Vol 1, No. 1, 2025

PROSPECT RECYCLES!

THE SCIENCE & ECONOMICS OF RECYCLING

Did you know?

- **ONE recycled aluminum can** saves enough energy to power through your smartphone playlist!
- **Concrete is the MOST** recycled material in the US.
- **5 million plastic bottles** are being thrown away every hour in the US.
- **Cardboard boxes** can be recycled up to SEVEN TIMES!

Visit Rumpke's Waste Recycling Center: *AUG 28.*

Our own Mayor Farnsley has arranged for a full tour of the 225,000 sq. ft. facility, in operation, as well as the landfill. The excursion is limited to 20 residents at: 502-228-1121 or use the QR Code.

Watch for the signs!

- As the ***"Prospect Recycles"*** initiative commences, you may begin to notice new signage around town, in shops, banks, churches, restaurants and public spaces, and on the Prospect website and else-where regarding **LIVE Recycling / Educational Community Events.**

Contaminated Recycling: Economic and Environmental Costs

Contaminated recycling happens when trash or unwanted materials get mixed in with recyclables.
Common culprits include leftover food or liquids in containers, greasy pizza boxes, plastic bags, and soiled papers. For example, a juice bottle with sticky residue can cause mold, and a greasy pizza box looks just like clean cardboard to sorting machines . Workers and machines can't easily tell the difference, so that one dirty item can spoil a whole batch of recyclables.

How to Reduce Contamination

Everyone can help keep recycling clean. Follow your local guidelines closely and prepare items properly.

- Rinse and clean containers. Empty jars, cans, and bottles into the bin only after removing food or liquid. Even a quick rinse helps! ***Clean enough is clean enough.***
- Don't bag recyclables. Leave papers, cans, and bottles loose in the bin!
- Plastic bags and liners can jam sorting machines. **Continued….**

Visit our "*Prospect Recycles*" display table at the Don Krekel Orchestra Concert July 27

Plastic Recycling Statistics

- The United States goes through 2.5 million plastic bottles every 30 minutes. That means 35 BILLION per year, yet only 5% of all plastics in the US are actually recycled.
- Recycling one ton of plastic saves over 1,000 gallons of gasoline.
- It's recently estimated that there are up to 46,000 pieces of plastic floating in each square mile of ocean, and those plastic items kill up to 1 million sea creatures annually.
- The United States uses 380 BILLION plastic bags each year, which requires up to 40 MILLION barrels of oil. So, a typical plastic grocery bag takes 500 to 1,000 years to degrade!

The Kroger in Prospect has placed RECYCLE CANS to collect plastic grocery bags just inside the front doors. Thank, you Kroger!

Look for announcements for "hands-on" recycling training events.

- Recycle only accepted items. Check your town's list – for example, many programs exclude plastic bags, polystyrene (Styrofoam), greasy paper, or soiled napkins. Put those in the trash or compost instead.
- Compost organics. Food scraps and yard waste often belong in a compost or yard pickup, not the recycling bin. Diverting organics to compost reduces landfill volume and methane. By keeping recyclables dry, empty, and uncontaminated, residents help lower waste processing fees and preserve the value of recycling.

Studies suggest roughly 10–25% of curbside recycling loads are contaminated, meaning tons of material end up being discarded instead of reused.

Economic Impacts

Contamination drives up costs for cities and waste facilities. Contaminated loads require extra sorting or are dumped as trash – waste that facilities must pay to handle. In Rhode Island in 2024, cities paid steep fees on rejected recycling. Providence alone sent ~18,000 tons of "contaminated" recyclables to landfill, costing over $1.14 million in extra charges. Until April 2025, any load over 10% contamination was rejected at a flat $250 fee; a new policy now charges about $83 per ton.

In Florida, curbside processing fees have roughly doubled in three years (from about $50 to $100 per ton) amid rising contamination levels. Higher contamination means more loads get rejected or downgraded, so communities lose revenue from recycled commodities and spend more on hauling waste. A University of Florida study even found that reducing contamination could save $12–$37 per household per year, far more than the $1–$12 saved by cancelling recycling altogether.

As one expert put it, cutting contamination is "the most effective way to control the cost of recycling".

Environmental Consequences

When recyclables are soiled and thrown away, environmental benefits vanish. More material ends up in landfills, and more new raw resources must be mined or made. That means higher emissions and energy use. For example, making aluminum cans from recycled scrap uses about 95% less energy than from new bauxite ore.

Contaminated loads also mean more organic waste in landfills: rotting food and paper produce methane (a greenhouse gas about **28 times** more potent than CO_2). In fact, analyses suggest robust recycling programs can cut carbon emissions dramatically (projected savings are on the order of 5–6 giga-tons CO_2 by 2050).

By contrast, tossing recyclables undermines these gains. Every bit of contamination erodes the market value of recovered materials and adds to landfill waste.

In short, cleaner recycling means that more materials actually get reused, saving money and reducing greenhouse gas emissions for everyone.

WE GET BETTER WITH PRACTICE AND KNOWLEDGE.

This project is a collaborative involving the City of Prospect, Western Kentucky University, and Rumpke, with a grant from Prospect/Goshen Rotary Club 2024.

PROSPECT CARES