## 2024 Portland Monitor

A publication of The Creative Outlet, Inc., Portland, Oregon

# A RECYCLING RENAISSANCE: MAKING MONEY RECYCLING Turning Waste into Valuable Raw Materials

The outstanding WELT documentary on YouTube.

Trash heaps are being mined for resources...

For many years, Germany has profited mightily from mega investments in recycling.

But now, Germany has become a world leader in developing even more ways to mine valuable recyclables.

Germany's attitude, one shared by countries from Scandinavia to Africa to Asia and the Middle East, is that the massive waste stream created everyday by humans is an opportunity and not a burden.

Around the world, but particularly in Germany, sophisticated technology is allowing trash of all kinds to be efficiently collected, sorted, repurposed and resold for astounding profits.

Precious metals gleaned from electronics, plastic fibers, and many other common materials are being mined to redefine waste management.

Salvagable materials, such as furniture and furnishings of all kinds that are dropped off at municipal dump sites are separated and resold at city-run recycling department stores.

Proclaims the German documentary Making Money-Turning Waste into Valuable Materials,

"Thanks to strict regulations and precise specifications, waste is turned into raw materials."





- Paper fibers can be reused up to seven times
- Sorting machines equipped with infrared sensors and magnets allow tons of scrap metal such as copper to be recycled
- Tetra packs are turned into paper
- Plastic bottles are used for car parts
- Yogurt cups are converted into shopping baskets
- Building rubble becomes new material for house and road construction
- What remains of the trash is then used to generate electricity that can replace coal

### **VIVA LAS VEGAS!**

Las Vegas boasts the largest residential recycling center in North America.

How FIVE BILLION Pounds of Las Vegas Garbage Powers a City Watch This:

PBS Terra Documentary on YouTube https://youtu.be/aHzltu6Tvl8



Las Vegas boasts the largest consumer recycling center in North America. Because it uses "single stream" recycling, all the sorting happens at the APEX Landfill,

which lies on the outskirts of Las Vegas. At APEX they capture methane from the garbage and turn it into energy. Unique equipment



performs mechanical separation with discs, screens, and computerized machines that read materials based on color and density. After machines separate the materials, humans perform quality control to make sure machines sorted correctly, and there are no contaminants in the final product.



160 wells have been drilled into this mountain of trash, some as deep as 200 feet. The wells siphon off the gas coming from the landfill.



After it's purified, it's sent to an on-site power plant, where it is burned to spin turbines which create energy.

That energy is fed back into the electrical grid that powers 11,000 homes in southern Nevada.



### Precious Plastic.com

and on Youtube @Precious\_Plastic
"We are a global plastic recycling movement
(1000+orgs) built on open-source designs."

### PRECIOUS PLASTIC IS...

Precious Plastic is an open source digital commons and open hardware plastic recycling project. It relies on a series of machines and tools that grind, melt, and inject recycled plastic, allowing for the creation of new products out of recycled plastic on a small scale. Precious Plastic has also created a marketplace called Bazar for selling machines and products for individual consumers, designers, and larger commercial concerns to set up their own miniature recycling works.

Precious Plastic is an international alliance of likeminded folks intent on changing how we regard the use and reuse of plastics, a substance that can either threaten life on planet Earth or help it, providing through responsible management, a versatile, valuable resource.

Their educational outreach programs demonstrate exactly what Precious Plastic offers.

Precious Plastic is committed to creating a renaissance of culture, science, industry, and innovation for small and large applications of plastic reuse involving open source "maker ingenuity."

#### Consider this:

a neighborhood, municipality, state, or country may obtain use of this technology to collect and repurpose what would otherwise be thrown into landfills, ultimately poisoning our soil, our waterways, and our atmosphere.

Precious Plastic is an international consortium of more than 40,000 people working out of 400 workspaces including the founding center in the Netherlands where the program began. Precious Plastic's code, drawings, and source materials are available for free online under the Creative Commons attribution.

(Share Alike International 4.0 license)



#### Participants include:

- Precious Plastic, Madison, Wisconsin
- University of Texas Precious Plastic students
- Puna Precious Plastic in Hawaii collects plastic to sort, shred and melt into plastic bricks and lumber for construction.
- Environmental Fellows Program at DePauw University, Indiana
- Precious Plastic, Turin, Italy
- Precious Plastic, Bangkok, Thailand collects plastic bottle caps to shred, melt, and reshape into new products.
- Precious Plastic Fiji
- Precious Plastic Indonesia
- Precious Plastic Iceland
- In Australia, UNSW Business School Students created, with Precious Plastic, "Closed Loop," a local-level plastic waste recycling business.
- In Melbourne, Australia, Monash University engineering students and Precious Plastic created a portable recycling demonstration machine to transport to educational events.
- Planplast China, a company that grew out of a Precious Plastic workshop

## WATCH THIS!

### The Precious Plastic Channel

on YouTube @ Precious\_Plastic

Documenting the international micro-recycling movement...



Using 3D print to optimize Precious Plastic machines! https://www.youtube.com/watch?v=8NxgVwSH7xM



Plastic Welding
How It Works
https://www.youtube.com/watch?v=PniBA6ABcgY



Recycling and Repurposing
Plastic in Indonesia
https://www.youtube.com/watch?v=phcUDITNrBE



G e t F i t! https://www.youtube.com/watch?v=PfF3cljHbRw



5 years recycling small-scale in Kenya https://youtu.be/aj9WEYfIohg



Making the perfect sheet of plastic. https://www.youtube.com/watch?v=GEqPjhllYTY

# Precious Plastic Recycling Machines: Collect Them All!



#### SHREDDER - BASIC

The Shredder cuts plastic items into small flakes ready to be turned into new things by the other machines.

The shredded plastic can be of multiple sizes and colors to increase its value.



#### **EXTRUSION - BASIC**

Extrusion is a continuous process where plastic flakes are inserted into the hopper and extruded into a line of plastic.

These lines can be used to make new raw material, granulated plastic, spun around a mould, or used in your own creative ways.



#### **INJECTION - BASIC**

Plastic flakes are heated and injected into a mould. It's a relatively quick process well suited for creating productions of small objects. You can make the moulds using CNC mills or lathes, or by simply welding them.



#### SHREDDER - PRO

The Shredder Pro shreds plastic waste into smaller flakes ready to be recycled.

This double axis machine is able to shred up to 50 kg of plastic every hour depending on the desired flake size.



#### **EXTRUSION - PRO**

The Extrusion Pro extrudes recycled plastic into a mould.

This machine is able to recycle up to 20 kg of plastic every hour and make productions of beams or bricks.



#### SHEETPRESS - PRO

The Sheetpress presses plastic into recycled sheets.

This machine can make multiple sheets (1x1 meters) per day recycling around 20 kg of plastic per sheet.



53 recycling machines + 13 labs across Portugal https://www.youtube.com/watch?v=Hc0ngzzF0Z0



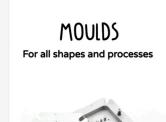
How to make 100% recycled polygonal sheets https://www.youtube.com/watch?v=WSZq\_9a-XMQ

# Precious Plastic Bazar https://bazar.preciousplastic.com

"Open Source" plans for Precious Plastic recycling machines are available online.

Machines may be purchased from Precious Plastic...













Shredder Mini - Handcranked Shredder

SHREDDER V2.1 KIT REV 3 REGULAR STEEL



Shredder V2.1 Regular Steel Kit



Injection machine - Ready to paint and use & Mould choice



Shredder (Basic)+ Motor + Coupling (MINI Version)

### Recycled plastic products



Hoodie Galeras -Dark Grey



8-sided tabletop game dice, set of 6



Surf Board Back



Recycled Plastic Pen



All Kinds of Books & Everything Collectible...

# PROP DEPARTMENT





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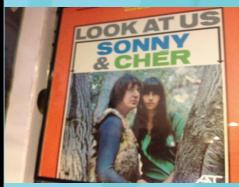




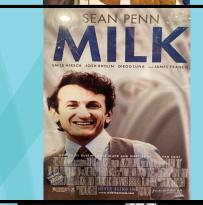














All Kinds of **Books** & Everything Collectible...



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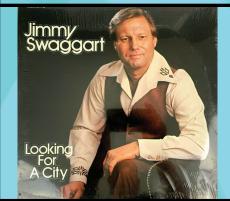
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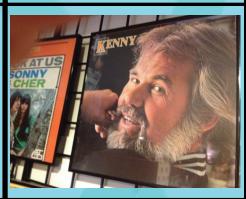
























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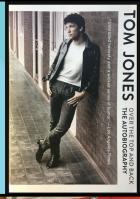




















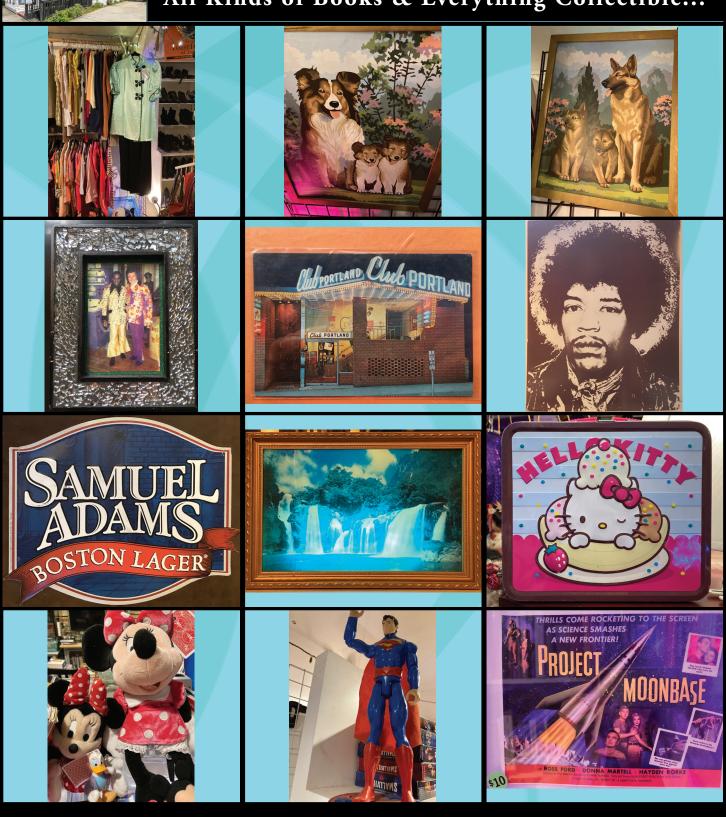




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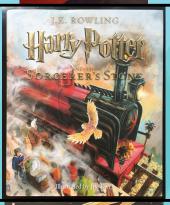


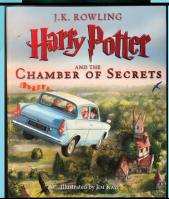
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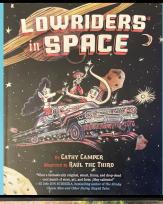


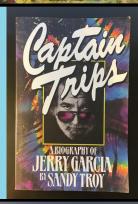




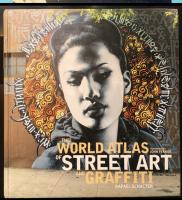
















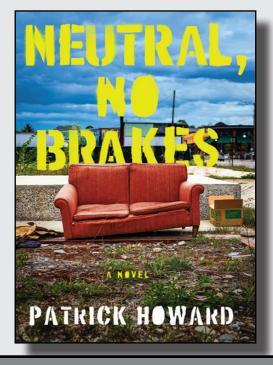
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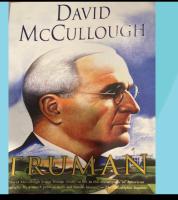
All Kinds of Books & Everything Collectible...

"An expansive, moving tale that illuminates the dangers of gentrification and the complexities of the human experience..."

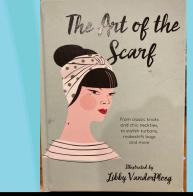
- Kirkus Review







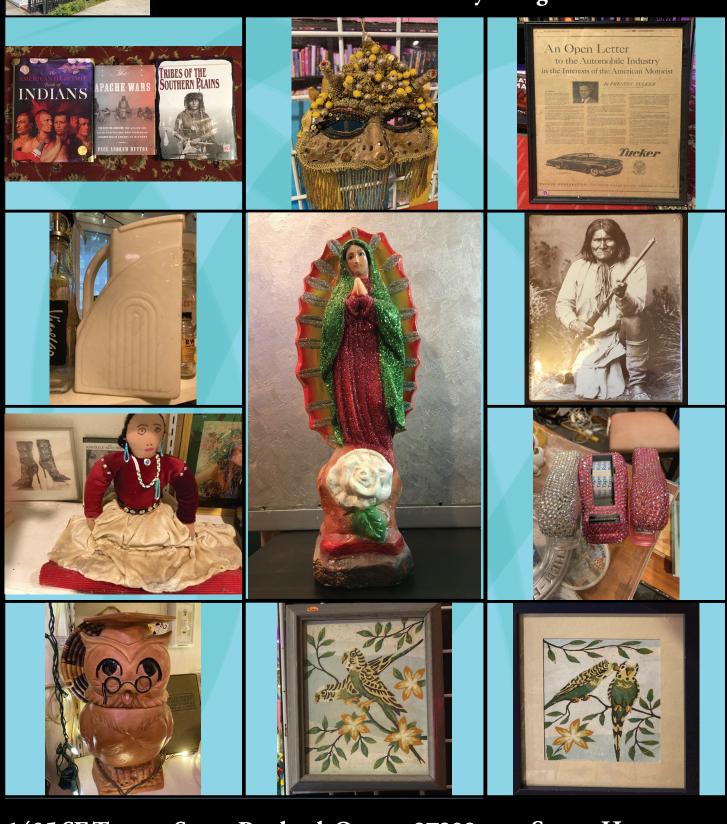
"It's not hoarding if it's books..."



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Store Hours: 12 noon to 6pm



All Kinds of Books & Everything Collectible...

























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Store Hours: 12 noon to 6pm



# Green Mill Properties Portland, Oregon

# GreenMillPropertiesPDX@gmail.com Follow us on Facebook Marketplace



Green Mill Properties PDX is offering two outstanding Commercial/Mixed-Use properties in the heart of Portland's most desirable neighborhoods: Multnomah Village and Sellwood. Both properties are outstanding investment or 1031 exchange opportunities. Please visit our WEBSITE and our YouTube CHANNEL for more details.

### Sellwood

1405 SE Tacoma Street, Portland, OR 97202 Commercial/Mixed-Use (CM-2) property Ideal Live/Work Opportunity



YouTube Video: https://youtu.be/U9sbclbL49l

### **Multnomah Village**

7435 SW Capitol Highway, Portland, OR 97219 Commercial/Mixed-Use (CM-1) property Office/Professional/Retail/Residential Ideal Live/Work Creative Space

Contact us with any questions you may have or to arrange a tour.
Green Mill Properties PDX
Portland, Oregon
GreenMillPropertiesPDX@gmail.com
(503) 984-0163



YouTube Video: https://youtu.be/pMxWSv8vg7Y

1327 SE Tacoma Street, Suite 253
Portland, Oregon 97202

### **Portland Classic:**

## Sellwood Neighborhood Commercial Mixed-Use Property For Sale



Retail/Office/Professional/Residential





Ideal Live/Work Opportunity 1405 SE Tacoma St. Portland, Oregon 97202

Contact Patrick at GreenMillPropertiesPDX@gmail.com 503.984.0163

### Sellwood Commercial Mixed-Use Property For Sale Retail/Office/Professional/Residential









### **Features**

- Open spacious retail display areas
- Upstairs loft/bedroom includes sky windows,
   built-ins & ample storage space
- Fenced back yard, patio & garden areas
- Very large remodeled kitchen with loads of tile/counter space & 6-burner range
- Zoned CM-2

Investment Opportunity in the Heart of Sellwood Perfect Owner/User opportunity
Retail/Office/Professial/Residential space
Oak and fir wood floors, spacious kitchen, fireplace, loft bedroom w/ skylights and ample
built-ins. Includes 3 floors, 3033 sq ft., backyard,
patio, garage & driveway parking. Next to
Columbia Sportswear. Great for biking and
walking.



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### Portland, Oregon Classic For Sale:

Multnomah Village Commercial / Mixed-Use Property
Office / Professional / Retail / Residential
Ideal Live / Work Creative Space





#### Features:

- Commercial/Mixed-Use (CM1) Zoning
- Extra-wide lot w/75ft road frontage
- Tons of storage + exterior storage unit
- Excellent Multnomah Village dining, shopping, medical, dental, professional offices
- Near Multnomah Arts Center, Gabriel Park & SW Community Center
- Adjacent to desirable Hillside neighborhood
- 10 min to OHSU, 7 min to Lewis & Clark College
- On bus line to downtown Portland, Ida B. Wells High School, PSU and PCC Sylvania
- Landscaped front and back
- Fenced back yard with gazebo, 2 decks and patios
- Excellent Live/Work opportunity
- Easy maintenance
- 3 Off-street parking places

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## Portland, Oregon Classic For Sale:







### **Additional Features**

- •1,928 sq ft bldg, built in 1925
- · Natural light
- Serene interior & exterior
- · Bamboo flooring
- Full unfinished basement





Multnomah Village Commercial / Mixed-Use Property Office / Professional / Retail / Residential Ideal Live / Work Creative Space



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## Raleigh Hills Home For Sale

Beautiful Bauman-built home in the Broadmoor neighborhood, 3 bedroom, 3 bath, fireplace, "granny flat" finished basement with separate entrance, large yard with fruit trees, mature landscaping, 2 driveways, 2 garages.

### 1963 Classic Portland Home

Minutes from downtown.

Walk to schools, library, park, Planet Fitness and excellent shopping:

Fred Meyer, New Seasons, Walgreens.
On the bus line.

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