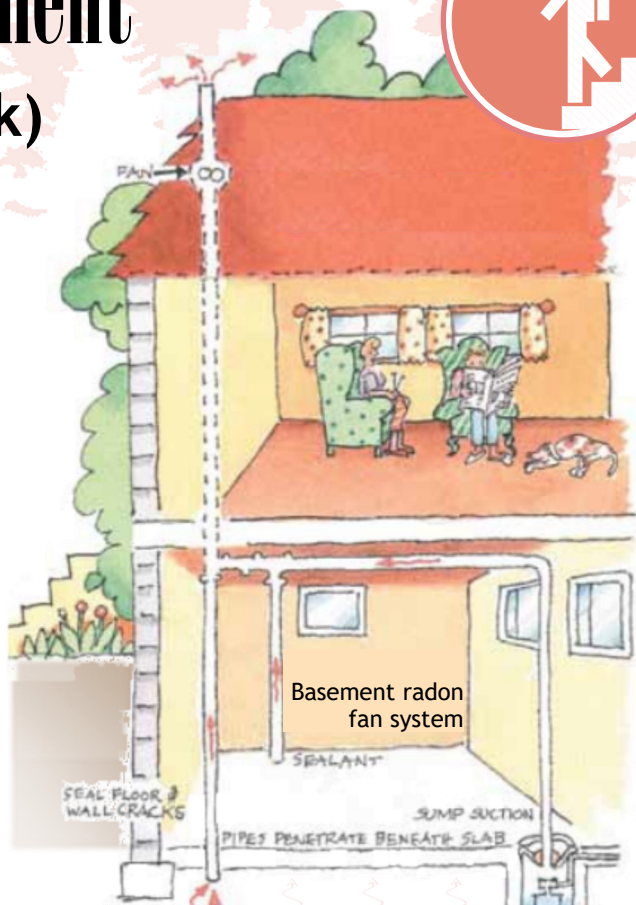


### Radon Gas, Indoor Air Pollution

Radon is an invisible, odorless, tasteless, and radioactive gas. This harmful vapor is the second leading cause of lung cancer, only second to smoking.

Radon is a natural gas that causes health problems when it concentrates in a home. The gas comes from the natural breakdown of uranium that is present in bedrock deep underground. The gas moves upwards, sometimes into the cracks in the basement walls or floors, from wells and sumps, and even from groundwater wells. Radon can be present in any building in Michigan. Presence of radon in your home can not be determined by your neighbors test results. Often times radon levels can vary significantly from home to home, even in the same neighborhood and in homes of similar construction.

The presence of radon may only be discovered with an in-home radon testing kit. With a kit, you can determine if there are levels of radon in your home and if they are beyond the acceptable threshold of 4 pCi/L (picocuries per liter).



Note: This diagram is a composite view of several mitigation options. The typical mitigation system usually has only one pipe penetration through the basement floor; the pipe may also be installed on the outside of the house. A Citizen's Guide to Radon, USEPA 2012

Radon testing kits are available at most hardware stores for \$10. Place the kits in the lowest living space for three days. Then mail in the sample and have the results emailed to you. Environmental staff at Inter-Tribal Council of MI or Bay Mills Biological Services may also provide technical assistance. Take action if the results are at or above 4 pCi/L.



The risks are further compounded for current smokers.

### MITIGATION MEASURES:

- Seal cracks in foundation; cover unfinished crawlspace floors with impermeable plastic sheeting.
- Open crawlspace vents if possible.
- Install a radon mitigation pump to remove radon gas from the soil before it enters your home.

**4 pCi/L = TAKE ACTION**

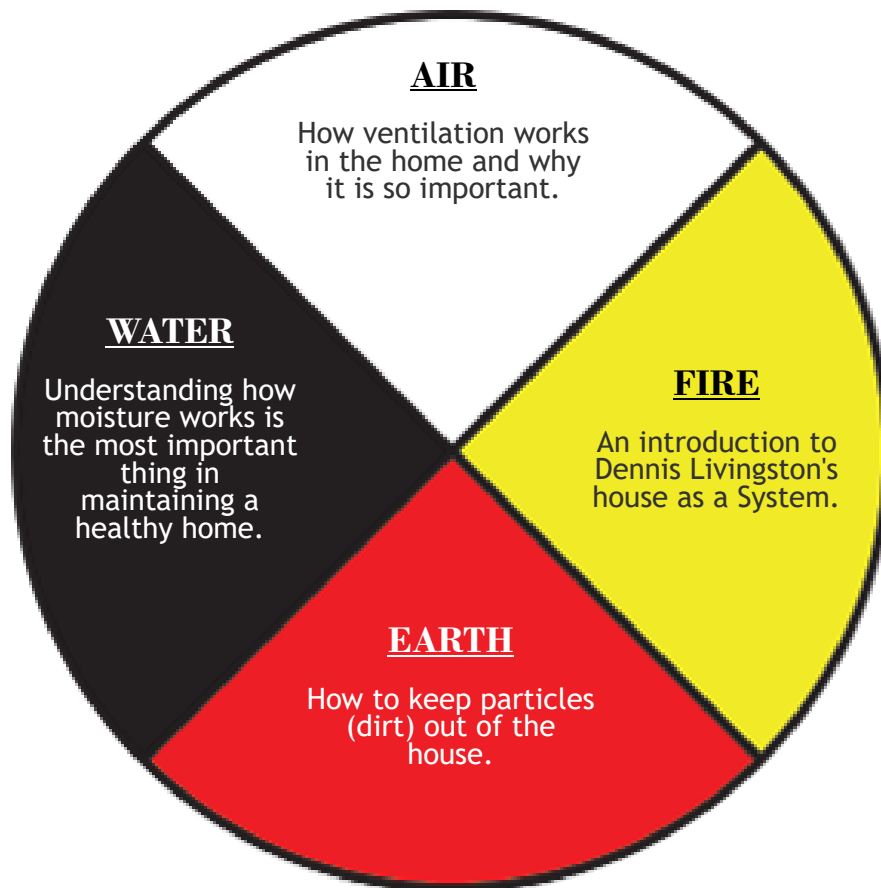
Refer to many great resources available through the EPA and Tribal Healthy Homes program. EPA's radon page includes links to publications, hotlines, private proficiency programs and more. <https://www.epa.gov/radon> Follow [AARST Radon Standards](#).  
 1-800-55RADON (557-2366) Get live help for radon questions.  
 1-800-644-6999 Radon Fix-It Hotline.  
 Inter-Tribal Council 906-632-6896; Biology 906-248-8648

# HOMEOWNERS TIPS: Indoor Air Quality



There are many solutions and remediation techniques that one can do to improve the Indoor Air Quality in a home. Tribal Healthy Homes Network helps develop effective programs, and share our results with tribes. Visit the Tribal Healthy Homes website <http://thhnw.org/resources/general/> some of the key resources available for tribes interested in starting healthy home activities in their communities. There are examples of healthy home training, assessment tools, outreach activities, and funding opportunities, many of which are customized materials specifically for tribes.

Check out the educational videos below.



If the above hyperlinks do not work, visit the follow web address:

<http://thhnw.org/materials/air-home-maintenance-video/>  
<http://thhnw.org/materials/fire-home-maintenance-video/>  
<http://thhnw.org/materials/earth-home-maintenance-video/>  
<http://thhnw.org/materials/water-home-maintenance-video/>

# HOMEOWNERS TIPS: Building or Remodeling



**Building a Home? Check out these materials tips for better indoor air quality.**

The following tips were developed by Tribal Healthy Homes in 2014. Their goal was to identify a mix of durable, healthy and affordable building materials, products, and technologies. The results are included below to help home-builders and remodelers improve indoor air quality and health. View the whole presentation at <http://thhnw.org/wp-content/uploads/2016/05/A-Tribal-Guide-to-Healthy-Home-Procurement.pptx.pdf>

## Top 10 Building Products for Durable, Healthy and Affordable Tribal Housing

<b>#1: Natural Linoleum</b>	Application: Flooring Manufacturers: Forbo, Armstrong Why it's healthier: No chemical plasticizers or stabilizers anti-static, antibacterial Bonus: Very durable
<b>#2: Heat Recovery Ventilators</b>	Application: Whole-house ventilation and heat recovery Manufacturers: Various Why it's healthier: Allows for increased ventilation w/reduced energy penalty
<b>#3: Efficient Spot Ventilation</b>	Application: Bath, laundry ventilation Manufacturers: Panasonic Why it's healthier: Efficient, quiet units encourage appropriate use with low energy penalty
<b>#4: Ventilation Timers + Humidistats</b>	Application: ventilation Manufacturers: Various Why it's healthier: Facilitates sufficient exhaust of moisture and combustion byproducts from bath and kitchen Bonus: Avoided moisture damage
<b>#5: Zero-VOC Paints and Finishes</b>	Application: Interior finishes (walls, floors etc.) Manufacturers: Various GreenSeal certified; others Why it's healthier: Reduced off-gassing Ocen lower toxicity Bonus: GreenSeal paints are performance tested
<b>#6: Low-toxic Mastics and Caulking</b>	Application: Duct sealant, construction adhesive Manufacturers: RCD MasJcs; OSI; AFM Why it's healthier: Low VOC Low toxicity
<b>#7: Cellulose Insulation</b>	Application: Wall, aec insulation. Manufacturers: GreenFiber (new low dust version available) Why it's healthier: Nontoxic fire retardant No added formaldehyde
<b>#8: Rigid mineral wool insulation</b>	Application: Exterior insulation. Manufacturers: Roxul. Why it's healthier: Naturally fire retardant Reduces potential for condensation in walls Bonus: Energy savings
<b>#9: Shoe-removal vestibules + track-off mats</b>	Application: Entryway contaminant control Manufacturers: Custom Why it's healthier: Shoes a major source of indoor contamination Bonus: Less housework
<b>#10: Certified hardwood flooring</b>	Application: Flooring. Manufacturers: Many. Why it's healthier: No glues, adhesives, resins to off-gas Bonus: Forest Stewardship Council certification. Sustainably-harvested

<b>Avoid: 1 Urea formaldehyde</b>	Suspected carcinogen and known irritant. Look for exterior grade engineered and composite wood products ("HUD-approved," "Exposure 1"); formaldehyde-free fiberglass insulation
<b>Avoid: 2 Useless furnace filters</b>	Low MERV rating, 1" panel (non-pleated) designs. Fiberglass, foam, horsehair or hog's hair all should be avoided. Can cause more issues than they fix PS: change filters regularly!
<b>Avoid: 3 Carpeting</b>	Serves as a "sink" for toxins and irritants. Carpet and padding can be VOC emitters themselves. If soft surfaces required, consider cork, cleanable area rugs, or (last resort) low-pile, CRI Green Label Plus carpet

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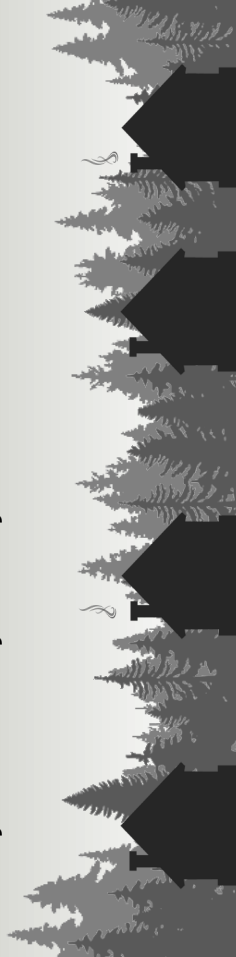
## ... Taking care of things...

All people have to take care of Aki (Mother Earth) or we will not have a home. All must share in this responsibility.

To take care of Mother Earth and the community of life, we need to remember the Teachings of the Seven Grandfathers: WISDOM, LOVE, RESPECT, BRAVERY, HONESTY, HUMILITY, and TRUTH.

We faithfully apply the Seven Grandfather Teachings in our lives. Sometimes it may be hard to apply all of them daily, but we must try. Each of us is responsible for honoring Mother Earth and teaching the children to do the same. The children must care for Mother Earth tomorrow, and for the generations to come.

May this booklet guide you in caring for Mother Earth and your home in your daily actions.



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