



ENERGY MASTERS

Quality Control Checklist

Date: _____

Unit #:	
Team #:	Completed by:
Time in:	Time out:
<input type="checkbox"/> Good candidate for follow-up on Energy Data Usage	<input type="checkbox"/> Good candidate for interview for resident profile

Sealed/Caulked					Faucet Aerators		Shower Head	Toilet Tummy	Standard Power Strip	Smart Power Strip
Light switches	Outlets	Vents	Windows	Base boards	Bath	Kitchen				

- ☐ Introduce yourself and the team (see tip sheet).
 - o Explain what the team will be doing and how long you'll be there.
 - o Provide Energy Saver Guide to and share tips with the residents.
 - o Which of the following occurred:
 - No tenant education completed. Explain: _____
 - Some tenant education completed. Topics covered: _____
- ☐ Inspect for signs of and ask about:
 - o **Bedbugs** - If present, exit the unit and report back to the work team staging area.
 - o **Mold** - If found, use your judgment about remaining and performing the work. Leave if uncomfortable. If you do remain, do not perform work in the mold-affected areas.
 - o **Peeling paint around window and door trim** - If found, do not perform sealing activities in those areas.
 - o **Residents show signs of illness.** - If present, use your judgment about remaining and performing the work. If uncomfortable, exit the unit and report back to the work team staging area.

Where	What	Notes
Living Room, Dining Room, Entryway, and Bedrooms		
<input type="checkbox"/> Trim (Doors, Windows)	<ul style="list-style-type: none">• Check for gaps or cracks around window and door trim.• Apply caulk where necessary.	
<input type="checkbox"/> Electrical Outlets	<ul style="list-style-type: none">• Remove switch and outlet covers.• Inspect for gaps between the electrical box and drywall.• Install backer rod and/or apply caulk or spray foam as necessary.	

<i>Where</i>	<i>What</i>		<i>Notes</i>
	<ul style="list-style-type: none"> • If caulk or foam is applied, wait at least 10 minutes to allow drying, then install foam inserts. • Replace covers and screws. • Install safety outlet covers on rarely used outlets (according to tenants). 		
<input type="checkbox"/> Vent Grills	<ul style="list-style-type: none"> • Remove grill cover. • Inspect for gaps between drywall and vent. Install backer rod and/or apply caulk or spray foam as necessary. • Clean and then replace grill cover. 		
<input type="checkbox"/> Electrical Panels	<ul style="list-style-type: none"> • Caulk seam where the panel meets the drywall as necessary. • DO NOT REMOVE PANEL. 		
<input type="checkbox"/> Exterior Doors	<ul style="list-style-type: none"> • Inspect weather stripping around and sweeps at bottom of doors, including sliding glass doors. • Note if either has gaps or leaks that need to be repaired. 		REPLACE OR REPAIR: <input type="checkbox"/> WEATHER STRIPPING <input type="checkbox"/> DOOR SWEEP
<input type="checkbox"/> Baseboards	<ul style="list-style-type: none"> • Peel back carpet to seal off baseboard, use backer rod and caulk as necessary 		
<input type="checkbox"/> Lighting	<ul style="list-style-type: none"> • Replace incandescent light bulbs with LEDs in most commonly used lights. Check for gaps in ceilings around the light fixtures. • Apply caulk as necessary. 		
<i>Bathrooms and Kitchen</i>			
<input type="checkbox"/> Lighting	<ul style="list-style-type: none"> • Replace incandescent and CFL light bulbs with LED lights (bathroom: 40W CFL globes; kitchen: 60W LED bulbs). • Check for gaps in ceilings around the light fixtures. • Apply caulk as necessary. 		
<input type="checkbox"/> Electrical Outlets	<ul style="list-style-type: none"> • See above 		
<input type="checkbox"/> Vent Grills and Fans	<ul style="list-style-type: none"> • Remove grills and/or fan covers. Inspect for gaps between drywall and vent or fan. • Install backer rod and/or apply caulk or spray foam as necessary. • Clean and then replace grills and/or fan covers. 		
<input type="checkbox"/> Medicine Cabinet	<ul style="list-style-type: none"> • Inspect for gaps between drywall and cabinet. • Apply caulk or spray foam as necessary. 		
<input type="checkbox"/> Plumbing Pipes	<ul style="list-style-type: none"> • Inspect inside cabinets under sinks for gaps between drywall and pipes. • Install backer rod and/or apply caulk or spray foam as necessary. • Do not seal over the main plumbing trap. 		
<input type="checkbox"/> Faucets	<ul style="list-style-type: none"> • Check for leaks. • Install aerators. • Have resident test to make sure they are okay with the switch 		<input type="checkbox"/> FAUCET LEAK REPAIR Location: _____

Where	What		Notes
<input type="checkbox"/> Toilets	<ul style="list-style-type: none"> • Conduct dye test and check for leaks. • Install tummy into the tank as necessary (e.g., not needed for newer, water efficient toilets). Do not install in low-flow toilets, e.g. 1.6 gallons or less • Ensure the toilet flushes properly after tummy installation. 		<input type="checkbox"/> TOILET LEAK REPAIR Location: _____
<input type="checkbox"/> Showers	<ul style="list-style-type: none"> • Check for leaks from showerhead and bath spout. • Inspect for gaps between drywall and piping. • Apply caulk as necessary. • Replace 2.0+ gpm showerhead(s) with low flow model. • <i>Before installing a new showerhead, wrap plumbing tape around the joint at least 4 times in clockwise direction.</i> • Test the new showerhead and ensure it doesn't leak. 		<input type="checkbox"/> BATH OR SHOWER LEAK REPAIR Location: _____
<input type="checkbox"/> Plumbing Panel (where applicable and accessible)	<ul style="list-style-type: none"> • Inspect for gaps around the opening of the plumbing panel (typically located on a wall behind the bathtub; sometimes in the closet or bedroom). • Add weather stripping around the inside opening and/or apply caulk to create a seal between panel and drywall as necessary. 		
<input type="checkbox"/> Refrigerator	<ul style="list-style-type: none"> • Clean coils beneath the refrigerator with the brush in your kit. 		

NOTES: _____

Quality Control Checklist

- ☐ Ask that the resident walk through and view all of the improvements with you.
 - o Explain the improvements and why they are important
 - o Allow the resident to check the function of the improvements (e.g., faucets, shower, lights, power strip)
 - o Ask if they are OK with the improvements and if they have any questions
- ☐ Do not install toilet tank tummys on low-flow toilets (e.g., at Marbella).
- ☐ Ensure that aerators are working properly.
 - o Turn water on and check for leaks and sprays
 - o Check the faucets in both the kitchen and the bathrooms
- ☐ Ensure that the showerhead is working properly.
 - o Turn on water and check for leaks and sprays
- ☐ Ensure that all outlet covers are fully, neatly, and tightly screwed back into the wall.
- ☐ If loose, it may be necessary to replace mounting screws with longer screws.
- ☐ Ensure all furniture is put back in place.

- ❑ Ensure all trash is picked up and improvement areas are cleaned up.
- ❑ Check to make sure the team does not leave any tools or supplies in the apartment.
- ❑ Double-check the numbers for items installed and outlets/vents sealed for page 1 reporting.

Notes: _____

Introductory & Educational Tips When Talking with Residents

Introductory Notes

- We are volunteers with Energy Masters
 - EM is a partnership of EcoAction Arlington, Arlington Thrive, Virginia Cooperative Extension, Arlington County, and City of Alexandria.
 - This is a free program for residents; funded by a grant from Arlington County and City of Alexandria, and donations to EcoAction Arlington.
- Purposes/Benefits: save money on rent/energy-water bills, increase comfort, and protect the planet/environment by using energy and water more efficiently, with less waste
- The team will be in your apartment for about 1 to 1.5 hours doing the following activities:
 - Replacing light bulbs with more energy efficient bulbs
 - Sealing air leaks around windows, doors, pipes, outlets, vents, fixtures, and cabinets/panels so that the air being heated or cooled stays in the apartment
 - Checking for water leaks & installing faucet aerators, low-flow showerheads, and toilet tank tumblers
 - Cleaning refrigerator coils
 - Providing/installing power strip
- These improvements will help reduce water and utility (electric, gas) costs
 - If bills paid directly by resident, they should see impacts in their next bills
 - If utilities are paid by landlord, will help keep affordable & stabilize (minimize future increases to) the amount of rent they pay
- Walk around the apartment with the resident and have them: identify outlets and switches, identify drafty areas, and get permission to move furniture (as needed)

Energy Masters Apartment Workdays: Work Team Tips and Reminders

Safety Checks and Precautions

- While walking through the apartment to identify and plan the work activities (e.g., number and location of outlets, switch plates, vents, light fixtures, windows), be sure to look for signs of bed bugs, mold, and peeling paint.
- Bed bugs are big enough to be visible, but are less active during daylight and when people are active. During your walk-through check around the beds and nearby walls. As a preventative measure, place the supplies on a tile floor on a drop cloth or newspaper.
- If there is anything that makes you feel uncomfortable or unsafe, either with the apartment conditions or the behavior of the residents, do not proceed. Immediately exit the apartment, return to the staging area, and report the issues to the program coordinator.

Organizing the Work Team: Finding & Sealing Air Leaks

- o While walking through the apartment to identify the work activities, map out a plan and assign tasks so that the team can complete the work as effectively and efficiently as possible.
- o You might, for example, have a pair work on the outlets, switch plates, vents, etc. For example, Volunteer A starts by unscrewing covers and Volunteer B follows with the sealants. By the time Volunteer A finishes removing plates and covers, the caulking on the first outlets has probably dried; they can loop back to installing the foam gaskets and replacing the covers.

Finding & Sealing Air Leaks

- o Use a flashlight to illuminate darker areas so that you can spot any gaps.
- o Before applying caulk or spray foam, ensure the area is free of debris, clean, and dry.
- o For areas with large gaps, first try to fill in with a backer rod, then apply caulk or foam.
- o Keep in mind which areas require fire-rated caulk or foam (i.e., air handler cabinets, hot water heater pipes).
- o Use rags to clean areas with excess or dripping caulk or foam.
- o Allow time for caulk or foam to dry before installing gaskets and/or replacing covers.
- o Remember to wear gloves when using any of the spray foam products.
- o Look under sink cabinets to see if there are large gaps between the plumbing pipes and the drywall.
- o Check the top of the door/window trims & interior closet doors for gaps.
- o Do not touch sprinkler areas on the ceiling.

Power Strip Installation & Usage

- o Install the power strip(s) where there are the most devices – usually the TV and/or computer areas.
- o Unless it's a "smart" power strip, do not plug cable boxes, digital video recorders (DVRs), answering machines, or internet modems into them.
- o Test to see that the devices still work after you have plugged them into the power strip.
- o Explain to the resident that – to save energy/money – they will have to turn off the button/switch when not using the device(s).

Water Efficiency Enhancements

- o When installing the low-flow showerheads, remember to first wrap the plumbing tape around the joint at least 4 times in clockwise direction

Miscellaneous

- o Use the "Notes" section on the checklist for any observations that may be driving energy/water use outside the normal range (e.g., unit is kept extremely warm, windows are open while heat or AC is turned on, there are a lot of electronics)

Resident Education

- o If the resident is really engaged, you have time, and you have the kill-a-watt device, show them how much energy some of their appliances and electronic devices are using when (1) turned on and plugged in, and (2) turned off and plugged in.
- o If they are really engaged you can also talk with them about:
 - o Having them talk with their neighbors, family, and friends about what they have learned about saving money by simple steps (e.g., installing LEDs, aerators) and by being more mindful of the energy and water they use.
 - o How they can become an Energy Master....or participate in other EcoAction Arlington and VCE volunteer activities