green home remodel
healthy homes for a healthy environment

salvage & reuse
green

What is a Green Remodel?

It’s an approach to home improvement with the goal of not only making your home look better, but work better—for both you and the environment. Want a healthier home? Lower utility bills? Reduced maintenance? A cleaner planet? A green remodel helps you realize a range of far-reaching benefits from a single smart design. With careful planning, you can create a home that combines beauty, efficiency, comfort and convenience with health and conservation.

This guide focuses on reusing salvaged building materials. Salvage refers to the recovery of resources that may otherwise be destined for the landfill. By reuse, we mean just that—integrating salvaged materials into a remodel project.

why

Why Consider a Green Remodel?

SAVE MONEY
When you incorporate salvaged materials into your project, they often cost less than new products, and last longer, too. This is especially the case when you are trying to match—or create a style reminiscent of—the period or quality of older homes. Another plus? When you choose salvaged materials over new, you reduce disposal costs and help our local economy by creating jobs for retailers specializing in these environmentally friendly services.

MAKE A HEALTHIER HOME
By minimizing your remodel’s scope and reusing materials in place, you’ll reduce the likelihood of your remodel releasing hazards into the home, such as lead paint dust or asbestos. When reusing materials, careful selection can avoid introducing additional hazards from materials finished with lead-based paint.

REDUCE ECOLOGICAL IMPACT
In addition to lessening the burden on our landfills, reusing salvaged materials minimizes the demand for mining, tree harvesting, water, energy, and other natural resources, as well as toxic materials used to process, manufacture and transport new materials.

salvage & reuse

In 2003, Seattle generated over 178,000 tons of construction-related waste—more than the city’s total amount of household garbage. Although home projects represent only a portion of the construction waste total, a remodel invariably results in a variety of items being discarded.

Fortunately, more options exist for reusing and recycling used building materials today. A number of retail locations and online resources now accept and offer salvaged building materials—making it possible to not only minimize your remodeling waste, but incorporate “new” recycled items into your project. You can find salvaged supplies for virtually every building material category, from flooring to fixtures. Especially in Seattle’s vintage homes, used building materials can temper the newness of a remodel while tying fresh elements to the existing home. When you walk through the aisles of a used-building-materials retailer, you take a tour of Seattle’s architectural history. Discover fixtures of a quality unobtainable today, often at a fraction of the cost of new—all, while benefiting our environment.

Cover photo and above: JAS Design Build
(photo © John Granen).
Rethink Remodel
Use smart, up-front planning and research to get the most out of your remodeling project.

Beyond Waste
Design waste out of your project and reuse salvage materials with careful planning and creativity.

Salvage & Recycling
Organize a successful salvage plan to maximize reuse opportunities and minimize environmental impact.

Getting Organized
Plan ahead, remain flexible and open to new opportunities.

Reuse
Working salvaged building materials into your remodel can create a sense of history while saving money and the environment.

When Not to Reuse
Prioritize health, safety and resource efficiency, while informing yourself about potential reuse hazards.

Used Materials Index
Learn what items are best suited for reuse and recycling.

Resources
Find where to get more information on safe and resource-efficient salvage and reuse materials, as well as other Green Home Remodel Resources.
Like the rest of the green design process, reusing salvage materials necessitates more creativity than conventional garbage-generating remodeling. When integrating used materials into your project, products and plans often continue to influence each other as the remodel progresses. Be prepared to modify your schedule if need be, and create flexible designs that leave room to utilize used materials or a newly found item.

Up-front planning minimizes remodeling waste. A space-efficient design can reduce or eliminate the need to add square footage or remove walls. A flexible floor plan allows your home to adapt to changing uses and needs, without costly modifications. When you choose quality products and enduring design, your project will be one you and your family can enjoy for years to come.

**Decide What You Want**

The most effective home remodeling projects begin when you thoroughly assess your wants and needs. By prioritizing goals, you can avoid confusing the ends with the means. For example, if your goal is to just add more square footage, you may end up with a bigger home—and costlier remodel—that still fails to address your space needs. However, if your goal is to create an efficient and effective use of space, you’ll have the opportunity to do more with the square footage you already have.

Of course, careful planning is important for any remodel. The City of Seattle offers a range of Green Home Remodel guides—like this one—to provide helpful information about materials and design considerations so you get the most out of your green remodel. Chances are, there’s one to assist with your particular project. The following guides are available at no cost to Seattle residents:

- Kitchen
- Bath & Laundry
- Roofing
- Painting
- Landscape Materials
- Hiring a Pro

To read or download, go to www.seattle.gov/sustainablebuilding and click on **Green Home Remodel**, or simply call (206) 615-0731 to order paper copies.
**Expand Your Definition of Cost**

Initial price gives only a peephole view of the true cost of a product or design. A higher purchase price can mean a better deal in the long run: you can actually reduce the cost of living in your home by choosing resource-efficient materials and designs (lowering monthly bills) and durable materials (requiring less frequent replacement). Focus on long-term savings, ease of maintenance and conservation, not just initial price. A low purchase price may simply mean a good deal—or it may signify a lack of quality or durability, or even that some environmental, health, or social costs are not included in the price tag.

When you choose professional-quality materials, finishes and hardware, you minimize waste down the road by delaying replacement. Warranty length is often a good indicator of quality. By reusing building materials, you also reduce environmental costs caused by new product manufacturing.

**Remodel Safely**

First, identify health objectives for your new design, then determine what hazards may already exist in your home and those that could be created by the remodeling process. For tips on staying safe as you remove materials from your home, see *Salvage & Recycling* on page 4.

When reusing materials, care must be taken to avoid introducing new hazards into your home. Pay particular attention to lead-based paint, lead fittings and solder on plumbing products, as well as asbestos in shingles, flooring, ductwork and some appliances. For details, see *When Not to Reuse* on page 9.

**Remodeling to Sell?**

Many people remodel prior to selling a home, thinking they’ll make money. Ironically, most homeowners would be better off keeping their cash in the bank. According to *Remodeling Magazine*, the average remodeling project—even a kitchen or bath—typically returns 90% or less on the original investment. Your house may garner a higher price, but not enough to offset the project costs. In other words, you may take on the work and expense of a remodel, only to lose money in the process.

Generally, you’ll realize a better return on smaller, lower-cost projects. Do-it-yourself improvements can also increase your return on investment, but require time and skill to avoid "remuddling" your property. Also consider that any speculative remodeling project may not match the new owner’s tastes. This could result in further remodeling, sooner rather than later—which ultimately wastes both money and resources. If you're intent on sprucing up your home before you sell, a new coat of paint may do the trick. The Green Home Remodel *Painting* guide offers tips on creating a healthy, environmentally friendly paint job; to order, see the *Decide What You Want* on page 1.

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*Photo, top right: Robert Harrison Architects. Photo, bottom right: JAS Design Build (photo © John Granen).*
**Universal Design creates**

**flexible, easy-to-use spaces**

**for people of all abilities,**

**reducing the need for costly**

**future modifications to the**

**home as users’ abilities**

**change. Look to the**

**American Association of**

**Retired Persons’ site at**

www.aarp.org/life/homedesign/

for more about Universal Design.

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This guide focuses on salvaging materials *from* projects, and incorporating used materials *into* remodeling. There are, however, many ways to design waste *out* of a project. The following table lists strategies for reducing remodeling waste. Keep in mind that there is often no single “right” decision to minimize your project’s environmental impact. But with research, planning and creativity, you can take advantage of waste prevention opportunities that might be missed in a conventional remodel.

<table>
<thead>
<tr>
<th><strong>manage project scope</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on meeting the largest number of your goals with the fewest modifications to your current space. This will cost less, reduce disruption, and use fewer resources.</td>
</tr>
<tr>
<td>Consider a not-so-big approach to home improvement. An increasingly common goal with green remodeling is to stay within a house’s original footprint to save money and outdoor space.</td>
</tr>
<tr>
<td>Use materials efficiently (such as placing wall studs at 24-inch intervals rather than every 16 inches, utilizing thinner plywood/wallboard or narrower molding, etc.), while ensuring quality construction, safety, and durability.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>maximize flexibility and space efficiency</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Design spaces that can adapt with minimal modification as users’ needs and abilities change, including integrating Universal Design (for more, see Kitchen or Bath &amp; Laundry Green Home Remodel guides).</td>
</tr>
<tr>
<td>Create multi-purpose spaces, such as a room that can be used for entertainment, a home office, and library rather than three rooms devoted solely to each purpose.</td>
</tr>
<tr>
<td>Analyze how and with what frequency you use your current space. Consider whether seldom-used spaces can be reassigned to accommodate more frequent activities, or combined with more popular spaces.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th><strong>create enduring design</strong></th>
</tr>
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<tbody>
<tr>
<td>Research designs appropriate for your home’s vintage, and preserve still-functioning elements that match the period—such as a pedestal sink in a Craftsman home.</td>
</tr>
<tr>
<td>Unfortunately, dated designs are often torn out well before they’re worn out. Focus on designs that maintain and enhance your home’s style. Often, older magazines and design books highlight colors and finishing that can withstand the test of time—if design schemes from 10-20 years ago still look fresh today, capitalize on their timeless quality in your project.</td>
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<tr>
<th><strong>design for deconstruction</strong></th>
</tr>
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<tbody>
<tr>
<td>Opt for simple designs with fewer elements; these are easier to take apart and reuse.</td>
</tr>
<tr>
<td>When possible, use nails and screws rather than adhesives.</td>
</tr>
<tr>
<td>Use a limited palette of materials to make future salvage more worthwhile (larger quantities of a single material are more marketable than small amounts).</td>
</tr>
</tbody>
</table>
Yes, hauling your remodeling waste to the recycling and disposal station can seem like the easiest option. But many items may be useful to someone else, or even reused on your own project. By planning your activities and carefully removing materials to retain their value (deconstructing rather than demolishing), you can increase the likelihood of a future life for these materials, beyond the landfill. A little sweat equity can go a long ways toward reducing your disposal expenses. If you can reuse materials on your own project, you will save money by not having to buy new. In some cases, you can also make money by selling your unwanted building materials, such as old hardware or a pedestal sink.

For optimum results, take the following steps to manage remodeling project materials:
1. reuse in place (leaving material as-is, repairing, refinishing, or re-facing, etc.)
2. salvage and reuse (on the project, in the home, sell, donate, or trade),
3. recycling, and
4. proper disposal of what’s left.

Nearly all projects involve a bit of each. The green goal is to get as much of your materials into the top categories, while minimizing the amount that ends up at the landfill.

For tips on hiring a contractor for your green remodel, request a copy of the Hiring a Pro guide by visiting www.seattle.gov/sustainablebuilding and clicking on Green Home Remodel, or call (206) 615-0731 for a paper copy.
Organization is the key to successful salvage, so formulating a plan makes sense. This plan will make salvage easier, help reduce the health effects on your family, and minimize environmental impact.

1. **Compile a materials list.**
   
   Walk through your project, and create a list of all the materials that have reuse and recycling potential. Refer to the table on page 11 (Used Materials Index) for help determining whether items you are removing are recyclable or desirable for reuse. While making your list, consider repairing or reusing some materials in place, such as gypsum wallboard.

2. **Find salvage and recycling options.**
   
   There are numerous outlets for reusable and recyclable materials: used building materials retailers, online exchanges, classified ads, and recycling companies. Fortunately, there are services that help you find the ones you need. See King County's “What do I do with..?” database at www.metrokc.gov/dnrp/swd/wdidw/ for lists of companies that take reusable building materials as well as a wide variety of recyclable materials. An excellent resource for getting rid of (and finding) building materials is the Online Materials Exchange. This King County service is available at www.metrokc.gov/dnrp/swd/exchange/ and offers free posting of reusable building materials. Remember to call companies before arriving with a load; many reuse businesses have limited space and changing lists of materials they accept. Depending on the material, you may receive a small amount of cash, in-store credit, or the material may be considered a “donation,” meaning you can get rid of it for free (and some stores can offer a tax credit for materials). If they won’t take a material, you can still post it on online exchanges or classified ads. Recycling operations are usually more flexible, but may charge a fee (which should always be less than the per-ton fee at the Recycling and Disposal stations; if not, call another recycling service).

**Organizing a large remodel?**

**Consider deconstruction services.** This process carefully dismantles materials for reuse and recycling, keeping up to 90% of materials out of the landfill. Call the Seattle Public Utilities Sustainable Building Program at (206) 615-0731 for more on deconstruction.

**getting organized**

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**Photo: The ReStore.**
3. **Develop a health and safety plan.**

    Make your objectives for dust and fume containment, as well as cleanup procedures, clear with contractors, friends, and family—before work begins. One often-overlooked hazard involves lead dust—a serious indoor health risk, especially in households with children or expectant mothers. Homes built before 1960 contain paints with the highest concentration of lead; all homes built before 1978 almost certainly contain some amount of lead paint. Create a strategy to protect the rest of the home from dust and debris hazards. If necessary, use tape and plastic to seal heating vents in and near work areas. The U.S. Environmental Protection Agency (EPA) offers excellent guidelines for addressing lead hazards during remodeling; visit www.epa.gov/lead or call the National Lead Information Center at (800) 424-LEAD for help creating a plan to deal with lead hazards during remodeling.

    Asbestos also poses a remodeling hazard. For a list of common asbestos-containing home materials and tips on safely dealing with them during remodeling, go to www.pscleanair.org and click on *Asbestos & Demolition*, or call the Puget Sound Clean Air Agency at (206) 343-8800.

    If removing walls or wallboard, always shut off the electricity to that portion of the house. Also consider the safety of the tools you use, and the manner in which you will remove materials. You may need an extra set of hands for bulky or awkward items. Nails, glass, and sharp metal pose common hazards on a construction site. Reduce the risk of a painful puncture or snag by removing nails from lumber, molding, and cabinetry as you go.

4. **Remove materials.**

    The key to successful salvage? Careful removal. Keeping materials intact and unbroken maximizes the likelihood of reuse, and retains their value. Another tip: bundle multiples of a particular material. Make a call to a used building materials store before you start; just tell them what you’re trying to remove and they can often recommend the best tools for the job. The right tools help immeasurably. Save money by renting or borrowing tools you’re unlikely to use frequently. A utility knife usually works well for freeing materials that have been painted together (such as cabinetry and drywall, molding and baseboard, light fixture and ceiling). Small and large pry bars are proven essentials for removing molding, cabinetry, and anything that’s been nailed down.

5. **Define a storage area.**

    Keep materials tidy and safe in a protected storage area. Ideally, you want to set aside space for organizing your materials by type and destination: salvage, recycling, and disposal. Keep items—especially those slated for salvage and recycling—protected and dry. Our rainy Northwest climate can quickly turn reusable materials into garbage. Store materials destined for recycling in piles according to how the recycling service accepts them. Recyclable materials that are contaminated (containing materials other than recyclable material) may be rejected and end up as garbage.

6. **Arrange for hauling.**

    Many opt to self-haul. You can borrow a truck, or rent one on an hourly basis from hardware stores, rental agencies, or member-based programs like Flexcar. Use extra caution if you hire a private company to haul materials—some part-time operations are unfamiliar with recycling and reuse options, or worse, illegally dump materials you believe are being properly transported. To avoid this, work only with permitted and licensed hauling companies that agree to take no more than half of their fee up front, with the remainder paid after you receive official receipts from the destinations you specified. Beware the “great deal”—it usually proves too good to be true, and could be a sign that the hauling service is improperly disposing of materials.
Reuse puts all those building materials saved from the landfill into new projects. Often, used items serve the same purpose as before (e.g., the reused flooring in the photo above), with little or no reprocessing, making them environmentally superior to recycled. Another plus: used items are almost always utilized right here in our region—so very little energy is expended, or pollution created, to transport them. Incorporating used materials into your project takes more time and creativity than buying new, off-the-shelf items—but it pays dividends aesthetically, economically, and ecologically.

Used building materials are available from many sources, including building salvage stores, online exchanges, classified ads, and demolition sales. A list of local sources of used materials is maintained on this guide’s companion site at www.seattle.gov/sustainablebuilding (click on Green Home Remodel), in the Salvage & Reuse section.

Reuse not only benefits the environment and your pocketbook. It also supports local businesses and helps create jobs in the Puget Sound region.
Tips For Incorporating Used Materials Into Your Project:

- Plan ahead. Give yourself time to find used products that meet your needs. Start looking early, and carry a list of the design elements you’d like to come from salvaged materials. Also keep specific measurements (of cabinetry, countertops, ceiling heights, wall and floor lengths, etc.) handy so you can determine whether salvaged elements will fit in your space. Shopping for used building materials is a form of treasure hunting: it’s the “early and often” salvage-seeker who finds the best stuff. Make sure you have sufficient and proper storage for your found materials. Moisture and cold, over time, can destroy your new treasure before you get the chance to use it, or necessitate costly refinishing or repair.

- Be creative. Think outside the box when it comes to using salvaged materials, because someone else’s trash could become your treasure. Could those old wooden bleacher seats become bookshelves or stair treads? Could that slate chalkboard be reborn as a kitchen counter or shower walls? Adventurous materials decisions can add character and a sense of history to your new space.

- Show flexibility. Searching for a single, specific item may take a lot of time and be frustrating. You should love what you select, but keep your options open. Be willing to let go of one idea if another opportunity arises. Instead of creating a design and then hunting for the materials to make it work, why not let your discovery be your starting point? If you come across a beautiful salvaged piece (such as vintage laboratory cabinets, a Craftsman-style fireplace mantle, or a pre-cut marble countertop), consider building part or all of your design around this unexpected treasure.

- Prioritize health, safety, and efficiency. It’s not always good to reuse. Avoid materials that may introduce hazards into your home such as lead, asbestos, or unsafe electrical products. Consider too, whether a product you select will negatively affect your home’s efficiency (such as single-pane windows). For more, see When Not to Reuse on page 9.

Working With Design Professionals

Incorporating used materials into a project is a specific skill, new to many design professionals. If you’re using an architect or interior designer on your project and wish to incorporate used building materials, look to the Hiring a Pro guide in the Green Home Remodel series. Beyond pointers specific to materials reuse, this guide will help you find a green design or building professional for your job, covering issues of health and efficiency as well. Find the guide online at www.seattle.gov/sustainablebuilding (click on Green Home Remodel) or request a paper copy by calling (206) 615-0731.
Some building materials should not be reused because they either pose safety risks or waste energy or water. So, it’s best to be prudent and on the lookout for potential problems.

Health Hazards

- Lead. Widely used until 1978, lead paint is primarily a concern when it flakes or forms dust (such as that caused by scraping or dry sanding). Old plumbing fixtures (faucets) often contain lead solder and leaded brass, as well, which can leach into drinking water. Lead solder was frequently used to join copper pipes until it was banned in 1980. If you have concerns or questions about lead, visit the U.S. EPA’s lead information page at www.epa.gov/lead or call the National Lead Information Center at (800) 424-LEAD.

- Asbestos. This known carcinogen was used in many building products, particularly from the 1940s until the 1970s. Older materials that may contain asbestos include 9-inch square flooring tiles and older sheet vinyl flooring, “popcorn” textured ceilings, roofing and siding, ductwork insulation, window glazing compound, and vermiculite insulation. For more information, visit www.epa.gov/asbestos and click on Asbestos in Your Home.

- Mercury, PCBs, and arsenic. Old thermostats, "silent" light switches as well as those with internal lights, and all fluorescent tubes and bulbs contain varying amounts of mercury. Pre-1978 fluorescent light fixture ballasts may have carcinogenic PCB (polychlorinated biphenyls). Pressure-treated woods often contain a variety of toxic substances such as arsenic.

For further help with potential hazards in used home building materials, see Resources.

Fire Safety and Structural Risks

- Used lumber intended for structural applications must be professionally re-graded to meet Seattle building codes. When in doubt, choose salvaged lumber for non-structural applications such as interior non-bearing walls, flooring, cabinets, or trim. Timbers of sufficient size may not need re-grading.

- Doors in some applications require a fire rating. Used doors must be inspected on a case-by-case basis if they are being specified for an application where the code requires a fire rating.

For an excellent overview of the code issues related to used building materials, see the Seattle Department of Planning and Development’s Client Assistance Memo #336: Sustainable Building and Reuse of Building Materials; to get a copy, go to www.seattle.gov/dpd and click on Publications.
Energy and Water Inefficiency

- Toilets and Fixtures. All toilets manufactured before 1994 waste huge amounts of water and should not be reused. Compared to a new 1.6 gallon-per-flush (GPF) toilet, a typical 5 GPF toilet—commonly manufactured before 1980—will waste over 12,400 gallons and $141 in water and sewer costs per year. There are many styles of new 1.6 GPF toilets to match the period of your home. Another source of water waste? Old showerheads. Reuse a showerhead only if it’s rated for 2.5 gallons per minute (GPM)—2.0 GPM is preferable. (The GPM should be listed on the showerhead. If not, assume it’s inefficient.) Visit www.savingwater.org for information on buying efficient, high-quality toilets and other water-saving tips.

- Windows. Old single-paned windows and most aluminum-framed double-paned windows are energy-inefficient; to meet building codes they can only be reused if building energy use calculations are modified and energy improvements made in other parts of your home to compensate. (For more information, see the Client Assistance Memo #336 referenced under Fire Safety and Structural Risks, above.) Thinking of replacing your old windows? Go to www.efficientwindows.org to learn about energy-efficient options. If your single-paned windows are in good condition and you plan to maintain them, storm windows can reduce their heat loss by 25%-50%, according to the U.S. Department of Energy. Inefficient windows can be reused in unheated buildings, such as sheds, greenhouses, and outbuildings.

- Appliances. Old appliances, water heaters, furnaces, and boilers should only be reused if they meet current energy conservation and safety standards. In general, new Energy Star® refrigerators, clothes washers, and dishwashers offer significantly greater efficiency than older models; visit www.energystar.gov for more information. Also note that old refrigerators and air conditioners likely contain ozone-depleting CFCs and old appliances may contain asbestos and other hazardous materials. Recycle your old appliances at Seattle’s Recycling and Disposal Stations; see Resources for location and hours of operation.
# used material index

The following items are examples of materials that are often desired by others and generally available for reuse. Disposal options, health concerns, and considerations for buying new are also indicated.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>WHAT TO REUSE</th>
<th>WHAT TO RECYCLE</th>
<th>WHAT TO DISPOSE</th>
<th>ENVIRONMENTAL &amp; HEALTH CONCERNS</th>
</tr>
</thead>
<tbody>
<tr>
<td>wood (lumber, flooring, etc.)</td>
<td>timbers, large dimension lumber, plywood, flooring, molding, lumber longer than 6 feet</td>
<td>unpainted and untreated wood unfit for reuse</td>
<td>painted, pressure-treated and rotting wood</td>
<td>lead paint, structural integrity</td>
</tr>
<tr>
<td>windows</td>
<td>windows in good condition (for single panes, consider adding storm windows)</td>
<td>metal frames and screens, unpainted and untreated wood</td>
<td>glass, unusable painted items and wood in disrepair</td>
<td>lead paint, asbestos in older window glazing compound, energy inefficiency</td>
</tr>
<tr>
<td>cabinets</td>
<td>consider re-facing, or reusing in your home/shop/garage</td>
<td>remove and recycle hardware, unpainted and unfinished wood</td>
<td>painted or finished wood</td>
<td>lead paint, formaldehyde in particleboard or interior-grade plywood</td>
</tr>
<tr>
<td>plumbing products</td>
<td>sinks, tubs, faucets</td>
<td>metal pipe, toilets and inefficient plumbing fixtures (porcelain or metal), faucets with lead-content</td>
<td>PVC and other plastic pipe; toilet seats (not accepted at recycling stations)</td>
<td>drinking water: lead content in faucets, solder, and old galvanized pipe</td>
</tr>
<tr>
<td>plaster and gypsum wallboard</td>
<td>repair cracks, or cover with textured paint, install new wallboard over old, or “skim coat”</td>
<td>wood lath—if clean—can be reused/recycled, unpainted wallboard</td>
<td>painted plaster or wallboard</td>
<td>nuisance dust, lead paint on walls, possible asbestos in older wallboard</td>
</tr>
<tr>
<td>electrical products</td>
<td>only if in good working order, or re-wired</td>
<td>metals (fixtures, conduit)</td>
<td>ceramic and plastic parts</td>
<td>frayed wires, possible asbestos insulation</td>
</tr>
<tr>
<td>landscape materials</td>
<td>timbers, stone, concrete</td>
<td>untreated, unpainted wood</td>
<td>rotting, treated, and painted wood</td>
<td>treated wood may contain arsenic, etc., wear a respirator and gloves when cutting; do not burn treated wood</td>
</tr>
<tr>
<td>non-wood flooring (tile, carpet, etc.)</td>
<td>difficult, unless removed intact, clean carpet in good condition</td>
<td>large quantities of ceramic tile</td>
<td>vinyl, stained carpet, broken tile</td>
<td>asbestos content in 9-inch tiles or sheet vinyl flooring, lead particles in dust in old carpet</td>
</tr>
<tr>
<td>roofing materials (see Roofing guide for more details)</td>
<td>retain sheathing, if in good condition, terra cotta or slate tiles</td>
<td>metal materials, contractors generally have outlets for recycling asphalt roofing materials, untreated cedar shingles</td>
<td>treated cedar shingles</td>
<td>possible asbestos content</td>
</tr>
</tbody>
</table>
resources

Books
- *New Spaces from Salvage* by Thomas O’Gorman (Barron’s Educational Series, 2002). Ideas for incorporating salvaged materials into building projects and home decorating.
- *Healthy House Building for the New Millennium* by John Bower (Healthy House Institute, 1999). Covers all aspects of building a healthy house, with a small section on salvaged materials.

Websites
- A companion resource list posted with the online version of this guide at www.seattle.gov/sustainablebuilding lists local sources of used building materials and places you can take materials for reuse or recycling, as well as help dealing with potential remodeling hazards.
- King County’s Online Materials Exchange at www.metrokc.gov/dnrp/swd/exchange/ lists available and wanted materials in King County, including building materials. It’s free to list and access materials listings on this site.
- King County’s Green Building pages at www.metrokc.gov/dnrp/swd/greenbuilding features numerous resources, including the Contractor’s Guide, a comprehensive resource for construction site materials recycling and reuse. Although geared toward construction professionals, this guide is an excellent piece for outlining construction waste management opportunities.
- Find Seattle’s Recycling and Disposal Station locations and hours at www.seattle.gov/util or by calling (206) 684-3000.

Assistance
- Call 1 (800) RECYCLE for personalized service to identify recycling options around Washington. The service is available 9am to 4pm, Monday through Friday.

This brochure was developed by the Seattle Public Utilities Sustainable Building Program, with the assistance of Seattle Public Utilities Resource Conservation staff.

This information can be made available on request to accommodate people with disabilities and those who need language assistance.