



SUSTAINABILITY SUMMARY

2023

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ABOUT THIS SUMMARY

This Sustainability Summary reflects Alto Ingredients' ongoing commitment to sustainability and providing all stakeholders with insight into our programs and performance. This summary contains data for the 2022 calendar year, covering January 1, 2022, to December 31, 2022, unless otherwise noted.

For more information or to get in touch with our team, please visit our Investor Relations website at <https://ir.altoingredients.com/> or please contact us at info@altoingredients.com.

LETTER FROM THE CEO



Alto Ingredients is committed to being a responsible member of the communities in which we operate. As a renewables company, we are dedicated to implementing sustainable best practices that are good for our business and all stakeholders. Our Sustainability Summary highlights our progress in implementing continual improvements, provides a comparison baseline, and outlines our goals.

Over the past decade, Alto has brought together various facilities that have unique capabilities in the production of specialty alcohol and essential ingredients. Throughout, we have integrated innovative practices to ensure optimal efficiency, and applied sustainable choices throughout the company and its facilities. We have done this by:

- Practicing our core tenets of responsibility, integrity, and quality, we actively contribute to a lower carbon footprint with the incorporation of our renewable fuel and frequently evaluate other metrics, such as water usage, to verify our impact and strategically develop reduction targets.
- Working collaboratively with our customers and regulators, we implement quality requests and incorporate guidance from key organizations.
- Positioning to leverage the Pekin campus' prime location above the Mt. Simon sandstone formation, we are pursuing opportunities around carbon capture and sequestration to reduce our carbon footprint.
- Prioritizing the well-being of our employees, we leverage our partnership with PROtect to use their insight to enhance safety and address key industry risks.
- Striving for communication excellence, including a multi-year employee engagement program with Gallup, we are committed to providing informative disclosure and transparency, updating ethics policies, fostering an environment of trust and accountability, and engaging with investors.
- Supporting our community, our employees regularly participate in meaningful initiatives, such as food drives and charitable organizations.
- Benefiting from a diverse range of expertise and experience, we have significantly broadened and strengthened our board of directors, enriching our decision-making processes, fostering innovation and ensuring a comprehensive approach to addressing the challenges and opportunities that lie ahead.

In short, we believe that sustainability can improve profitability. We are committed to delivering value to our customers, employees, investors, partners, and consumers while also being mindful of our impact on the planet. We believe that our commitment to sustainability is good for our business, stakeholders, and the environment.

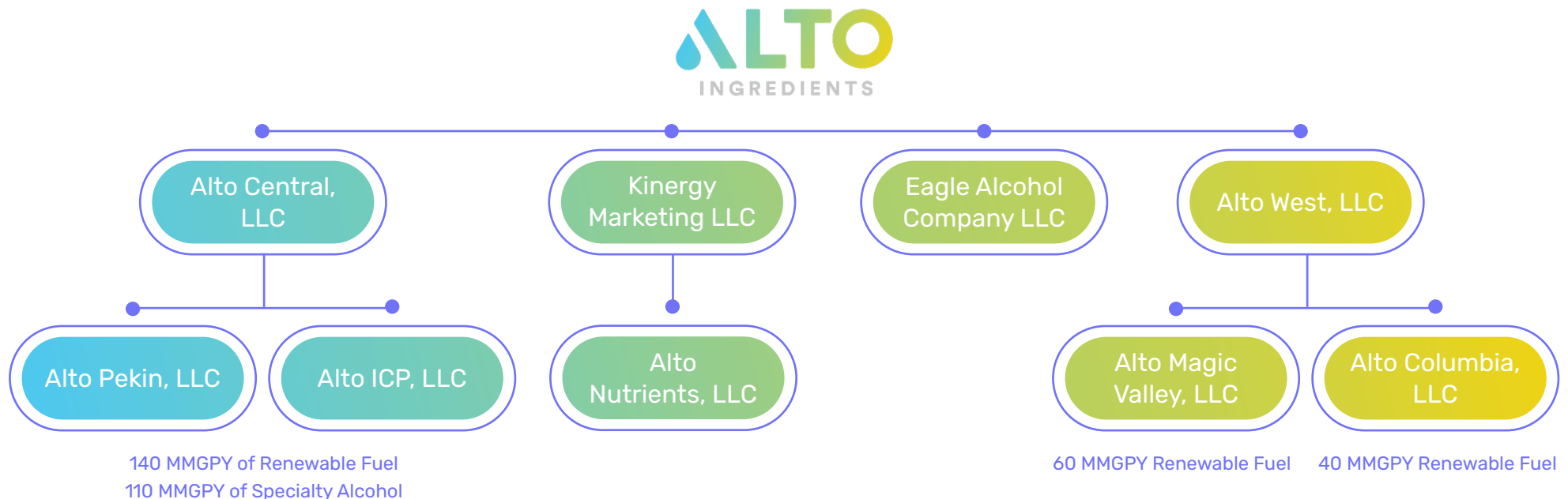
A handwritten signature in blue ink, appearing to read 'Bryon McGregor'. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Bryon McGregor, President and CEO

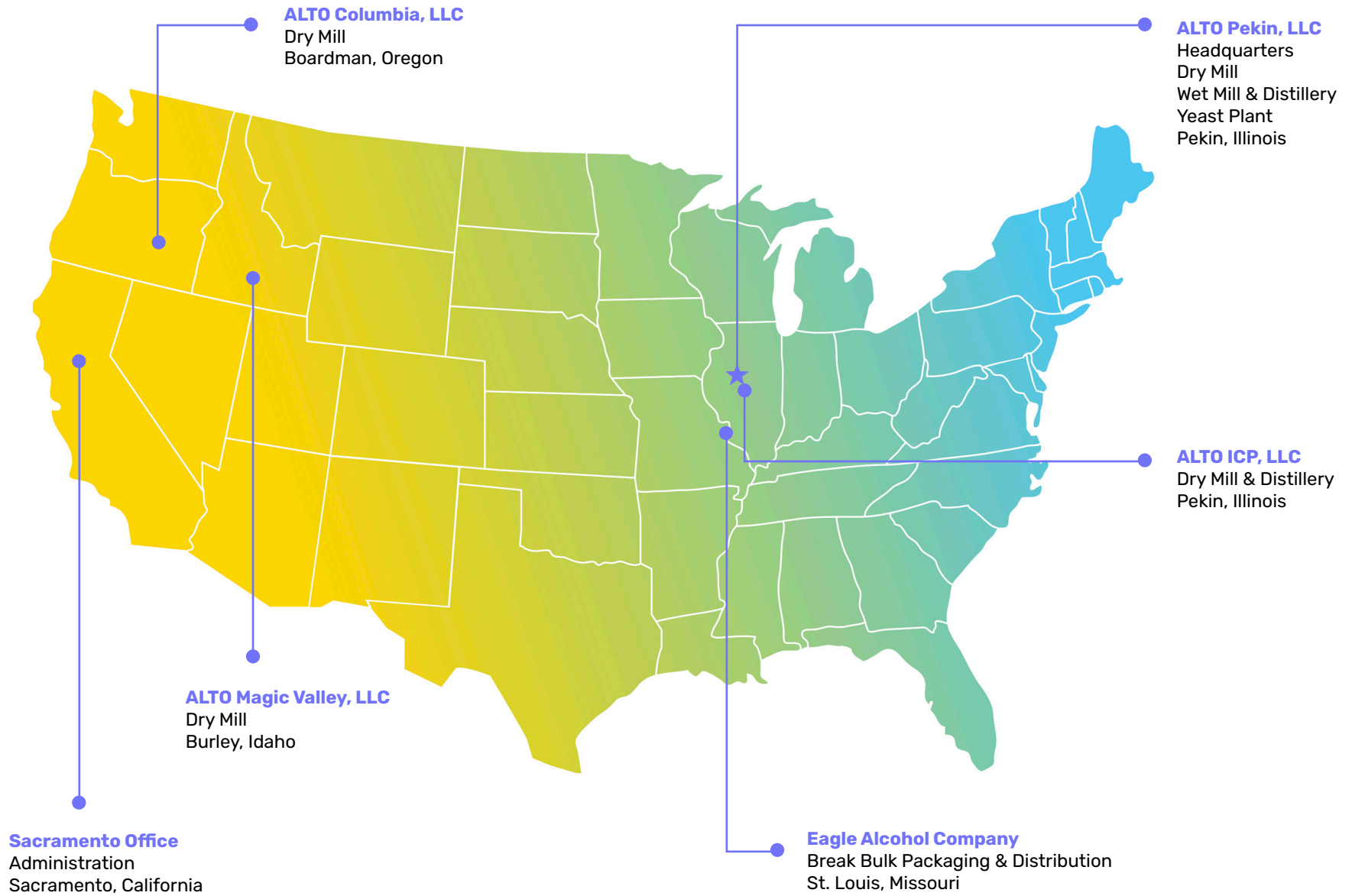
ABOUT ALTO INGREDIENTS

Alto Ingredients, Inc. (NASDAQ: ALTO) is a leading manufacturer, supplier, and distributor of specialty alcohols and essential ingredients. These alcohol products are used in food, beverage, pharmaceutical, dietary supplement, and cosmetic products, in addition to industrial and renewable fuel. Kinergy Marketing and Alto Nutrients market the company's alcohol and essential ingredients including Alto Yeast™, corn protein meal, corn germ, corn oil, distillers grains, and CO₂, offering consistent product quality, logistically preferred locations, and providing reliable service and delivery.

Alto Ingredients operates five alcohol production facilities and a food-grade yeast plant. The yeast plant and three alcohol production facilities are located in Illinois, and the two additional alcohol facilities are located in Oregon and Idaho. Eagle Alcohol Company is located in Missouri and is a wholly owned subsidiary, which specializes in break bulk distribution of specialty alcohols. Alto's manufacturing and distribution combines to provide a strong product portfolio. Alto sells its products in domestic and international markets.



OUR LOCATIONS





SUSTAINABILITY AT ALTO INGREDIENTS

OUR APPROACH

Founded in 2003, Alto Ingredients is proud to be a leading producer of a wide range of premium products, which are incorporated into a myriad of vital finished goods that touch people's lives from cleaning solutions to pharmaceuticals. Alto's mission is to provide ingredients that make everyday life better and our values are rooted deep within the foundation of our company. Our business is built on trust, and an unwavering commitment to our employees, investors, partners,

consumers, and the planet we all share. Our approach is informed by these values and represented by our dedication to responsibility, honesty, quality, and managing the impacts of our operations.

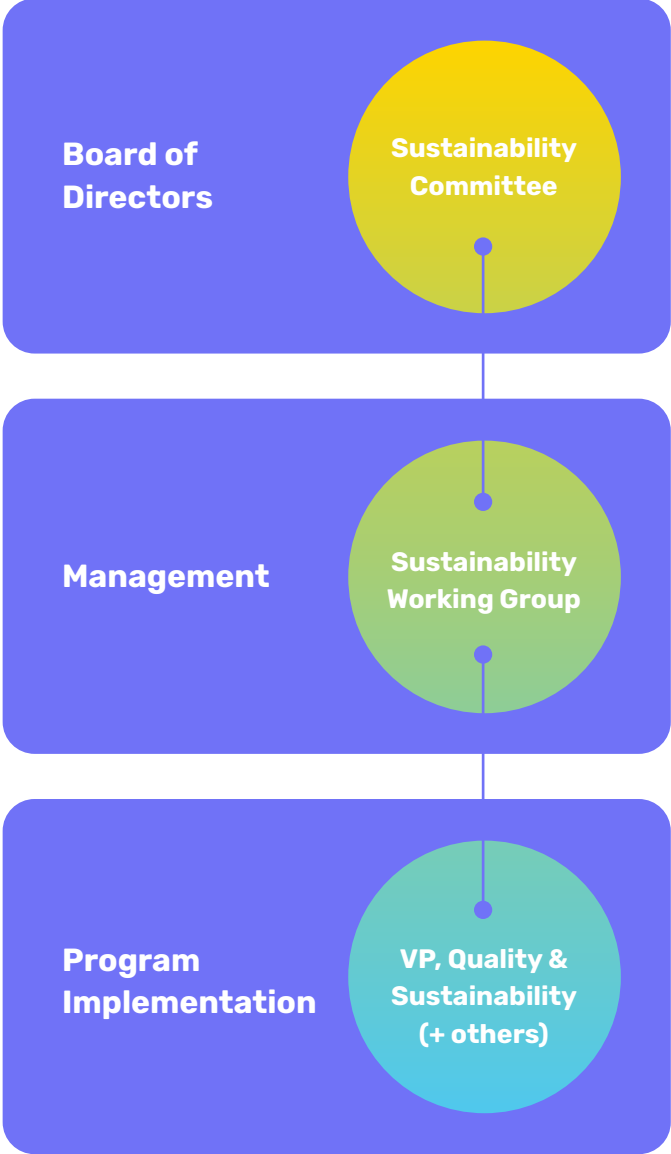
From integrating innovative practices at our facilities that ensure optimal efficiency to contributing to a lower carbon footprint with our ethanol fuel to giving back to the community through food drives and participation

in charitable organizations, we are focused on continuous improvement in environmental, health and safety, product quality and diversification. In addition, we are pursuing large-scale projects, such as carbon capture and sequestration (CCS) and new cogeneration capabilities, to make meaningful improvements to our carbon footprint.

OVERSIGHT

Our sustainability efforts are overseen by our board of directors. Alto has also established a Sustainability Board Committee dedicated to supporting the company’s efforts. This committee is responsible for matters related to strategy, material sustainability-related risks and opportunities, and public disclosures through sustainability reports, SEC filings, and the company website. This committee meets quarterly, and more frequently if deemed appropriate. In addition, the team regularly updates the full board on relevant developments. Specific responsibilities of the committee are outlined in our [Sustainability Board Committee Charter](#), which can be found on our website.

While our board holds primary oversight of our initiatives and strategy, our Sustainability Working Group Committee coordinates efforts with our executive team, our Vice President of Quality and Sustainability, and our senior management team on the day-to-day identification and execution of our initiatives. The VP of Quality and Sustainability provides regular reports and updates to the Board Committee at quarterly meetings and supports the broader board.



ENVIRONMENT

We manufacture renewable, bio-based products for four key markets: health, home & beauty; food & beverage; essential ingredients; and renewable fuels. We are committed to being responsible stewards of the environment by identifying opportunities to limit our natural resource use and consistently employing ways for reducing pollution and minimizing waste. Fueling a low-carbon economy was a founding value of our company and continues to be a key pillar of our commitment to sustainability.

KEY MARKETS



**Health, Home
& Wellness**



**Food &
Beverage**



**Essential
Ingredients**



**Renewable
Fuels**

CLIMATE CHANGE

We are committed to implementing sustainable practices that prioritize the well-being of our planet and mitigate climate-related risks. Lowering our carbon footprint is a key part of our diversification and business strategy, and we aim to adopt responsible sourcing and processing methods that ensure the preservation of valuable resources and lower our net carbon output throughout our operations.

All production facilities are undergoing Life-Cycle Analysis (LCA) for fuel ethanol products using publicly available models, including the Argonne National Laboratory's Greenhouse Gases, Regulated Emissions, and Energy use in Transportation (GREET) model, to better understand the current impacts, as well as projected impact of capital projects and process optimization.

The natural gas and electricity consumption required in corn milling and production of ethanol is a significant contributor to our footprint. We consistently identify opportunities in clean technology, such as carbon capture and sequestration, renewable natural gas, and increased energy efficiencies throughout our operational facilities. For more information on initiatives to manage our footprint, increase efficiencies and improve our performance, please visit our latest investor presentation at <https://ir.altoingredients.com/>.

GHG EMISSIONS

We have measured our Scope 1 and 2 greenhouse gas (GHG) emissions across our five production facilities to understand and manage our climate impact. Our production facilities were operating for all of 2022, but in 2021 our Magic Valley production facility was temporarily idled, which resulted in a slight increase in emissions from 2021 to 2022. We may increase,

decrease, or idle production at one or more operating facilities or resume operations at any idled facility as market conditions change, which may be reflected in our total GHG emissions.

As part of this effort, we engaged a third-party to verify our emissions calculations—our assurance statements can be found on our

website. We have entered into a multi-year agreement with SEDEX, a sustainable supply chain solutions provider, to support initial data collection for Scope 3 GHG estimates. We will continue to work toward understanding our Scope 3 emissions to manage our carbon footprint throughout the value chain.

GHG Emissions Data ¹	2021	2022
Scope 1 Emissions (MT CO2e)	746,769	796,527
Scope 2 Emissions (MT CO2e)	162,860	180,684
Scope 1 + 2 Emissions (MT CO2e)	909,629	977,211

¹ The emissions data above covers 100% of our production facilities (e.g., Pekin, ICP, Magic Valley, and Columbia facilities). It excludes our office in Sacramento and warehouse/distribution facility in St. Louis, which we believe are negligible contributors to our overall carbon footprint compared to production facilities. Biogenic emissions from fermentation are not included in the GHG emissions data, but will be shared separately once quantification is completed.

ENVIRONMENTAL MANAGEMENT

We have implemented processes for ongoing monitoring and management of key environmental risks, including energy use and efficiency, emissions, waste, and water usage. Wastewater treatment and discharge monitoring, as well as complying with air permit requirements represent some of the most significant environmental risks within our operations.

All our operational facilities are Very Small Quantity Generators (VSQGs) of hazardous waste, which produce

less than 400 kg of waste per month as a company, almost exclusively due to EPA water quality wet chemistry testing. Despite this limited footprint, we continue to explore opportunities to eliminate this testing as regulatory requirements allow.

We conduct ongoing monitoring of potential water-related risks and impacts across our operations through our Environmental, Health, Safety & Security (EHSS) programs. All our production and office facilities

are located in regions that were previously categorized as Low to Low-Medium Baseline Water Stress as classified by Aqueduct, the World Resources Institute's (WRI) Water Risk Atlas tool. However, our Magic Valley and Sacramento offices were recently reclassified (see table). We will continue to monitor these risks and evaluate strategies to mitigate potential impacts related to our operations through our EHSS programs.

Location	Major Basin	Overall Water Risk	Physical Risks Quantity	Water Stress	Groundwater Table Decline	Interannual Variability	Seasonal Variability	Drought Risk	Riverine Flood Risk Stress
Eagle Alcohol	Mississippi-Missouri	Low (0-1)	Low (0-1)	Low (<10%)	Insignificant	Low-medium (0.25-0.50)	Low-medium (0.33-0.66)	Medium (0.4-0.6)	Low (0 to 1 in 1000)
Alto Pekin	Mississippi-Missouri	Low-medium (1-2)	Medium-High (2-3)	Low-Medium (10-20%)	Insignificant	Medium-high (0.50-0.75)	Low-medium (0.33-0.66)	Medium (0.4-0.6)	Low (0 to 1 in 1000)
Alto ICP	Mississippi-Missouri	Low-medium (1-2)	Medium-High (2-3)	Low-Medium (10-20%)	Insignificant	Medium-high (0.50-0.75)	Low-medium (0.33-0.66)	Medium (0.4-0.6)	Low (0 to 1 in 1000)
Alto Magic Valley	Columbia and NW	High (3-4)	Extremely High (4-5)	Extremely high (>80%)*	Low-medium (0-2 cm/yr)	Medium-high (0.50-0.75)	Medium-high (0.66-1.00)	Low-medium (0.2-0.4)	Low-medium (1 in 1000 to 2 in 1000)
Alto Columbia	Columbia and NW	Low (0-1)	Low (0-1)	Low (<10%)	Low-medium (0-2 cm/yr)	Low (<0.25)	Low (<0.33)	Low-medium (0.2-0.4)	Low (0 to 1 in 1000)
Sacramento Offices	California	Medium-high (2-3)	High (3-4)	Medium-High (20-40%)	High (4-8 cm/yr)	Medium-high (0.50-0.75)	Medium-high (0.66-1.00)	Low-medium (0.2-0.4)	Low-medium (1 in 1000 to 2 in 1000)

All have low (0 to 9 in 1,000,000) coastal flood risk

*Water depletion is major contributor. This value is calculated using consumptive withdrawals for uses such as domestic, industrial, irrigation, and livestock.

AWARDS & CERTIFICATIONS



In our first-year reporting to EcoVadis, our Alto Pekin and Alto ICP production facilities scored above the **80th percentile achieving Silver Medal status**. These locations represent three out of Alto's five plants and cover 70% of our production capacity and all of our food and high-quality alcohol business.



Together for Sustainability (TfS) is a member-driven initiative committed to making sustainability improvements within the chemical industry. In 2023, our Alto Pekin and Alto ICP production facilities achieved TfS certifications, with **strong assessment scores of 86% and 82%**, respectively. Membership in this initiative demonstrates our commitment to the principles of Responsible Care® and the UN Global Compact, as well as our dedication to continue making sustainability improvements throughout our operations and supply chain.

SOCIAL RESPONSIBILITY

LABOR & HUMAN RIGHTS

People are at the core of our business and the well-being of our employees is paramount to our success. We conduct employee engagement surveys annually through Gallup, and we offer comprehensive and competitive benefits to attract and retain top talent within our sector. From our robust medical, dental, and vision plans to our generous 401k plan with 6% match – we focus on competitive compensation and benefits for our employees. We have reimbursement toward fitness memberships and a third-party Employee Assistance Program (EAP) with financial resources and tools, counseling services and guidance for life planning, and other wrap-around

support. We are also dedicated to protecting the rights of people across our business. We maintain a strong Code of Ethics, which outlines our commitment to respect the human rights and dignity of people and conduct our business in line with the International Labor Organization (ILO) core conventions.

In April 2023, we had a total of approximately 435 employees. Our recent transition to twelve-hour operating facility shifts provides our union employees with a better work-life balance through improved scheduling practices. The average tenure of our USW Union employees is 12 years, and the average tenure of our

UFCW Union employees is 13 years. For more information about our standards around anti-discrimination and harassment, collective bargaining, and human rights, please visit our Code of Ethics at <https://ir.altoingredients.com/esg>.

Our [California Transparency in Supply Chains Act Disclosure](#) outlines our commitment to operating and conducting all business activities in accordance with high ethical standards and prevent abuses of human rights across our supply chain. For more information, please see our Supply Chain Management section.

HEALTH & SAFETY

We are dedicated to upholding the highest standards of health and safety throughout our operations. Our Environmental, Health, Safety & Security (EHSS) policy outlines our standards and objectives for providing a safe and healthy work environment for employees, contractors, and visitors to our facilities. Our EHSS programs and safety committees enable us to monitor and improve our health and safety performance. In the case of safety incidents, we have implemented processes to identify the cause and ensure remedies are in place to prevent future occurrences.



Reduction in OSHA Recordables from 2021 to 2022

2020 = 25 total • 2021 = 27 total • 2022 = 16 total

Health & Safety Metrics ¹	2022
Rate of High-Consequence Work-Related Injuries	0.23%
Rate of Recordable Work-Related Injuries (excluding Covid)	2.29%
OSHA Recordables ²	16
High-Consequence Injuries ³	1
Fatalities ⁴	0

¹ Metrics cover 100% of ALTO's operations, including production, warehousing, distribution, and offices.

² 6 OSHA Recordables related to COVID exposure

³ As defined by GRI 403 Occupational Health and Safety Standards 2018

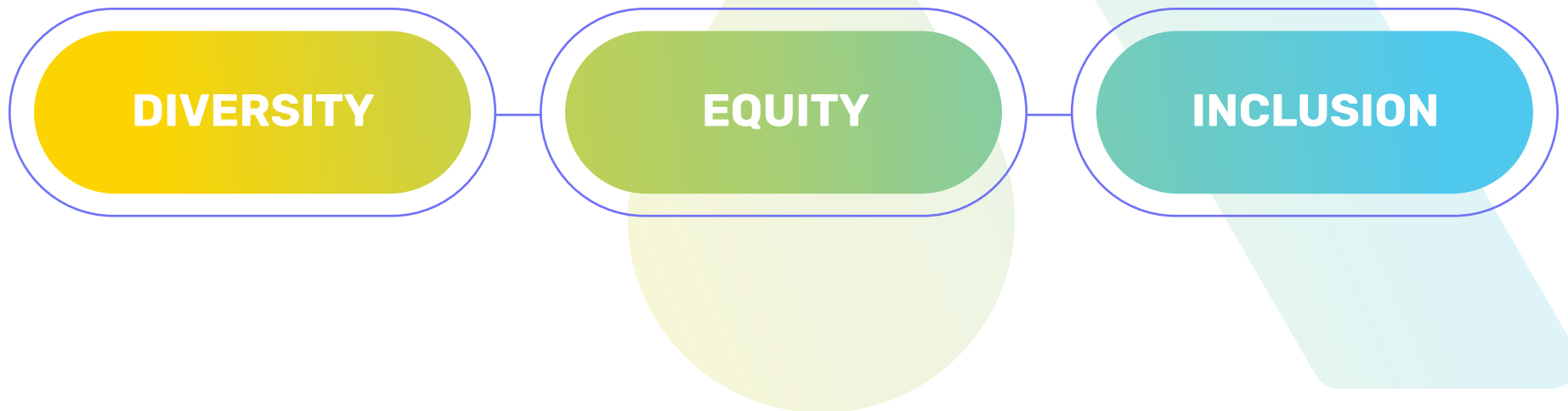
⁴ There have been none in the last 5 years

DIVERSITY & INCLUSION

Alto is committed to fostering a culture that focuses on the importance of diversity, equity, and inclusion. One of our core tenets is the care for our employees regardless of race, color, national origin, ancestry, religion, creed, physical or mental disability, marital status, medical condition, gender or gender identity, sexual orientation, age, family care or medical leave status, veteran status or any other basis protected by federal, state or local law.

Continuing diversity initiatives include, among others, partnering with local workforce development agencies to broaden recruitment and selection of candidates, encouraging women and minority candidates within our job postings, and ensuring that we evaluate and hire candidates that are the most qualified and well-suited for the positions. We continue measuring and monitoring of employee demographics (gender and race) in comparison to demographics of operating facility locations; and

the ongoing development of a work environment that encourages and enforces respectful communication and teamwork that reflect the significance to us of the principles of diversity. All employees complete an annual mandatory harassment training, which covers topics including anti-discrimination.



PRODUCTS

A woman with dark curly hair and a white headband is shown from the chest up, applying a white circular product to her face. The background is a soft-focus indoor setting. The image is part of a header banner with a colorful geometric design on the right side consisting of diagonal stripes in yellow, green, and purple.

PRODUCT SAFETY & QUALITY

Alto Ingredients consistently provides products and services that meet or exceed the requirements and expectations of our customers. Our quality management system enables us to pursue ever improving quality through programs that enable each employee to do their job right the first time and every time. We have processes to identify and mitigate material risks, deliver training to employees to ensure their understanding of responsibilities and standards, and we continuously engage internal and external

stakeholders to learn and improve. We maintain ISO 9001:2015 corporate and multi-site certification and product-specific standards, including Hazard Analysis and Critical Control Point (HACCP) for all food and beverage products, as well as ICH Q7 Good Manufacturing Practice and EXCiPACT certifications for all active pharmaceutical ingredient (API) and excipient products. We also provide best in class beverage quality, offering a variety of proofs, including 200 proof low-moisture grain neutral spirits (GNS).

We review ingredient information annually including safety data sheets (SDS), product data sheets, animal testing and vegan statements, and where applicable we also require allergen statements and kosher certificates. We have had zero product recalls in the last five years, but we conduct mock recall exercises at least annually for alcohol and essential ingredient products to ensure our product recall processes remain strong.

SUPPLY CHAIN MANAGEMENT

Alto Ingredients is committed to having a positive impact on our employees, investors, partners, consumers, and the planet we share, so we have created our Supplier Code of Conduct to establish and communicate principles and expectations for our supplier partners.

This code is overseen by both the Quality and Purchasing departments to ensure suppliers are selected and monitored based on the highest standards. We have entered into a multi-year program with SEDEX to conduct risk assessments of suppliers which provides visibility into sourcing of goods and services, and ensures our partners have responsible and ethical business practices in place. We also conduct on-site assessments of critical suppliers and provide annual scorecards of performance to key vendors.



GOVERNANCE

OUR LEADERSHIP

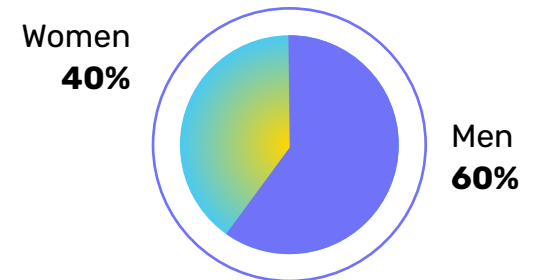
In the last two years, refreshment of our board has been key for bringing new ideas and skill sets to further our strategic goals, including sustainability. As of 2023, 60% of our directors have knowledge or experience around environmental, health, and safety (EHS) and sustainability, which enables our board to effectively oversee and guide our continuous progress in these areas.

BOARD DIVERSITY

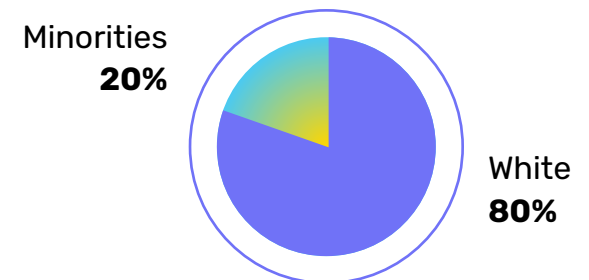
As part of our board refreshment, we have sought out highly qualified women and minority candidates as well as candidates with diverse backgrounds, skills and experience. We integrate these considerations as part of each board member candidate search the committee undertakes and have outlined these responsibilities in the charter of our Nominating and Corporate Governance Committee. When searching for director nominees, the committee will include highly qualified diverse candidates (including gender, race and ethnicity) in the pool from which nominees are chosen. From 2021 to 2023, we doubled the number of women on our board of directors and increased the representation of minorities on our board to 20%.⁵

⁵ Data is as of June 2023

Gender Diversity on the Board



Racial / Ethnic Diversity on the Board



BUSINESS ETHICS

Integrity, honesty, and fairness are fundamental to our business and our long-term success as a company. We are dedicated to fostering a culture of ethics and responsibility to ensure all our decisions and actions are informed by this commitment to business ethics.

We expect all of Alto's directors, officers, employees, and partners to act in accordance with the standards outlined in our Code of Ethics. All employees receive training for the Code of Ethics and are required to read and acknowledge the requirements on an annual basis. In 2023, we refreshed our Code of Ethics to include more details on anti-corruption, anti-bribery, human rights, and whistleblower protections. We also maintain a separate Code of Ethics for Alto Ingredients' chief executive officer, chief financial officer, and other senior financial officials to outline additional standards and responsibilities based on their roles.

We are governed by our Whistleblower Policy that sets the expectation for employees, consultants, officers, or directors to promptly report any suspected misconduct in accordance with our Code of Ethics. Our 24/7 anonymous hotline is open to employees, vendors, customers, and any other interested parties who want to submit a good faith complaint without fear of discrimination or retaliation. In 2023, we extended our Whistleblower Policy to include ethics concerns outside of accounting, broadening the scope to include reporting on issues such as environmental, health and safety, harassment and other concerns. As a publicly traded company, we are committed to meeting or exceeding all compliance with Sarbanes-Oxley Act (SOX) reporting and data standards. The independent registered public accounting firm RSM US LLP has issued an unqualified opinion for the most recently concluded fiscal year, and the company has not restated or disclosed late financial statements in the last five years.

CYBER SECURITY

At ALTO Ingredients, we realize the importance of protecting our company, customer and vendor data, and that cybersecurity is key to business continuity. The audit committee in coordination with the CFO and Director of IT are responsible for overseeing information security practices. Our board of directors are briefed annually alongside any event-driven needs. We facilitate internal and external cybersecurity training for all employees with at least one training per month, engage a third-party firm to perform routine assessments, and we maintain information security risk insurance. The Board and IT team are committed to timely disclosures of material cybersecurity breaches as required by the new rules adopted by the SEC in 2023.

