

**RHINEGEIST BREWERY**



**2025  
Impact  
Report**

External Community Engagement | Employee Initiatives | Sustainability



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## A Note from the CEO

# At Rhinegeist, we continue to believe that beer brings people together.

As we enter a new year, it's worthwhile to look back and recognize the positive impact that we've had on the communities we serve, and perhaps more importantly, the positive impact that our communities have had on us. From cause-based beers and in-kind donations, to charitable pint nights, sustainability efforts, employee resource group initiatives, volunteer events and more, nothing makes operating a brewery more rewarding than witnessing the good vibes radiate out into the neighborhoods and cities that Rhinegeist proudly serves.

This impact report is our opportunity to highlight our efforts as well as the many dedicated organizations we partner with throughout the year. Beer for Humans has been active since 2023, and it has become so much more than the eponymous brew. The following pages are a testament to this. Humans make everything work, and the beer is just icing on the cake, as they say.

One aspect that we'd like to highlight particularly in this year's report is sustainability. In 2025 we approached sustainability more as a shared responsibility than a peripheral aspect of day-to-day brewery functions. The report demonstrates how each department contributes directly to our sustainability efforts, and ultimately to the long-term impact and success of Rhinegeist. Like

diversity, volunteer efforts, or charitable endeavors, sustainability is an integral part of our organization's DNA.

Once again, we hope you take the time to look through this impact report, and we sincerely hope you enjoy reading through it half as much as we enjoyed all of the events, partnerships, planning and projects that comprise it. We're extremely proud of the achievements of our partners, the spirit of our fans, the city we call home, and the dedication of our team.

Cheers,

**Adam Bankovich**  
Chief Executive Officer



Chapter One

# External Community Engagement



# Beer for Humans

Beer for Humans is more than just a beer brand—it is the colorful face of our community giving program.

## The Beer

Throughout our twelve-year history, community work has been a part of what we do. We believe that beer brings people together, and bringing people together is what Beer for Humans is all about! Currently, we donate to approximately 300 organizations per year, and each partnership varies in scope. We are always building partnerships with purpose through cause-based beers, Pint Nights, in-kind donations, volunteer hours, emergency relief, DEIA initiatives, event partnerships, and local membership engagement. Since its launch in February of 2023, Beer for Humans has become the central pillar of community support at Rhinegeist. Beer for Humans is more than just a beer brand—it is the colorful face of our community giving program.

## Pint Night

Drink beer, give back! Each month, Rhinegeist highlights local nonprofit organizations brewing positive change in the communities we serve. Every Wednesday in our Cincinnati Taproom from 5-8pm, our partners have the opportunity to table and share the work they do with our guests. At the end of the month, each organization receives a donation, plus any monetary donations dropped in their dropbox. So grab your pals, grab a pint, and sip for a cause!



**Impact Fact:** We donate to approximately 300 organizations per year.

# BEER FOR HUMANS

## PILLARS OF GIVING

Medical Research	DEIA Support
Environmental Welfare	Addiction & Mental Health Services
Equal Access Education & (At Risk) Youth Services	Poverty & Hunger



# Canny – the Beer for Humans.



Our Beer for Humans mascot, Canny, carries the banner for all of our cause-based endeavors, from in-kind donations, volunteer hours, emergency relief, DEIA initiatives, event partnerships, local membership engagement and more!







External Community Engagement

# Brewed for a Cause

## Cause-Based Beer

Cause-based beers unify, uplift, and bring new faces into the brewing process. They provide financial contributions to our partners and elevate the voices of everyone involved. **We brewed 9 cause-based beers in 2025**, with a portion of the proceeds from each going back to nonprofit organizations in our community.

<b>Mack's Island Ale</b> Tropical Beer with Ginger	United Way of Greater Cincinnati - Community Empowerment Works
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<b>Native Land Beer</b> Hazy IPA	Urban Native Collective
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<b>Hildegard</b> Pale Ale	Cradle Cincinnati
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<b>Valor</b> Blonde Ale	Joseph House
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<b>Miss Major</b> Berliner Style Sour Ale	Transform Cincy
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<b>Ales for ALS</b> IPA	Alzheimer's Association
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<b>From the Heart</b> IPA	Ohio Craft Brewers Association
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<b>Mutter Erde</b> Fonio Pilsner	Tri-State Trails
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<b>Synaptic</b> Irish Red Ale	Brewhaus Bakery & Dog Bones
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# Events for People

## External Events

We recognize that the important work happening in our communities goes well beyond the walls of the brewery. We support fundraisers, galas, and other nonprofit events through the form of beverage sponsorships, contributing donations matching the wholesale value of beer purchased for the event.



### 2025 Sponsored Events

- |   |   |
|---|---|
| African Professionals Net, APNET Symposium Gala               | FC Cincinnati Foundation, Served by the Pros  |
| All-In Cincinnati, Day of Healing                             | Franklin Park Conservancy, Blooms and Bubbly  |
| American Cancer Society, Pan Ohio Hope Ride                   | Gem of the Highlands 5k                       |
| Autism Connections, Bourbon Bash Ball                         | Keep a Breast, Brewbies Nashville             |
| ChangingGears, Grand Prix                                     | Keep Cincinnati Beautiful, Cincy Block Party  |
| Cincinnati Art Museum, A Happening: Press Play                | League for Animal Welfare, Whiskey & Whiskers |
| Cincinnati Museum Center, Layers of Innovation                | Love Grows, Garden Gala                       |
| Cincinnati Nature Center, Hoots and Hops                      | Northside Farmers Market, Dinner Party        |
| Cincinnati Observatory, Celestial Sips                        | PAR Projects, Beer Burger Brunch              |
| Cincinnati Parks Foundation, Views and Brews                  | Parks Foundation, On Point Music Festival     |
| Cincinnati Public Schools, Golf Outing                        | Pleasant Ridge Community Council, Ridge Day   |
| Cincinnati Tennis Foundation, March Matchness                 | Room to Read, Lobs for Literacy               |
| Cincinnati Zoo and Botanical Garden, Hops and Holly; Zoo Brew | Save the Animals Foundation, Paddle for Paws  |
| Civic Garden Center, Growfest                                 | St. Vincent de Paul, Prescription Fore Fun    |
| Civic Garden Center, Volunteer Event                          | Stray Animal Adoption Program, Friendsgiving  |
| COCA, Reach for the Stars                                     | Tender Mercies, Annual Golf Outing            |
| Community Matters, The Big Shindig                            | The Karen Wellington Foundation, Fun Run      |
| Contemporary Arts Center, Cuisine Art Cocktails               | Tutoring Chicago, Jingle Mingle               |
| Dragonfly Foundation, Grand Gala                              | Visionaries + Voices, Double Vision           |
|   | WAVE Fnd at Newport Aquarium, Nauti Nite      |

## Taproom Events

### Scraps

SCRAPS, benefitting Our Daily Bread (ODB), returned to Rhinegeist Brewery in 2025. ODB is a nonprofit soup kitchen and social center located in Over-the-Rhine. The center offers meals, hospitality, and services in a safe and respectful environment. Registration to SCRAPS helps to ensure that ODB is able to continue serving 600+ meals each day.

100% of the food that ODB serves is rescued and donated, sparing thousands of pounds of good food from landfills each year. Talented local chefs are given a 48-hour window to create delicious recipes

from these rescued ingredients for attendees to sample. Beer pairings are provided with each dish and guests vote for their favorite!

### Plant n Sip on Native Land

We hosted a hands-on Plant n Sip workshop, where participants potted their own plant while sipping Native Land Beer, a Hazy IPA brewed in collaboration with Bow and Arrow Brewing, the first Native-woman-owned brewery in the U.S.

Native Land Beer highlights Native American history and contributions while supporting Indigenous nonprofits. For every pint sold of Native Land Beer at Rhinegeist, \$1 benefitted Urban Native Collective, a Cincinnati-based nonprofit preserving Native culture and heritage.



**Impact Fact:** 20 Rhinegeist staff formed our own team to participate and individually fundraise for the 100 Mile Challenge!

### Toss For A Cure

We partnered with CancerFree KIDS to host a cornhole competition fundraiser to support their 100 Mile Challenge, a 30-day fitness challenge honoring Childhood Cancer Awareness Month.

### Cheers To Trails

To celebrate National Bike Month, we partnered with Tri-State Trails on Cheers to Trails, featuring a group ride through Over-the-Rhine and a post-ride happy hour tapping of Mutter Erde, a Fonio Plisner crafted in the spirit of Mother Nature.

### Red Bike Pinewood Derby

Every year, Red Bike presents their annual fundraiser, a Pinewood Derby-inspired tournament where participants race handcrafted wooden cars down a 40-ft track. All registration proceeds support Red Bike.

# Projects We Are Committed to

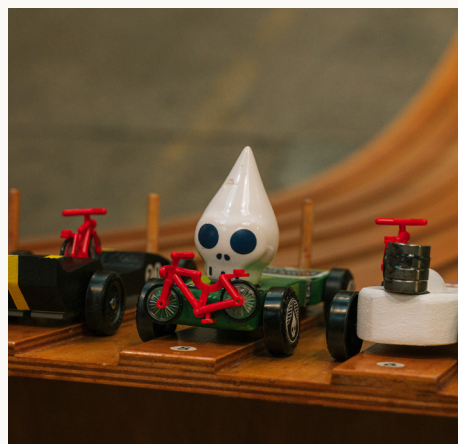
**In-kind donations let us give back through our space, our products and our people—creating a lasting impact in our community.**

### Queen City Charities Year-Round Partnership

Queen City Charities is committed to celebrating the broad diversity of the LGBTQ+ community through the arts of storytelling and drag. They partner with community and business leaders across the region to raise funds and write grants for local organizations that seek to build bridges and offer solutions to some of the greatest challenges facing Greater Cincinnati's LGBTQ+ population. We partnered with QCC in 2025 for a drag bingo fundraiser, their annual Wigs and Waffle fundraiser, and Nightmare on Elm Street, our Halloween drag show, and Sip & Slay during the holidays.



▲ Beer for Humans token to vote for your favorite nonprofit



▲ Red Bike Derby

▶ Red Bike Derby



### Can'd Aid Community Partnerships

Can'd Aid's people-powered programs provide tools and access for under-resourced communities to lead healthy, active, and creative lives. In 2025 we hosted a public bike build event in which 100 bikes were built and donated to students attending William Howard Taft Elementary School.

### Hoxworth Blood Drives

Give a Pint, Get a Pint! Throughout the year we host two blood drives in partnership with Hoxworth Blood Center. When you donate blood, you receive a voucher redeemable for a pint of beer on another day! Hoxworth Blood Center is the only provider of blood products to more than 30 Tri-State hospitals. When you make a lifesaving blood donation with Hoxworth, you are saving lives close to home.

### St. Vincent de Paul Coat Drive

Throughout December, we partner with St. Vincent de Paul for an annual coat drive. Coat donation bins are set up in participating restaurants, bars, and venues across the tri-state area. For the entire month, we donate \$1/ pint of Truth and/or Dad sold at these accounts to St. Vincent de Paul. In 2025, we expanded this outreach program from Cincinnati and Columbus to Indianapolis!

### Community Memberships

Rhinegeist was a proud sponsor of the OTR Chamber, Cincinnati Public Radio, Findlay Market, Camp Washington Business Association, and Visit Cincy in 2025.



### OTR Community Housing Holiday Drive

The holidays can be a joyful time for many, but they also bring challenges for others. OTR Community Housing spreads cheer with an annual holiday party for low-income Cincinnati residents. We pitch in to donate home goods and clothing for gift baskets.

### Merchandise Donations

Merchandise donations are a versatile asset that allows us to contribute to nonprofits at any level to assist in the fundraising process. Merchandise donations are most often used in community raffle baskets or silent auctions in which the funds go directly to a registered 501(c)(3). In 2025 Rhinegeist offered approximately 250 in-kind donations in the form of Beer for Humans merchandise.

### Sales and Account Givebacks

From Cincinnati to Chicago, Cleveland to Pittsburgh, our sales team coordinates givebacks at participating bars and restaurants. Portions of the proceeds from pint sales at these accounts support nonprofits! In 2025, we expanded charitable campaigns in external markets by 18%, increasing Outer Market activations to 38+.

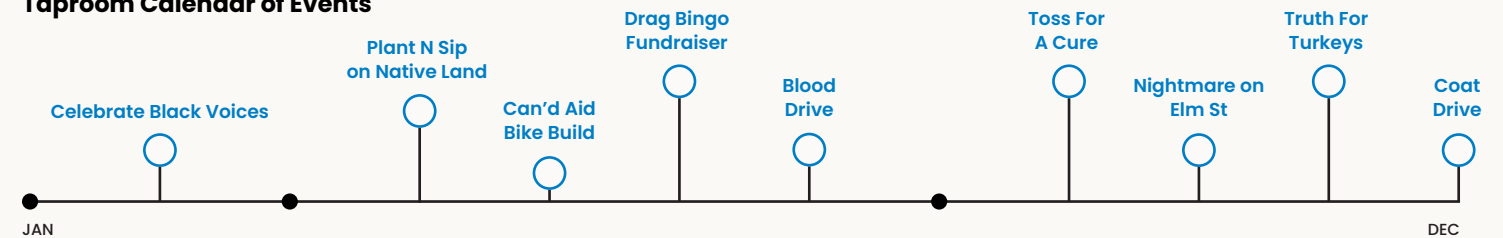
### Ohio Alleycat Resource (OAR)

We make standing donations of recycled case trays to Ohio Alleycat Resource and Spay/Neuter Clinic to be used as disposable litter boxes

### I am Boundless

We donate a portion of spent grain to I am Boundless' Pets and People program. Every batch of Pets and People Dog Treats is made by adults with disabilities in Dayton, Ohio and creates learning and employment opportunities.

### Taproom Calendar of Events



# Employee Initiatives



# Diversity, Equity, Inclusion & Accessibility

**We are working toward a more equitable, diverse, inclusive and accessible environment at the brewery and beyond.**

We do not tolerate discrimination based on race, color, religion, creed, ancestry, ethnicity, sex, gender identity, sexual orientation, marital status, age, disability, citizenship, genetic information, or anything else that makes us the unique individuals that we are at Rhinegeist.

**We welcome all.**

We recognize that racism and discrimination are often baked into the way that our society and the communities within it are structured, which is why remaining silent is not an option if we want to see things change for the better. We are committed to being leaders in our communities and the craft beer community as a whole. We are working toward a more equitable, diverse, inclusive, and accessible environment at the brewery and beyond.



## Employee Resource Groups

Employee Resource Groups (ERGs) are company-sponsored networks of employees based on shared characteristics or background. ERG members often share common needs in the workplace. The groups advocate for themselves in addition to fostering their own professional development. In turn, ERGs become a valuable resource to Rhinegeist, providing information about employee identities, performing community outreach, opening new networks for recruiting, supporting business objectives, and manifesting our commitment to a diverse, equitable, inclusive and accessible workplace. ERGs amplify underrepresented voices, increase the visibility of these groups, and act as informal, in-house focus groups. We currently sponsor four ERGs: BIPOC & Allies, Women & Allies, Neurodivergent & Allies, and Pridegeist & Allies.

### BIPOC & Allies

The Black, Indigenous, & People of Color & Allies ERG fosters a safe, supportive space while promoting diversity in the brewing industry through events and community engagement of BIPOC-identifying individuals.

### Women & Allies

The Women & Allies ERG bridges the gap for women in craft beer, fostering connection, support, and growth through community engagement, professional development, and social events.

### Pridegeist

The LGBTQ+ & Allies ERG fosters inclusion, advocacy, and community, ensuring all employees feel welcome, valued, and free to be their authentic selves.

### Neurodivergent & Allies

The Neurodivergent & Allies celebrate neurodiversity, raise awareness, and foster empathy through service and company initiatives to create a more inclusive and accepting environment.

### What our ERGs were up to in 2025

#### Celebrate Black Voices

During Black History Month, we celebrated Black creativity, and impact within our community! Celebrate Black Voices featured a Black-owned pop-up market, DJ Queen Celine, and the release of Mack's Island Ale, a Tropical Beer with Ginger, named after Theodore Mack Sr., owner/operator of one of America's first Black-owned breweries, Peoples Brewing Co.!

#### International Women's Day

Our Women & Allies ERG hosted a Hildegard Happy Hour for women in the brewing industry, inviting our friends from local breweries to enjoy a pint of Hildegard and shop at a pop-up market with women-owned businesses and beer-themed products.

#### Brewed Together

To celebrate the positive impact of people with disabilities in the American workforce, our Neurodivergent & Allies ERG brewed up Synaptic, an Irish Red Ale, and partnered with Brewhaus Bakery Co., a nonprofit that helps young adults with disabilities build vocational skills and have fun crafting natural dog treats from beer grain source from craft breweries like Rhinegeist!

#### Pridegeist

Throughout the year, Pridegeist partnered with Queen City Charities, Transform Cincy, and other LGBTQ+ nonprofits! In May, we released Miss Major, a Berliner Style Sour Ale with Lemon and Strawberry in honor of trans woman activist and community leader Miss Major Griffin-Gracy, and hosted a Know Your Rights! Pop-Up Legal Informational Clinic hosted by The Legal Access Clinic.

### Ways that we worked to improve DEIA in 2025

- Formally recognizing 'Accessibility' in our efforts to promote equity, diversity and inclusion
- Worked with 9+ new minority-owned vendors for various events
- Formalized Key Performance Indicators (KPIs) to track progress made on DEIA in the workplace
- Established a partnership with Freestore Foodbank through their LIFT program to offer hiring tips and potential hiring opportunities to participants
- Hosted LULAC, a local non-profit organization focused on Hispanic/LatinX community, so our team could learn more about Hispanic/Latin cultures
- Supported minority-owned businesses through on-premise beer activations and events.

### What:

DEIA is our strategy to enhance and maintain a people-focused approach to improve the positive professional experiences of our employees.

### Why:

DEIA will support the company's strategy to propel as an industry leader by striving for opportunities to uphold a competitive edge within our talent and business activities.

### How:

DEIA will be supported through employee-led and company back initiatives to expand internal & external relationships w/ various communities, track metrics to measure success and provide educational access on DEIA-related topics.

# Volunteerism and Giving

## Volunteerism

Rhinegeist takes pride in our employees' commitments to giving back to our community. Driven by our team, we offer various volunteering opportunities throughout the year in order to bring employees together in support of the organizations that make our city a better place. In 2025, our team volunteered a total of 250 hours.

## Employee-Based Giving

Rhinegeist's resources are not limited to the brewery. Our employees are seeking ways to engage with our community in order to make a collective impact, using their own resources as well. Throughout the year, Rhinegeist partners with nonprofits in our community for a number of resource collection drives. This partners employee participation with company giving to support a variety of events.

- **Pride Month**  
Clothing Drive in support of Transform Cincy to provide new wardrobes for those transitioning
- **Halloween**  
Candy and Costume Drive in partnership with the Corporation for Findlay Market
- **Thanksgiving**  
Pantry, hygiene, and home goods in partnership with local foodbanks
- **Holiday**  
Gift Drive in Partnership with OTR Community Housing



## Reaching Goals | Volunteer Hours

In 2025 we set a bold goal to revamp our volunteer program in order to create access for all employees to volunteer throughout the year. While we still have a ways to go, we were able to offer 3 additional volunteer opportunities and increase our volunteer hours by 20% in 2025.

Equal Access Education & (At-Risk) Youth	DEIA	Addiction & Mental Health Services	Environmental Welfare	Poverty & Hunger
Judging and moderating at the the Cincinnati Ethics Center's High School Ethics Bowl	Committee board members of Pones Sensory Friendly Prom with I Am Boundless Mock Interviews for FreeStore Foodbank	Card writing for breast cancer survivors with Karen Wellington Foundation	Community gardening at CAIN foodbank in partnership with Urban Native Collective	Period Kit Assembly

# Sustainability

Sustainability is crucial for minimizing environmental impact, fostering community engagement, and ensuring long-term economic viability. We rely heavily on natural resources like water, energy, and agricultural ingredients, making us significant contributors to resource depletion and pollution. By implementing sustainable practices such as water conservation, energy efficiency, waste reduction, and sourcing local ingredients, we can mitigate our environmental footprint. Prioritizing sustainability is not only ethically responsible, but also essential for maintaining competitiveness, fostering goodwill, and ensuring a thriving future for the craft brewing industry.



# Waste

## Waste Diversion

Waste diversion stands as a critical pillar in the broader framework of sustainable resource management, offering a potent solution to mitigate environmental degradation and resource depletion. By diverting waste from the landfill through strategies like reducing, reusing, recycling, and composting, we significantly reduce the burden on limited landfill capacities and curb harmful emissions linked to decomposition. We diverted over 8.7 million lb from the landfill in 2025!

### Spent Grain

The majority of our solid waste is spent grain from the brewing process, so we collect it from our three brew decks and divert it from the landfill. We trucked 8,359,320 lb of spent grain from our 60 bbl brew deck to be used as animal feed at a farm in 2025. Approximately 18,519 lb of spent grain from our 20 bbl brew deck and 58,832 lb from our 8.5 bbl brew deck was either composted or used as animal feed at a local farm.

### Recycling

Recycling plays a pivotal role in our commitment to sustainability and environmental responsibility. From glass bottles to aluminum cans and cardboard packaging, we generate a variety of recyclable materials throughout our operations.

#### Commingled Recycling

We use commingled recycling, which allows us to combine various recyclable materials such as glass, plastic, metal, and paper into a single collection stream. This eliminates the need for separating those materials into separate bins. We recycled approximately 246,804 lb of commingled recycling in 2025.

#### Side-Streamed Recycling

Our larger dry baler allows us to bale our cardboard, shrink wrap, and malt sacks/super sacks. We installed a small dry baler in 2025 to bale aluminum cans. This eliminated plastic bag waste and free up real estate in our packaging area, since we do not have to stage the cans in multiple gaylords. All of our baled materials are sent to local recycling processors.

We also partner with local recycling companies to recycle materials we are unable to put into our commingled recycling dumpster. These hard to recycle items include scrap metal, plastic can carriers, keg caps, lights, batteries, and paper cores (from shrink wrap tubes). We side-streamed 134,564 lb of recycling in 2025.

### Landfill

Unfortunately, not all waste we accumulate can be recycled. Approximately 283,500 lb of waste was sent to landfill in 2025.

*There is always room for improvement!*

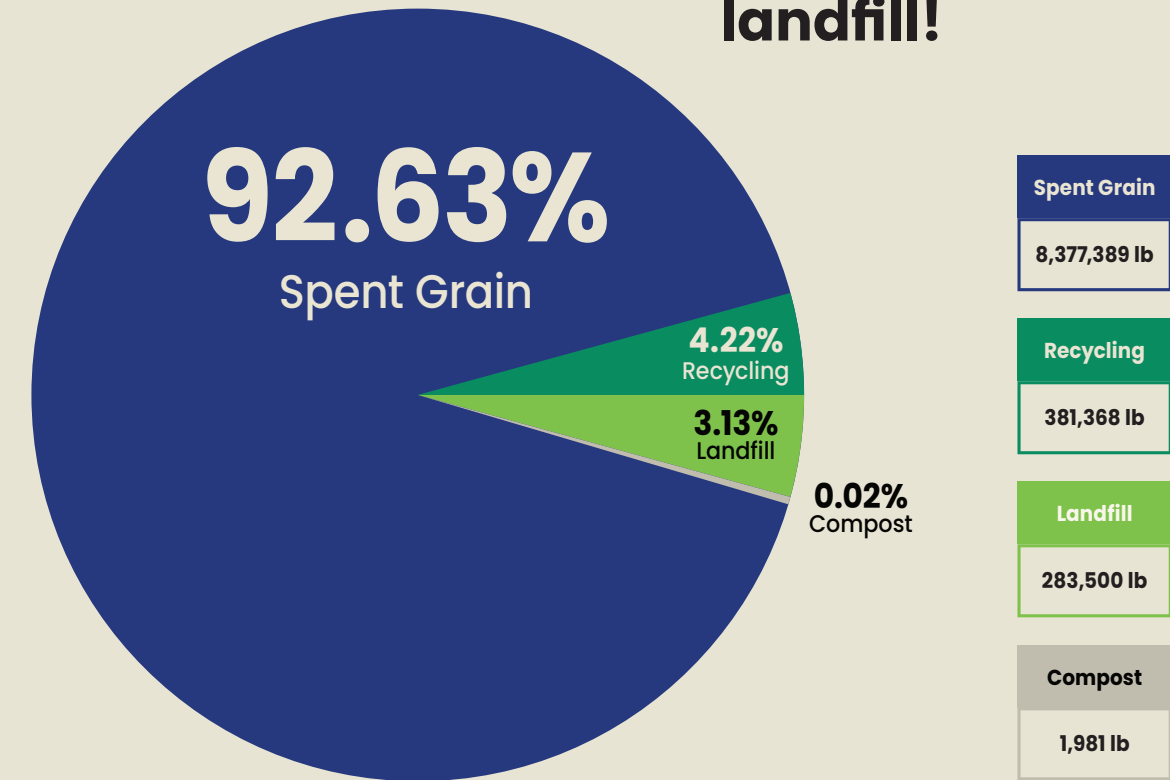
### Diverted Waste Streams by the Pound

Spent Grain	8,436,671 lb
Commingled Recycling	246,804 lb
Cardboard	63,240 lb
Scrap Metal	44,546 lb
Plastic Can Carriers	10,200 lb
Chemical Drums & Totes	7,231 lb
Shrink Wrap	7,222 lb
Coffee & Espresso	1,981 lb
Polypropylene Malt Sacks	1,384 lb
Keg Caps	303 lb
Batteries	38 lb
Lights	11 lb

**Over 8.7 MM Pounds**  
Diverted from the landfill

## Waste Diversion

**Less than 4% of our waste goes to the landfill!**



## High Strength Waste

Our HSW project utilizes a dedicated drainage system to collect spent organic waste—including residual spent grain, hops, and yeast—from our brewing and cellaring processes, rather than sending it to the municipal wastewater treatment facility. HSW generated from the 60-bbl brewhouse, decanter, fermentation vessels, and centrifuge is collected in two storage tanks and trucked offsite for disposal. In mid-May 2025, we transitioned HSW disposal from a hog farm to a local anaerobic digester. In total, approximately 863,303 gallons of HSW were trucked offsite, with 294,840 gallons sent to the hog farm and 568,463 gallons sent to the local anaerobic digester.

### Our Recycling Partners



# Special Projects

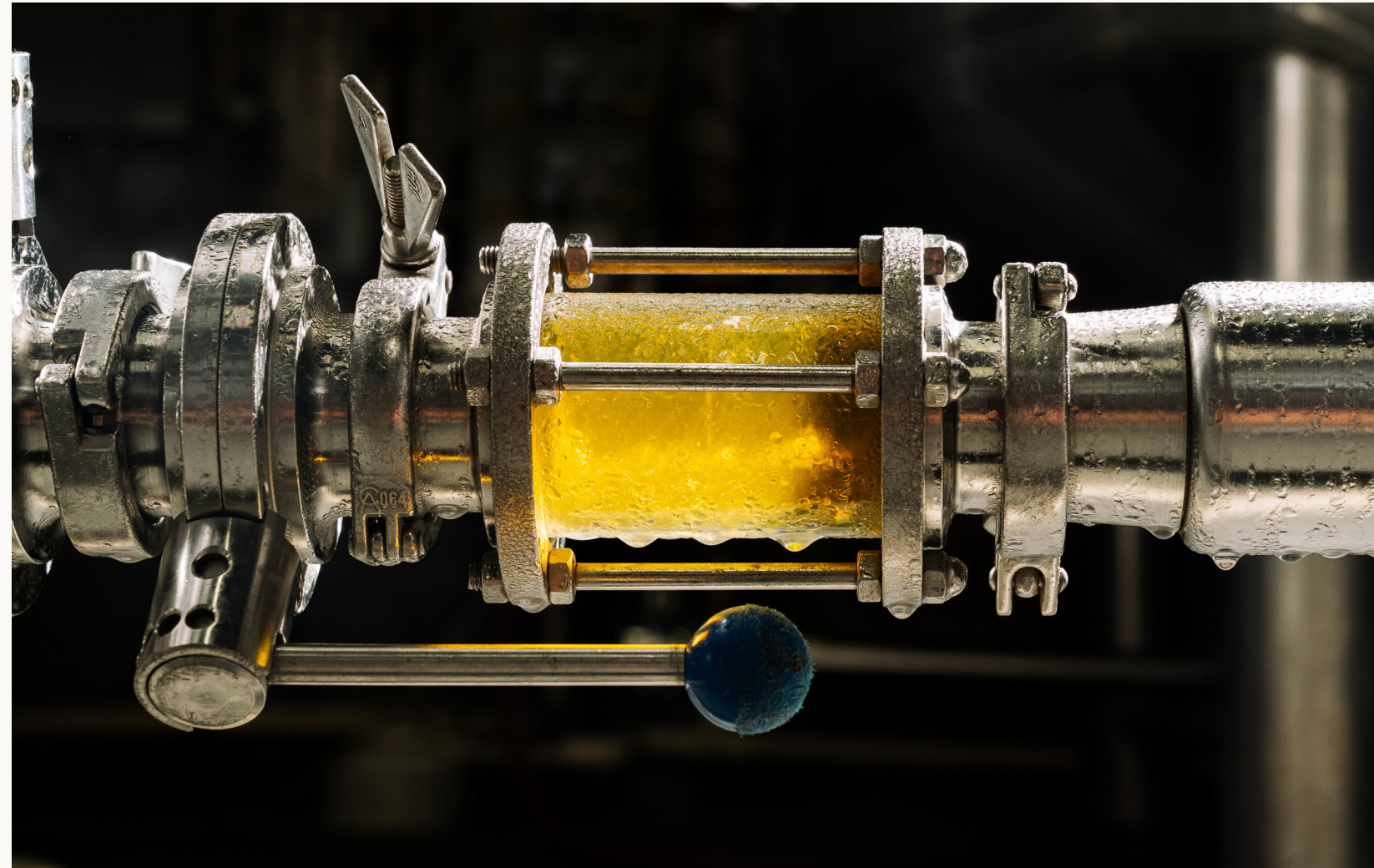
**Our sustainability projects focus on innovation, efficiency, environmental stewardship, and cost savings. Through targeted projects aimed at reducing resource use and minimizing waste, we continue to strengthen our commitment to responsible brewing and long-term impact.**

## Advanced Hop Products

### CGX™ Cryogenic Lupulin Pellets

We introduced CGX™ cryogenic lupulin pellets into select brews beginning in the summer of 2024. CGX™ pellets are used both as a whirlpool addition (via the hop back) and for dry hopping. The primary benefits realized from this transition include reduced manual labor associated with handling hop boxes, as well as decreased shipping and storage requirements. One box of CGX™ pellets is equivalent to two boxes of T-90 pellets. In 2025, we used 30,933 lb of CGX™ pellets, which is equivalent to approximately 61,866 lb of T-90 pellets. This resulted in the avoidance of shipping, storing, transporting, and disposing of 703 boxes of hops in 2025.

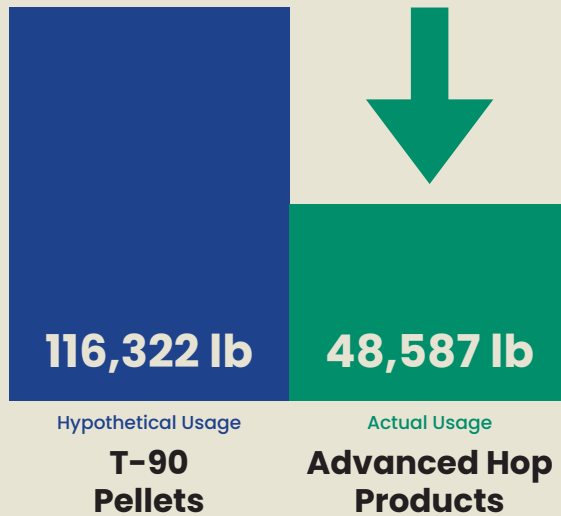
CGX™ pellets are made by our friends at Crosby Hops, using a cryogenic process that preserves the aromatic oils and compounds of the hop, resulting in a more intense and fresher hop character in the finished beer. The lupulin is separated from the plant material, enabling CGX™ pellets to deliver higher concentrations of essential oils and resins, which means the desired bitterness and aromatic profile can be achieved with fewer hops, reducing costs and waste. The cryogenic process environmental benefits include being produced using renewable energy, less packaging, less trub in wastewater, less refrigeration, less fuel, and less emissions.



**Less Usage,  
More Efficiency**

**67,735 lb**

Reduction in usage, shipping, and storage by utilizing Advanced Hop Products.



# Special Projects

## Cellar Optimization

Since 2017, our engineering and brewing teams have been focused on leveraging specialized equipment to increase cellar extract yield for overall production gains. What does this mean for us? Each batch of beer we brew results in a larger volume of beer we can package. Through dedication and hard work, we were able to take our average brite tank fill volume (yield) from 187 bbl (2017) to 222.7 bbl (2025). This means that we are producing more beer that can be packaged while purchasing less ingredients, using less energy, using less water & wastewater, and mitigating lost beer to the sewer. Other benefits include potential increased shelf life stability, general quality increase, and tank residence efficiencies.



### Cellar Optimization Contributors

#### Decanter

We commissioned our decanter in August 2020. It allows us to separate solids (hops, yeast) and liquid (beer) efficiently. The segregated solids are sent to our High Strength Waste (HSW) system and the beer is circulated back to the fermentation vessel, instead of going to the sewer. Decanter optimization included implementing a discharge protocol (solids clearing from decanter bowl), repiping decanter cellar, and installing turbidity sensors.

#### Cross Flow Membrane Filtration System

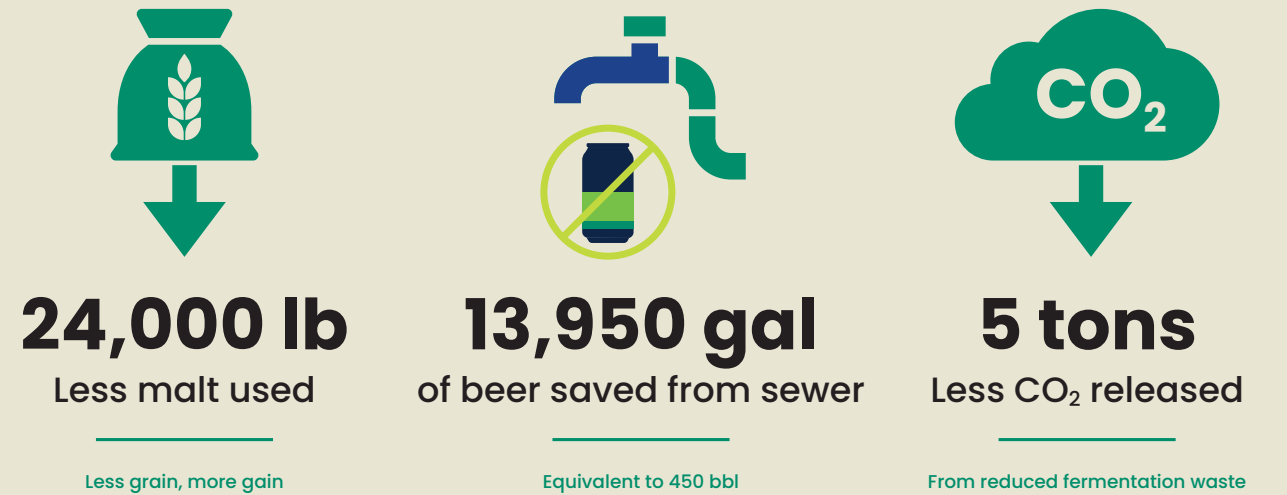
We purchased a gently-used fully automated standalone crossflow filter system and commissioned it in May 2024. The crossflow filter system operates in combo with our centrifuge positioned upstream of the system to reduce the solids load on the membranes, resulting in prolonged membrane life, reduced operational costs, and reduced beer losses. It allowed us to take aborted press outs on Juicy Truth and Truth from 70% and 17% respectively to nominally 0%. With these changes still in effect, it resulted in a reduction of 145 bbl (4,495 gallons) of beer discharged to the sewer.

#### Carboblender

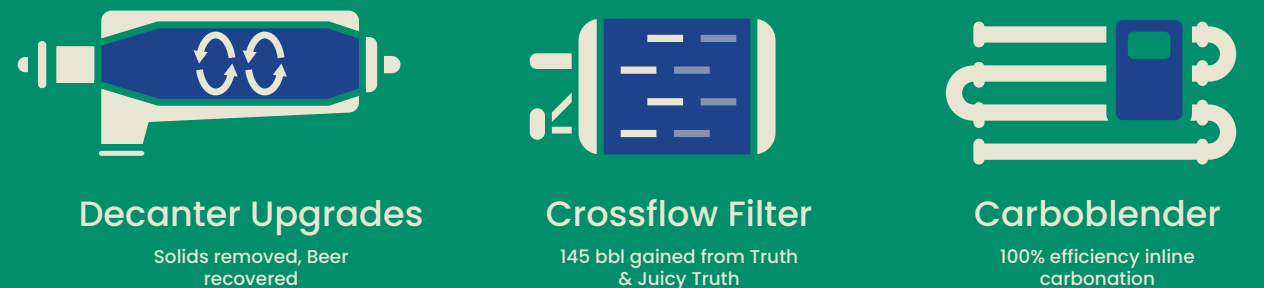
We purchased a gently-used fully instrumented and automated carboblender unit and commissioned it in May 2024. The carboblender carbonates and adjusts the ABV in-line, delivering maximum volumetric yield on every batch of beer. It delivers maximum CO2 usage efficiencies (100% of the injected CO2 is dissolved in the beer).

# Small Change, Big Impact

## Cellar Optimization Impact



## 2025 Equipment Upgrades



# Special Projects

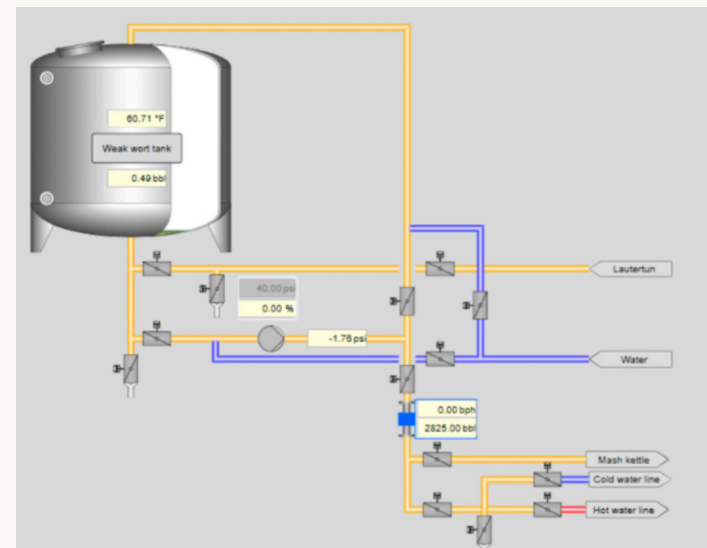
## Weak Wort Recovery System

We installed a weak wort recovery system in April 2025. It collects the leftover, sugar-poor liquid (weak wort or last runnings) from the lautering (grain separation) process, preventing waste by reintroducing it as water for the next mash, maximizing sugar extraction and minimizing effluent. Our weak wort system is a creative water and efficiency management technique, allowing our brewers to wring more value (and sugar) from their ingredients while being environmentally conscious.

### Key Benefits

- Maximize Sugar Extraction: get as much fermentable sugar as possible from the malted grains.
- Reduce Waste: minimize liquid waste (effluent) by reusing weak wort.
- Water Conservation: lower demand for fresh water

In 2025, our weak wort recovery system collected 276,861 gallons of weak wort, recovering approximately 85,097 lb of fermentable extract. This improved brewhouse yield by 2.9%, avoided the use of 120,000 lb of malt, reduced wastewater loading, and generated approximately \$39,600 in annual cost savings.



## Bulk CO2 Monitoring Program

We created a Bulk CO2 Monitoring Program in 2024 to improve efficiency, reduce losses, and strengthen operational viability. The program included mapping the full CO2 system, developing detailed system drawings, and identifying and repairing seven leaks.

We expanded our Bulk CO2 Monitoring Program in 2025 by installing five flow meters to track real-time usage and 24-hour totalized volumes, enabling data-driven decision-making. Using these insights, we will brainstorm and implement targeted CO2 optimization projects that will reduce waste, improve reliability, and support more sustainable operations in 2026.

Using an ultrasonic leak detector, our team pinpoints and repairs CO2 leaks—helping us reduce greenhouse gas emissions and improve safety across the brewery.







**RHINEGEIST BREWERY**