



## RoseVilla Pill Bottle Reuse Case Study

**Chapter:** RoseVilla

**Location:** Portland, OR

**Recorder:** Lana Bryan, Phone: 408-712-3834, Email: [lane.bryan@gmail.com](mailto:lane.bryan@gmail.com) (preferred)

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**Who to Contact for More Information:**

Gloria Falk, Phone: 503-652-3308 (preferred), Email: [gfalk1125@outlook.com](mailto:gfalk1125@outlook.com)

Jan Nolley, Phone: 503-905-5073, Email: [jnolley@willamette.edu](mailto:jnolley@willamette.edu) (preferred)

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### Summary:

The Pill Bottle project at RoseVilla involves collection, cleaning, and preparation of pill bottles to send to a non-profit charity for distribution and reuse around the world.

**Objective:** To keep plastic bottles out of the landfill, giving them a longer life before discarding or recycling.

### Project Description:

The RoseVilla community and campus

- size/location: 22 acres, suburb of Portland, OR
- number of residents: Independent living: 350, assisted living & nursing: 32
- types of residences: cottages, apartments
- non-profit or for profit? non-profit
- 'Resident driven' community? Yes

Any campus that has independent living can do this activity, as pill bottles are plentiful among these folks. Assisted Living-only facilities or skilled nursing facilities could not. Many of the latter use blister packs rather than pill bottles.

### Methodology:

1. This program is resident-started and resident-volunteer run. The Clinic staff only is involved by saving empty pill bottles from residents who see them frequently.



2. Send an announcement to residents to see if they are interested in this charitable activity to donate their empty, dry pill bottles with lids. We encourage them to clean their own bottles and remove labels (if they can) before donating them. Include where the bottles will be sent for reuse.
3. Gather volunteers to sort and clean the bottles. We meet once a week for an hour in a common room.
4. Place containers around the campus where residents can drop off their pill bottles.
5. Before the first sorting/cleaning “Pill Bottle Bee,” we gathered supplies such as clean rags and towels, vegetable oil, lemon essential oil (therapeutic grade) to add to the vegetable oil, acetone (nail polish remover to remove black marker from lids), one-gallon Ziploc bags, and reusable grocery bags for sorting.
6. Enjoy the camaraderie that results from a shared activity around a common goal.

### **Sorting the bottles:**

You can sort the bottles first by their state of cleanliness in categories of “Clean of labels & glue,” “Almost clean” and “Too awful to spend our precious time on.”

- Clean of labels & glue: These are ready to be placed into zip-lock gallon bags labeled “Clean Bottles,” then boxed and shipped to the Matthew 25: Ministries charity.
- Almost clean: These require some work with the cleaning supplies until they are clean inside and out.
- Too awful to spend our precious time on: These have labels or partial labels or just glue residue. If they would take more than 5 minutes per bottle to clean, opt to recycle the bottle or find a place that will take them to process and reuse.

### **Cleaning the bottles:**

If you opt for the more difficult task of removing labels and glue, there are several ways to accomplish it. For small numbers of bottles, add water and place in the microwave for a few seconds to make peeling off the label easier. But when there are hundreds of bottles, that method is not practical. You don’t want plastic melting in your personal microwave.

For cleaning many bottles at a time, here is a list of cleaning supplies:

- rags (terry cloth is good); also thin lens-cleaning cloths are good for drying the inside of bottles
- combined vegetable oil with a few drops of strong lemon essential oil
- nail polish remover (acetone) for removing black marker from lids
- dish pan or sink



- towel for draining
- scraping tool (citrus peelers, rather than sharp knives, don't leave scrape marks on the plastic)
- hair dryer and hot pad

Some labels will peel off if you start at a corner and go slowly. Some respond to heat from the hair dryer after a corner is started. Aim the dryer directly at the peeled corner and keep it moving. Protect your fingers with the hot pad. (Lesson learned: Do not put oil on a bottle and then use the hair dryer. It will melt the bottle and might burn your fingers.)

To remove stubborn pieces of labels and glue residue, place one or more layers of rags on a table and pour a tablespoon or two of oil or on the rag. Rub the bottle over the oil. To remove difficult spots, allow the bottle to rest in the oil for a few minutes, then peel or rub.

Hopefully, there will be a group of resident volunteers to help. Like the old-fashioned quilting bee, this "pill bottle bee" should be a social time for getting to know and catching up with your neighbors, sharing stories and experiences, and laughing!

**Funding Needed (Amount, Sources):** \$60.00 per month for postage to ship a box of bottles from Oregon to Ohio. (Postage depends on your location and distance from the charity.) Use the cheapest mailing method, USPS Ground Advantage. Sources for funding have included a grant from the RoseVilla Foundation and personal funding.

#### **Involvement or Support of Community Administration:**

The RoseVilla administration offers verbal support. The RoseVilla Foundation awarded a \$500 grant in 2023 to use for nine months of postage.

#### **Key Challenges:**

Except for the one-time grant from the RV Foundation, the cost of postage falls to the volunteers.

#### **Outcome (Results)**

In two years, we sent over 6000 pill bottles to Matthew 25: Methodist Ministries to include with medical supplies sent to many countries around the world. And we are still going strong! RoseVilla residents repeatedly tell us how happy they are to see their used pill bottles being reused in this way.



## **Lessons Learned:**

1. For donations, we use a large basket in a Club Room where residents gather for a variety of activities. (A volunteer picks up the bottles twice a week and delivers them to the room where we sort and prepare them.) We place another smaller basket in our Health Clinic. (The Clinic staff puts these in a large trash bag and we pick them up about every two weeks, or when they tell us the bag is full.)
2. We work in a room that has a sink, useful to rinse out any pill residue left behind inside the bottles. A big bonus is that the room has cabinets; we labeled one of them “Pill Bottles” and stash supplies in it. Then no one has to lug the supplies around the campus.
3. At first, we struggled with cleaning the bottles, resorting to products like Goo-Gone to remove the labels and glue. After two years, we were quite tired of the odor and the mess, so we found a local place that would take bottles with labels for local recycling and another that melted the bottles, labels and all, to make new products. For cleaning of light glue residue, we use vegetable oil with lemon essential oil.
4. A volunteer delivers to local businesses that accept them for further processing. A volunteer washes the towels/rags between meetings.
5. One volunteer mails the clean pill bottles to the charity. One one-gallon Ziploc bag holds from 10 to 14 bottles. A standard mailing box (12x14x15) holds about 18 bags.

## **Next Steps or Follow Up:**

We continue to improve which materials we buy, how we do things, and finding local sources.

## **Resources:**

Matthew 25: Ministries: <https://m25m.org/>

Earth 911: <https://earth911.com/diy/reuse-pill-bottles/>

Majestic Pure Lemon Essential Oil: search online for best price



## The Pill Bottle Process



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