MURPHY OIL CORPORATION

2022 SUSTAINABILITY REPORT

MURPHY
OIL CORPORATION

About This Report

The Murphy Oil Corporation 2022 Sustainability Report contains data and information regarding the environmental, social and governance (ESG) issues essential to our internal and external stakeholders. We have adopted the five reporting principles of relevance, transparency, consistency, completeness and accuracy, as outlined in the "Sustainability Reporting Guidance for the Oil and Gas Industry, 4th Edition, 2020," published jointly by the International Petroleum Industry Environmental Conservation Association (Ipieca), the American Petroleum Institute (API) and the International Association of Oil & Gas Producers (IOGP). As this is an area of continual improvement across our industry, we strive to update our disclosures in line with operating developments and with emerging best practice ESG reporting standards.

REPORTING FRAMEWORKS AND BOUNDARIES

We report annually according to internationally recognized ESG reporting frameworks and standards, including the Sustainability Accounting Standards Board (SASB), Task Force on Climate-related Financial Disclosures (TCFD), Global Reporting Initiative (GRI) (Core option), Ipieca and American Petroleum Institute (API). In addition, we consider the feedback from key ESG raters.

For ease of locating disclosures by framework, we have included Content Indices at the back of this report on page 83. Unless otherwise noted, the data and information reported are at a total enterprise level, for assets under our operational control and for calendar year 2021. Additionally, all currency references are in US dollars.

Values in charts and tables may not sum to the total amounts shown due to rounding.

SUPPORTING INDUSTRY EFFORTS FOR CONSISTENT AND COMPARABLE REPORTING

We participate in several industry initiatives working to improve sustainability reporting. One such initiative is with API on its Climate-related Reporting Initiative. The aim of this initiative is to develop more consistent and comparable reporting of key greenhouse gas (GHG) indicators in a template form for voluntary use by individual companies. The initial version of the template was released for use in 2021, and further details can be found on the **API website**. For Murphy's API Template for GHG Reporting, please see page 79.

INTERNAL AND EXTERNAL ASSURANCES

We recognize the importance of providing our stakeholders with complete and accurate data and information, and have therefore taken the following steps in reviewing the content quality of this report:

- **Internal assurance** – We streamlined our data collection activities into an internally developed information system with built-in internal control measures. Additionally, this report was reviewed by a cross-functional management team, subject matter experts and the executive leadership team, as well as the Health, Safety, Environment and Corporate Responsibility (HSE&CR) Board Committee.
- **External assurance** – We engaged ERM Certification and Verification Services (ERM CVS) to conduct an independent assurance of our absolute 2021 total Scope 1 and Scope 2 GHG emissions. For ERM CVS's Independent Assurance Statement, please see page 81.

RESTATEMENTS

As we improve our sustainability reporting year-on-year, we note that it may be necessary to restate our data. Reasons for restatements could include changes in reporting boundaries, metric definitions or calculation methodologies, or other reasons. For the sake of transparency, we will highlight the restated items and reasons for restatement if we believe it would be meaningful information.

In this year's report, we restated our 2020 gross operated Scope 1 GHG emissions data and associated metrics. The primary reason for the revision was to correct the overreported flaring emissions for our Gulf of Mexico Delta House platform and BW Pioneer Floating Production Storage and Offloading (FPSO) facility. The overreporting was due to incorrect flaring emission factors provided by the Bureau of Ocean Energy Management (BOEM), which the US Environmental Protection Agency (EPA) Mandatory Greenhouse Gas Reporting Rule requires offshore operators to use. The restatement resulted in the 2020 Scope 1 GHG emissions data being 14% lower than originally reported last year. As described above, the restated Scope 1 data items are highlighted in the Performance Data section of this report on page 73.

Key to Abbreviations

BBL	Barrel
CO_2e	Carbon Dioxide Equivalent
MBOE	Thousand Barrels of Oil Equivalent
MBOEPD	Thousand Barrels of Oil Equivalent per Day
mg/L	Milligram per Liter
MMBOE	Million Barrels of Oil Equivalent
MMBTU	Million British Thermal Units
$mtCO_2e$	Metric Tons of Carbon Dioxide Equivalent

Contents

Message to Our Stakeholders

At Murphy, we embrace the challenge of operating in a more sustainable manner as we seek to be an industry leader for decades to come. I am pleased at the progress we have made this past year as we work toward aligning our actions and long-term goals of protecting the environment.

In 2021, we began mapping our ESG efforts and priorities with the United Nations Sustainable Development Goals, along with endorsing the Texas Methane & Flaring Coalition's goal of eliminating routine flaring by 2030. Along with our adoption of the sustainability reporting principles, this year, we expanded our TCFD disclosures further and included the International Energy Agency (IEA) Net Zero Emissions by 2050 Scenario (NZE) as part of our climate scenario analysis. We also support industry efforts for consistent and comparable reporting and have provided our GHG data per API's Template for GHG Reporting.

LOWERING OUR EMISSIONS

As Murphy's operated activity continued in 2021, we remained focused on reducing our climate footprint by piloting ways to lower emissions. In 2021, our team tested the use of a dual-fuel drilling rig, along with a dual-fuel frac fleet in the Eagle Ford Shale in Texas. Following the success of those pilots, we are now evaluating electric frac units in our onshore operations. As we continue targeting emissions reductions onshore by employing currently available technology, the team has worked to electrify facilities, install air compressors on new onshore locations as a method of reducing natual gas-powered valves, as well as to decommission existing flares, deploy solar-powered pumps and batteries and pilot the use of thermal cameras for remote monitoring, among other projects.

Offshore, I am pleased with our team's forward thinking as they planned the King's Quay floating production system (FPS) in the deepwater Gulf of Mexico. Through structural optimization, we were able to reduce the amount of steel used in the design, resulting in weight savings and lower emissions. Further, our analysis shows investment in electric cranes on the FPS will reduce emissions over the life of the underlying producing fields. Due to the nature of offshore operations, we already conduct zero routine flaring at our Gulf of Mexico offshore facilities.

It is important to note that we have received independent assurance of our absolute 2021 total Scope 1 and Scope 2 GHG emissions for the second year in a row. Additionally, our overall focused efforts in reducing emissions continue to track favorably when compared to our industry, and when compared against our 2019 baseline, we have seen improvements in our GHG, methane and flaring intensities.

CONSERVING OUR WATER

Our drilling and completions team recently formalized an onshore water management policy to better govern responsible water management practices. The team has also worked to develop solutions for reducing freshwater needs and maximizing water recycling, thereby enhancing water use efficiencies while lowering costs. Overall, the percentage of recycled water to total water consumed in Murphy's onshore operations has increased to 17% in 2021 from 4% in 2020.

In 2021, Murphy signed agreements with certain water disposal vendors with pipelines connected to Murphy ponds and facilities, reducing the need for freshwater. The Company has also negotiated produced water sharing opportunities with nearby operators, with much success. In the Eagle Ford Shale, our team has spent capital to optimize facilities and produced water ponds, allowing for larger volumes of produced water for storage and reuse, rather than trucking it off to disposal.

In the Tupper Montney asset in British Columbia, we have established sufficient infrastructure to reduce demand on local water sources as well as the number of trucks needed for transport, and we now capture up to 100% of water from frac flowback and production operations. The team has also piloted the use of recycled produced brine for drilling operations as a viable drilling fluid additive. Thanks to the success of this pilot program, we are now beginning to implement it as part of our procedure.

Along with reducing our freshwater usage, we are mindful of the chemicals used in our operations, particularly offshore. I am pleased that through our offshore chemical treatment program, we have achieved almost a 20% total average reduction in topside chemicals since 2020. At our Delta House facility, we saw a 25% reduction, and at our Front Runner and Medusa platforms we achieved a 50% reduction in chemical usage.

WORKING TOGETHER TO PROTECT OUR PEOPLE

Safety and protecting our people and communities will always be a top priority at Murphy. Last year we relaunched an internal program to promote the nine International Association of Oil & Gas Producers (IOGP) Life-Saving Rules, plus an additional rule called "Fit for Duty." Our health, safety and environmental (HSE) team also revised its training matrix, adding training sessions that are now required of all employees. In the field, we have installed a vehicle monitoring system in all Company vehicles to monitor driving habits and identify their locations in case of an emergency.

For 2022, we have been selected to participate in an ESG Plus pilot in partnership with ISNetworld, our third-party contractor and supplier information management provider. This pilot is aimed at the assessment and documentation of ESG performance by Murphy and contractor companies, including verification of emissions data and implementation assessments of their ESG programs. While providing further transparency on ESG practices, this will also enable Murphy to strengthen its partnerships with contractors as we work to achieve our goals.

EXPANDING OUR DIVERSITY PRACTICES

Murphy's diversity, equity and inclusion practices are constantly evolving, and we continue to review internal policies and practices to ensure they are inclusive and equitable. We have also expanded our benefits based on employee feedback, and now include a consumer-driven health plan, infertility treatment coverage and an expanded network of mental health providers.

Lastly, it is important that we work with suppliers who align with Murphy's policies and practices, and therefore we are working to increase the diversity of our supplier base. I am pleased that in 2021, almost a quarter of suppliers reported having a level of diverse ownership within their organization, and we will work to increase this diversity program going forward.

ESTABLISHING THE RIGHT POLICIES

As Murphy continues down the path of developing a sustainable future, it's imperative that we establish and refine the appropriate framework to guide the Company in achieving our goals. In 2021, our sustainability team worked to update our climate change principles and in 2022, we published a comprehensive Supplier Code of Conduct to which we expect all our business partners to adhere to. Three of the Board Committees enhanced their charters to reflect continued oversight of ESG-focused responsibilities. The Executive Compensation Committee of the Board incorporated a GHG emissions intensity performance metric to accompany the safety and spill rate metrics included in the ESG component of the Company's Annual Incentive Plan. Additionally, we have formed an operations sustainability-focused team, comprised of operations and HSE specialists, to identify, evaluate and implement technologies in support of our corporate climate and emissions strategy and goals.

Looking to the future, I have no doubt that we at Murphy will strive to make it better and think beyond possible, with solutions that lead us to achieve our goals in 2030, 2050 and beyond.

Sincerely,

Roger W. Jenkins
President and Chief Executive Officer

ESG Highlights

Environment	decrease ▼23% absolute Scope 1 and 2 GHG emissions since 2019	decrease ▼20% GHG emissions intensity from 2019 baseline	0 IOGP spills in 2021
Safety	improvement ▼46% workforce TRIR[1] compared to 2019	improvement ▼50% workforce LTIR[2] from 2019	0 fatalities in 2021
Employees and Community	more than 13,000 internal training courses available for employees and contractors	more than $900K Employee Gift Matching Program donations in 2021	more than 3,000 students received El Dorado Promise scholarships since 2007
Board of Directors	92% independent	23% diverse by gender[3]	8% diverse by race/ethnicity[3]

1 Employee and contractor Total Recordable Incident Rate.
2 Employee and contractor Lost Time Incident Rate.
3 As of March 25, 2022.

Who We Are

Murphy Oil Corporation is an independent exploration and production company with onshore and offshore oil and natural gas production operations in the United States and Canada. We are based in Houston, Texas, and had 696 employees as of year-end 2021.

The Company has a rich and storied history dating back to the early 1900s, when our founder, Charles H. Murphy Sr., envisioned becoming an industry leader – first in lumber and banking, and ultimately in oil and natural gas. The Company was incorporated in 1950 and has been publicly listed since 1956.

Murphy's Worldwide Health, Safety and Environmental (HSE) Policy provides clear and consistent direction: to comply with environmental laws and standards and create safe and rewarding workplaces while making positive contributions to the community.

The combination of our commitment and strong operational capabilities makes Murphy a preferred partner in all communities in which we operate, as well as a welcomed partner of both independent and national oil companies.

We produce crude oil, natural gas and natural gas liquids primarily onshore and offshore in the US and Canada and explore in targeted areas worldwide. We have offices in Houston, Texas, and Ho Chi Minh City, Vietnam.

Sustainable oil and natural gas assets that are safely operated with LOW CARBON EMISSIONS INTENSITY in three operating areas across North America

HIGH-POTENTIAL EXPLORATION PORTFOLIO with industry-leading offshore capabilities

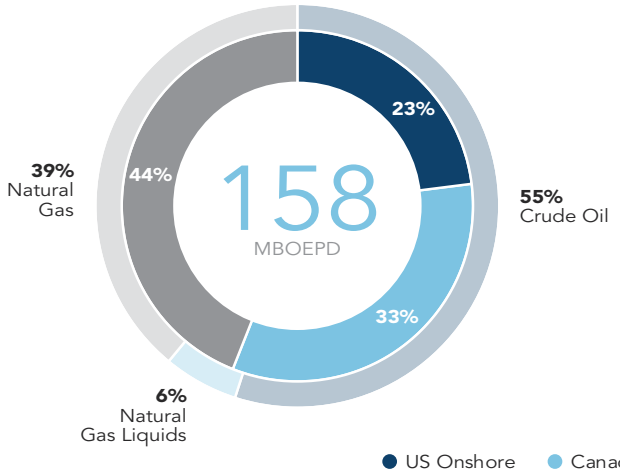
STRONG GENERATOR OF FREE CASH FLOW with capital allocation flexibility

FINANCIAL DISCIPLINE has led to a 60-year track record of returning capital to shareholders

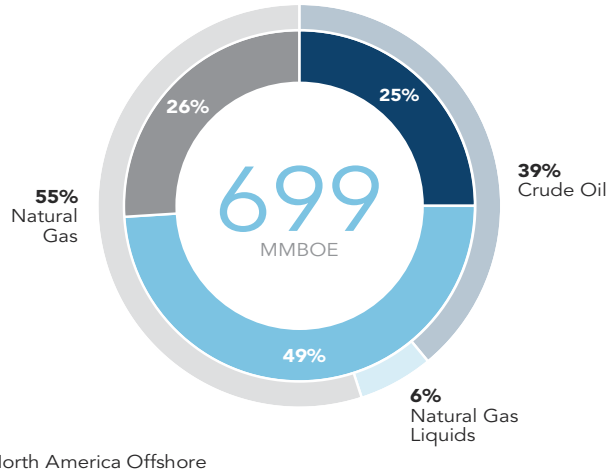
Supported by a multi-decade founding family, with MEANINGFUL BOARD AND MANAGEMENT OWNERSHIP

PRODUCTION AND RESERVES

2021 Fiscal Year Net Production[4]



2021 Proved Reserves[4]



US Onshore · Canada Onshore · North America Offshore

4 Production and Proved Reserves excludes noncontrolling interest, and represents only the amounts attributable to Murphy.

OUR PURPOSE, MISSION, VISION, VALUES AND BEHAVIORS

The world has changed a great deal since the 1950s. But our reason for being – our why – has not. Charles H. Murphy Sr.'s insistence on doing what's right continues to inspire the high standards we set for ourselves in everything we do, including our commitment to our people, communities and the environment.

In 2018, the Company, with the support of our Board of Directors (Board), outlined a concrete mission and vision, which is supported by key values and behaviors that guide the way we work every day. Throughout this report, we highlight ways in which we are living these values as part of our commitment to ESG excellence.

OUR PURPOSE

We believe in providing energy that empowers people.

OUR MISSION

We challenge the norm, tap into our strong legacy and use our foresight and financial discipline to deliver inspired energy solutions.

OUR VISION

We see a future where we are an industry leader who is positively impacting lives for the next 100 years and beyond.

OUR BEHAVIORS

DO RIGHT ALWAYS

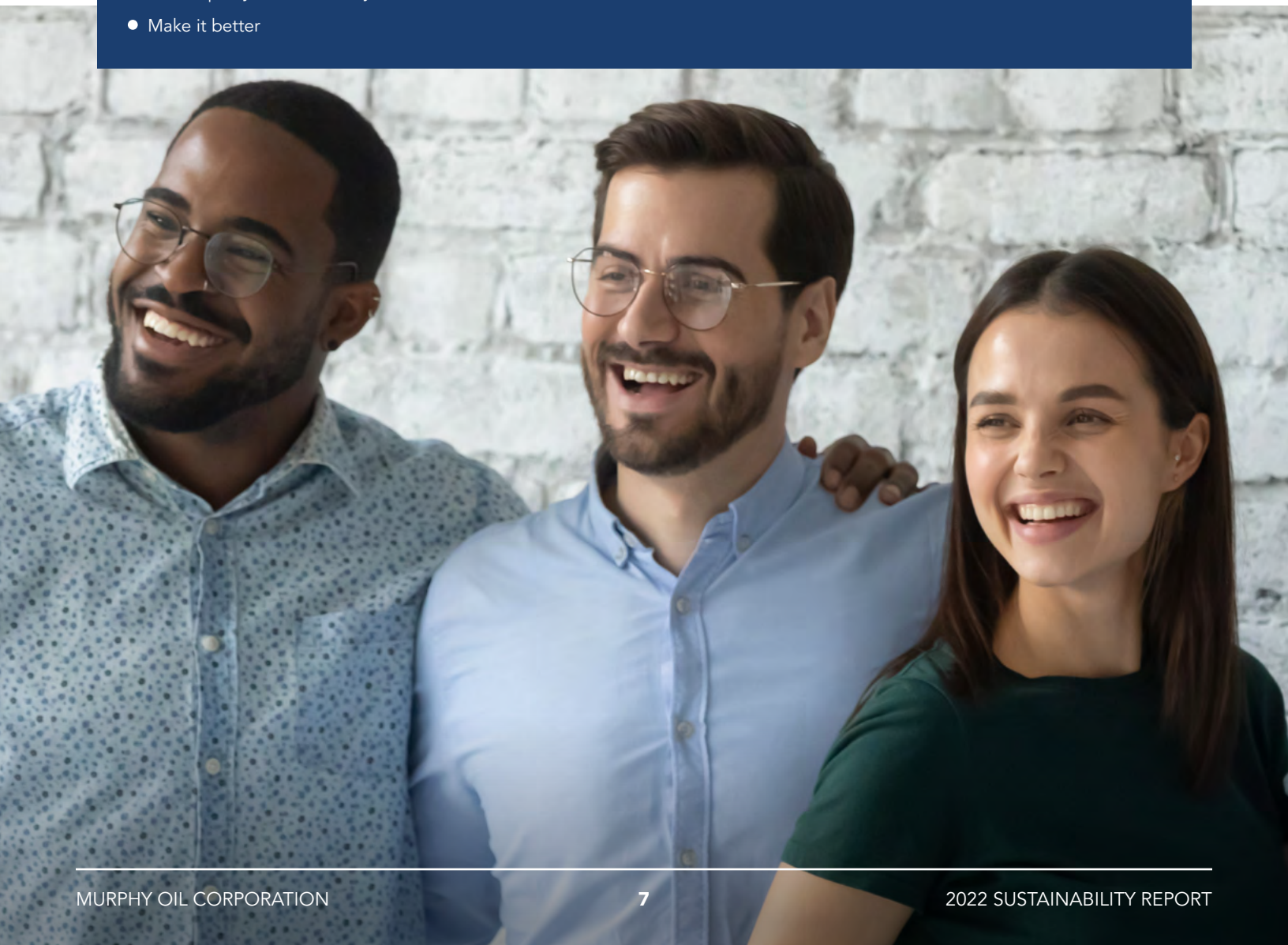
- Respect people, safety, environment and the law
- Follow through on commitments
- Share openly and accurately
- Make it better

STAY WITH IT

- Show resilience
- Lean into challenges
- Support each other
- Consider the implications

THINK BEYOND POSSIBLE

- Offer solutions
- Step up and lead
- Don't settle for "good enough"
- Embrace new opportunities



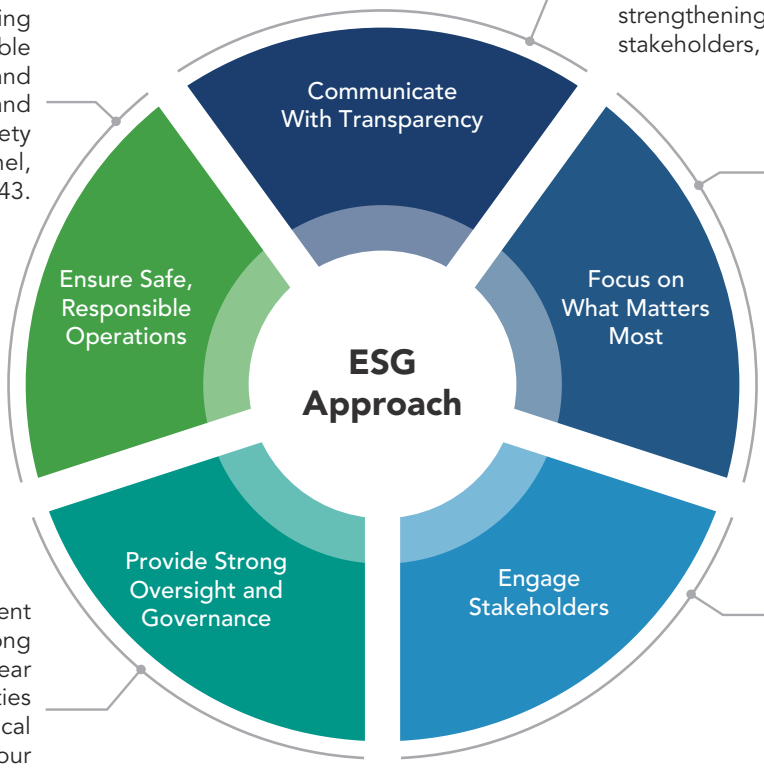
Our Approach to ESG

Murphy is built on operating responsibly and protecting our workforce, communities and the environment. While we know this is good for the planet and our stakeholders, we also know it is critical to our success as a business.

Long before environmental, social and governance – or ESG – was a concept driving companies' and stakeholders' strategies and decision-making, our Company's founder, Charles H. Murphy Sr., built his company on a strong commitment to integrity and doing what is right for our employees, communities and stakeholders. His son, Charles H. Murphy Jr., was a forerunner in the environmental awareness movement, and his tireless efforts helped to create standards and practices for the oil and natural gas industry. They recognized that protecting and conserving the environment, investing in our people and communities and protecting the health and safety of our workforce are not only the "right" things to do, they also underpin our financial stability and support our ongoing license to operate and sustain long-term value creation.

As illustrated in the graphic below, our approach to ESG is based on five principles, which guide the way we work every day.

Our goal is to help balance society's need for affordable, reliable, secure and responsibly produced energy with the protection of the environment and climate.



Communicating our ESG commitments, plans and progress is key to enhancing our business, improving operations and strengthening our credibility with our stakeholders, see page 2.

We continually advance our comprehensive approach to managing ESG impacts, risks and opportunities, see page 9.

We view our stakeholders as important partners and actively engage with them regularly, see page 10.

Board and senior management commitment, coupled with strong governance systems and clear delineation of responsibilities and accountability, are critical to effectively managing our ESG risks, opportunities and performance, see page 11.

We are committed to conducting our business in a responsible manner that protects and conserves the environment and that protects the health, safety and security of all personnel, see page 13 and page 43.

Responding to Climate Change Is Central to Our ESG Efforts

Today, climate change is at the center of most discussions of ESG issues, and we recognize that it is one of the most pressing issues in our business. Addressing climate change, and the global energy transition it requires, also presents important risks and opportunities for our industry and our Company. We believe our longtime commitment to operating responsibly and using resources efficiently – and our environmentally advantaged portfolio – position us to meet the challenges and seize the opportunities of the energy transition so we can remain an industry leader for years to come. To guide our efforts, we developed climate change principles in 2008, which we reviewed and updated again in 2021. While we have made progress, we are currently assessing pathways to net zero emissions. Read more about our approach to climate change and emissions reductions in the Environmental Protection and Conservation section, see page 13.

Our Climate Change Position

Find out more about our **climate change position** on the Murphy Oil Corporation website.

FOCUSING ON WHAT MATTERS MOST

We are continually advancing our comprehensive approach to managing the range of ESG impacts, risks and opportunities Murphy faces. The following graphic illustrates our core ESG focus areas, and we continue to move our programs and performance forward on these key issues.

To help determine the key sustainability topics to focus on, we conduct a materiality assessment annually using the process prescribed by Ipieca/API/IOGP. For the purposes of our sustainability reporting, we have adopted Ipieca/API/IOGP's definition of "material" as outlined in "Sustainability Reporting Guidance for the Oil & Gas Industry, 4th Edition, 2020": "Material issues are those that – in the view of both management and external stakeholders – have the potential to significantly affect a company's sustainability performance and stakeholder awareness, assessments or decisions."

Our materiality assessment process includes the following steps:

- **Identify issues** – We list existing and emerging issues relevant to our Company and stakeholders. Sources include stakeholder engagements, enterprise risk management process, SASB's Materiality Map, interviews with senior management, peer benchmarking and ESG rating agencies.
- **Prioritize issues** – We then rank the identified issues based on level of impact to the Company, as well as the level of concern to key stakeholders.
- **Check and confirm issues** – Prior to publishing, we review this report to ensure that the identified material issues are discussed adequately and appropriately.
- **Disclose the process and outcomes** – In the interest of transparency, in this report we outline our materiality assessment approach and outcomes (see graphic at right for this year's outcomes).
- **Review the process** – Upon publication of this report, we reach out to key stakeholders for feedback as to whether the report sufficiently addressed their issues of concern, and to identify areas of improvement and, where appropriate, make improvements.

Based on this analysis, we identified 12 ESG issues of greatest importance to our stakeholders and our Company.

Our ESG Focus Areas

ENVIRONMENT

- Climate change, including the energy transition and scenario analysis
- Greenhouse gas emissions, including Scope 3
- Water management
- Biodiversity

SOCIAL

- Employee and contractor health and safety
- Diversity, equity and inclusion of our workforce
- Human capital management
- Community relations and engagement

GOVERNANCE

- Stakeholder engagement
- Board diversity
- Cybersecurity
- Risk management

ENGAGING OUR STAKEHOLDERS

We view our stakeholders as important partners. We engage with our employees, investors, the communities where we work and live, government and regulatory agencies, academics and nongovernmental organizations through:

- Direct channels such as focus groups and interviews, investor roadshows and outreach, proxy voting and meetings.
- Indirect channels such as webinars, forums and panel discussions, professional networks and our website.

To identify key stakeholders, we conduct a mapping process in which we prioritize stakeholders who are willing to engage with us. Maintaining and building these relationships are important to us; and we use their input to guide, improve and/or formalize our internal policies. For more information on our Stakeholder Engagement process, please see Governance, page 67.

We are committed to improving the relevancy and transparency of our public disclosures on matters that are key to our stakeholders. These disclosures include our Annual Report, Proxy Statement and Sustainability Report, certain questionnaires and our website. Stakeholder engagements occur throughout the year, and we consider post-publication feedback as we plan the next report.

Contributing to the United Nations Sustainable Development Goals

Our purpose as a company – to provide energy that empowers people – is an important element of sustainable development. In 2021, we began an effort to map our ESG efforts and priorities onto the UN Sustainable Development Goals (SDGs), which provide a blueprint to achieve a better and more sustainable future for all through action for social inclusion, environmental sustainability and economic development. Meeting the SDGs by 2030 will require the private sector, including our Company, to work alongside governments, nongovernmental organizations and communities.

While we understand that the 17 SDGs are inextricably linked, we believe we have the most impact on the following SDGs:

- **Goal 3** – Good Health and Well-being
- **Goal 4** – Quality Education
- **Goal 7** – Affordable and Clean Energy
- **Goal 8** – Decent Work and Economic Growth
- **Goal 13** – Climate Action

A content index detailing how we contribute to the SDGs can be found on page 94.

BOARD AND MANAGERIAL OVERSIGHT OF ESG TOPICS

Board and senior management commitment, coupled with strong governance systems and clear delineation of responsibilities and accountability, are critical to effectively managing our ESG risks, opportunities and performance. ESG issues are a formal part of every Board meeting. Furthermore, the Board is responsible for overall risk oversight of the Company, which includes certain environmental, social, supply chain and governance matters.

MURPHY OIL CORPORATION BOARD OF DIRECTORS

ESG TOPICS REVIEWED AT LEAST ANNUALLY

- Board Evaluation Process
- Director Nominee Selection Process
- Murphy Ethics Hotline Report
- Current and Emerging ESG Trends
- Diversity, Equity and Inclusion
- Political Contributions
- Compliance Update
- Enterprise Risk Management
- Lobbying Activities
- Cybersecurity
- Executive Compensation
- Shareholder Engagement
- Information Security
- Health, Safety and Environmental Performance
- Succession Planning

BOARD COMMITTEES WITH ESG-FOCUSED RESPONSIBILITIES

AUDIT

Holds oversight responsibility for reviewing programs related to risk oversight, including cybersecurity, and compliance with the Company's Code of Business Conduct and Ethics.

EXECUTIVE COMPENSATION

Holds oversight responsibility for reviewing the Company's key human capital management strategies.

HEALTH, SAFETY, ENVIRONMENT AND CORPORATE RESPONSIBILITY

Holds oversight responsibility for the Company's approach to sustainability. The Committee oversees not only compliance with, and responses to, applicable laws and regulations, but also the evolution of trends and emerging issues as the Company develops, reviews and assesses leading practices that drive the Company's commitment on principles of sustainability.

NOMINATING AND GOVERNANCE

Holds oversight responsibility for developing criteria for Board membership that encourages a diversity of backgrounds and perspectives, including diversity of race, ethnicity, gender and national origin, and actively seeks individuals qualified to become Board members for recommendation to the Board. The Committee also oversees the Company's lobbying activities and political spending, and reviews current and emerging governance trends, issues and concerns that may affect the Company's business, operations, performance or reputation.

ESG EXECUTIVE MANAGEMENT COMMITTEE

SUSTAINABILITY WORKING GROUP

BOARD COMMITTEES

The Health, Safety, Environment and Corporate Responsibility (HSE&CR) Committee leads the Board's oversight of sustainability issues and strategy development, including climate, environmental performance, health and safety, diversity, equity and inclusion of our workforce, and community engagement.

The following Board committees enhanced their charters in 2021 to reflect their continued oversight of certain ESG-focused responsibilities:

- The **Audit Committee** is responsible for reviewing programs related to risk oversight, including cybersecurity and compliance with the Company's Code of Business Conduct and Ethics.
- The **Executive Compensation Committee** is responsible for reviewing the Company's key human capital management strategies.
- The **Nominating and Governance Committee** is responsible for developing criteria for Board membership that encourages a diversity of backgrounds and perspectives, including diversity of race, ethnicity, gender and national origin, and actively seeks individuals qualified to become Board members for recommendation to the Board. The Committee also oversees the Company's lobbying activities and political spending, and reviews current and emerging governance trends, issues and concerns that may affect the Company's business, operations, performance or reputation.

To view detailed responsibilities for each Board Committee, please refer to our **website**.

ESG EXECUTIVE MANAGEMENT COMMITTEE

Murphy's ESG Executive Management Committee monitors and manages sustainability risks and opportunities. This committee is comprised of our President and Chief Executive Officer and senior executives representing key functional areas across the Company.

The primary responsibilities of the committee are:

- Ensure the Company has timely and accurate information regarding laws, regulations and industry trends related to ESG matters, including climate; responsible business conduct; the community; and diversity, equity and inclusion.
- Monitor and advise the Company on current and emerging ESG matters, including risks and opportunities, that may affect the business, operations, performance or reputation or are otherwise pertinent to the Company and its stakeholders.
- Assist the HSE&CR Board Committee or other Board Committees with respect to ESG matters.
- As necessary, review and provide comments to the Company regarding policies, reports and communications regarding ESG-related matters.
- Review and provide comments on the Company's Sustainability Reports.

The ESG Executive Management Committee is required to meet at least quarterly and reports to the HSE&CR Board Committee. The committee has delegated the responsibility of producing the annual Sustainability Report to the Sustainability Working Group. Further, the committee may delegate other responsibilities to other working groups or subcommittees.

ESG Executive Management Committee

Reports to HSE&CR Board Committee

Chaired by President and Chief Executive Officer

Current members:

President and Chief Executive Officer

Executive Vice President and Chief Financial Officer

Executive Vice President, Operations

Senior Vice President, General Counsel and Corporate Secretary

Vice President, Human Resources and Administration

Vice President, Investor Relations and Communications

Director, Governance and Legal Services

Director, Sustainability

Sustainability Working Group

Reports to ESG Executive Management Committee

Chaired by Director, Sustainability

Comprised of representatives from the following business units:

Finance and Treasury

Health, Safety and Environmental

Human Resources

Investor Relations and Communications

Law

Operations

Risk Management

Supply Chain Management

SUSTAINABILITY WORKING GROUP

The Sustainability Working Group is a cross-functional team of subject matter experts that manages and coordinates the publication of our annual Sustainability Report as well as other ESG matters and efforts, as directed by the ESG Executive Management Committee.

OPERATIONS SUSTAINABILITY FOCUS TEAM

The Operations Sustainability Focus Team, comprised of operations and HSE specialists, was formed in 2021 to identify, evaluate and implement technologies to support our corporate climate and emissions strategy and goals. The team maintains a funnel of project ideas prioritized by impact, feasibility and cost, addressing both the short and long term.

See the Governance and Responsible Business Practices section on page 65 for more on our approach to other governance issues.

ENVIRONMENTAL PROTECTION AND CONSERVATION

“Protecting and preserving the environment is a deep-rooted principle for everyone at Murphy.”

lowest
Scope 1 Emissions
since becoming pure exploration and production player in 2013

highest
Water Recycling Ratio
in Company history

Zero IOGP Spills
in 2021

Murphy has a long history of conducting our business in a manner that protects and conserves the environment. This commitment is embedded in the way we have structured our portfolio of assets, developed our strategy and implemented continuous improvements in our operational processes.

Protecting and preserving the environment is a deep-rooted principle for everyone at Murphy, starting with **Charles H. Murphy Jr.** He was an early leader in the environmental awareness movement and helped to create environmental standards and practices for the oil and natural gas industry. Mr. Murphy was honored with the National Wildlife Federation's citation for outstanding individual service for his work in bringing together oil industry leaders and national leaders of the environmental movement. In 1999, he became the first oil industry executive to receive the prestigious Chevron Conservation Award.

Over the past decade, we have transformed the Company into a focused exploration and production player. In 2019, we acquired primarily operated deepwater US Gulf of Mexico assets, and we fully divested our operations in Malaysia. Through these strategic transactions and others, we have divested refining, oil sands and heavy oil assets, consequently reducing our exposure to emissions-intensive activities. Now, unconventional assets in Canada – which has some of the world's most comprehensive environmental regulations – and the US Gulf of Mexico – which can deliver barrels with some of the lowest emissions intensity in the industry – account for a larger share of our operations.

At the tactical level, Murphy continually improves the performance of existing assets by making investments in equipment upgrades and new technologies, which help to monitor, measure and improve our environmental performance. Our environmental initiatives are directed by our **Worldwide Health, Safety and Environmental Policy** and implemented according to our comprehensive HSE Management System (see page 45). This management system helps us focus our efforts related to reducing greenhouse gas (GHG) and other air emissions, increasing energy efficiencies, protecting water resources and ecosystems, and managing waste and land impact. Additionally, we provide training and awareness programs on our environmental management system for employees and contractors, and participate in external audits with regulatory agencies such as the Texas Railroad Commission, Texas Commission on Environmental Quality, US Bureau of Safety and Environmental Enforcement, Alberta Energy Regulator and British Columbia Oil and Gas Commission.

CLIMATE CHANGE AND EMISSIONS

We understand that our industry, and the use of our products, create emissions – which raise climate change concerns. At the same time, access to affordable, reliable, secure energy is essential to improving the world's quality of life and the functioning of the global economy. We believe that as the energy economy transitions under the Paris Agreement, oil and natural gas will continue to play a vital role in the long-term energy mix.

At Murphy, we are committed to reducing our GHG emissions, and focused on understanding and mitigating climate change risks. To guide our climate change strategy, Murphy has adopted a climate change position, and we are setting meaningful emissions goals. In 2021, we endorsed the Texas Methane & Flaring Coalition's goal of eliminating routine flaring by 2030, under the current World Bank definition of routine flaring. We have also committed to reduce our Scope 1 and 2 GHG emissions intensity by 15% to 20% by 2030 against a 2019 baseline, excluding the Malaysia operations, which we divested in 2019. We continue to capture, track and improve our reporting of methane and flaring metrics.

In this section, we share our efforts to improve our emissions performance and our climate governance, strategy, risk identification and management and metrics and targets, in alignment with the Task Force on Climate-related Financial Disclosures (TCFD) core elements.

Our Climate and Emissions Goals and Progress

	Target	Progress
Reduce Scope 1 and 2 GHG Emissions Intensity	reduction of ▼15-20% by 2030 (from 2019)	on track ▼20% achieved in 2021
Eliminate Routine Flaring	0 by 2030	on track

Our TCFD Journey: Progressively Improving Our Climate Disclosures

The **Task Force on Climate-related Financial Disclosures (TCFD)** has developed a framework to help public companies and other organizations more effectively disclose climate-related risks and opportunities through their existing reporting processes. TCFD's goal is that through widespread adoption, financial risks and opportunities related to climate change will become a natural part of companies' risk management and strategic planning processes.

In 2020, we became a TCFD supporter and adopted its framework to begin our climate-related reporting. Since then, we have expanded our disclosures year-on-year to align with the framework. The table below outlines our enhancements for 2021-2022. For our TCFD Content Index, please see page 86.

	TCFD Core Elements	2021-2022 Efforts and Reporting Enhancements
Governance 	The organization's governance around climate-related risks and opportunities (page 21)	Enhanced charters of three Board committees to reflect their continued oversight of certain ESG-focused responsibilities Reviewed and updated our climate change position, originally developed in 2008 Conducted an assessment on the alignment of our climate change position versus that of our key trade associations
Strategy 	The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning (page 22)	Expanded the climate-related scenario analysis to include the International Energy Agency (IEA) Net Zero Emissions by 2050 Scenario (NZE) Added a more comprehensive discussion of climate-related risks and opportunities, including potential time horizon and financial impacts
Risk Management 	The processes used by the organization to identify, assess and manage climate-related risks (page 25)	Augmented discussion on how we identify and assess climate-related risks Expanded discussion of mitigation strategies for identified risks and efforts for identified opportunities
Metrics and Targets 	The metrics and targets used to assess and manage relevant climate-related risks and opportunities (page 27)	Reported our performance against our climate goals Engaged a third party to conduct an independent assurance of our absolute Scope 1 and Scope 2 GHG emissions for the second consecutive year Added an annual GHG emissions intensity goal as a performance metric in our Company's annual incentive plan Reported our estimated Scope 3, Category 11: Use of Sold Products GHG emissions Expanded climate-related metrics to align with the Sustainability Accounting Standards Board (SASB) for oil and natural gas exploration and production companies and the Global Reporting Initiative (GRI)

Transparent Emissions Reporting

Murphy is committed to transparently reporting, as well as reducing, our GHG emissions. We have maintained an inventory of GHG emissions since 2001 through an internal, annual Worldwide GHG Emissions Report. We have continually refined our emission surveys as we strive for improved measuring and tracking. We report emissions on an operated basis per Ipieca/API/IOGP "Petroleum Industry Guidelines for Reporting Greenhouse Gas Emissions, Second Edition," and in accordance with regulation of the following local countries and provinces:

- United States – Environmental Protection Agency (EPA) GHG Mandatory Reporting Rule
- Canada (Federal) – Canadian Environmental Protection Act
- Canada (Alberta) – Emissions Management and Climate Resilience Act
- Canada (British Columbia) – Greenhouse Gas Industrial Reporting and Control Act
- For other overseas operations, a simplified version of EPA's reporting created for our GHG inventory was used.
- Where necessary, additional source types were added to all assets (e.g., indirect emissions) for consistency across the inventory.

For sustainability reporting purposes, we include all drilling and completions emissions from contracted activities in our Scope 1 data disclosure.

GHG Emissions Definitions

We have adopted the following definitions for our GHG reporting, based on the **Greenhouse Gas Protocol**.

Scope 1 – Direct GHG emissions from sources owned and controlled by Murphy

Scope 2 – Indirect GHG emissions from the generation of purchased electricity consumed by Murphy

Scope 3 – All other indirect GHG emissions as a consequence of Murphy's activities, from sources not owned or controlled by the Company

IMPROVING OUR EMISSIONS PERFORMANCE

We focus our efforts on reducing emissions generated from combustion sources and processes that emit predominantly methane.

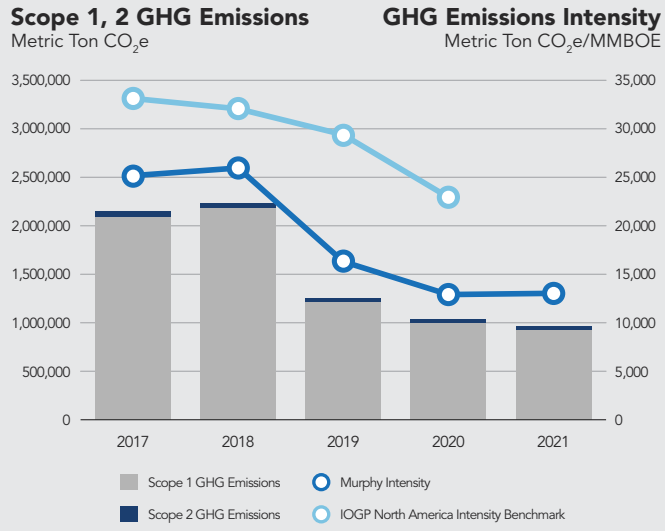
We have made investments to reduce GHG and other emissions, spending approximately $110 million from 2015 to 2021. Reducing emissions is a top priority across all our business functions. We follow a rigorous inspection and preventative maintenance program to keep operations running clean and efficiently, and our operations and facility design teams work collaboratively to incorporate GHG reduction technologies and practices into our existing operations, as well as new infrastructure.

We have also established internal technical sharing sessions to communicate best practices and provide a forum to evaluate applicability across our business units and functions, including asset operations, engineering, subsurface, drilling and completions, and environmental specialist functions. In 2021, the Operations Sustainability Focus Team, comprised of operations and HSE specialists, was formed. This team is tasked to identify, evaluate and implement technologies to support our corporate climate and emissions strategy and goals. The team maintains a funnel of project ideas prioritized by impact, feasibility and cost, addressing both the short and long term.

We have made progress in reducing our emissions. Between 2017 and 2021, our total Scope 1 and Scope 2 emissions fell by 55%, and total company GHG emissions intensity decreased by almost 50%. Through our targeted efforts, as outlined below, our emissions intensity decreased by about 20% from 2019 to 2021, putting us on a clear path to achieving our goal of reducing emissions intensity by 15% to 20% by 2030 against a 2019 baseline. We continue to focus on implementing emissions-reducing initiatives, in line with best practices from organizations like the American Petroleum Institute's (API) The Environmental Partnership, and the Texas Oil & Gas Association (TXOGA), to ensure the reductions are sustainable under future increased activities.

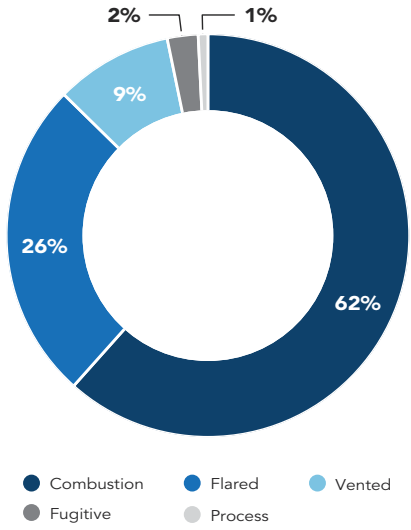
GHG Emissions and GHG Emissions Intensity[5]	2017	2018	2019	2020	2021
Scope 1 and Scope 2 GHG Emissions Metric Ton CO_2e	2,140,553	2,225,724	1,250,320	1,036,312	967,267
GHG Emissions Intensity Metric Ton CO_2e/MMBOE	25,124	25,912	16,234	12,809	12,950

Total GHG Emissions and Intensity[5]



Source: IOGP and Murphy internal

Distribution of 2021 Scope 1 GHG Emissions



IMPROVING OUR EMISSIONS PERFORMANCE: METHANE

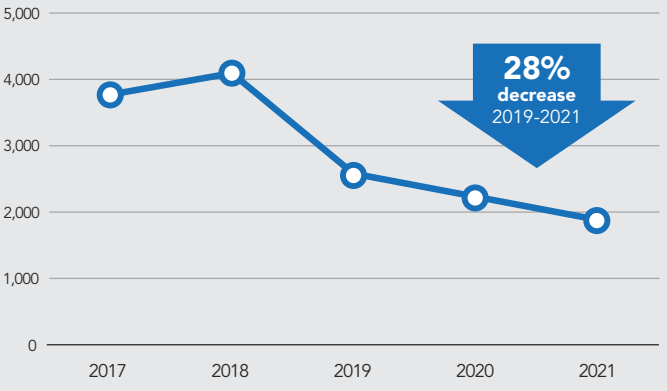
Methane has a significant impact on the climate, due to its high Global Warming Potential (GWP). As a result, the Company is targeting efforts to reduce methane emissions and has built redundant pipelines to minimize flaring due to downstream third-party constraints. It is also investing in technologies that reduce venting and fugitive emissions, including:

- Electrifying facilities, pumping units and instrument air compressors
- Working to replace high-bleed pneumatic controllers with fuel gas to low-bleed and instrument air-actuated controllers at well sites and facilities
- Implementing a permanent design change to our wellsite facilities to include air compressors on all new onshore locations
- Continuing use and deployment of chemical pumps utilizing solar-powered batteries
- Focusing on process efficiencies to reduce facility downtime leading to venting and flaring
- Implementing new well tubing designs and plunger-assisted gas lift installations to reduce lift gas requirements for artificial lift
- Adding pipeline infrastructure to reduce venting and flaring at legacy assets
- Utilizing forward-looking infrared (FLIR) cameras, for leak detection and repair (LDAR), to reduce methane leaks by routine monitoring and repairing
- Piloting of continuous methane and volatile organic compounds (VOCs) monitoring at two facilities. Continuous monitoring enables us to detect leaks sooner, target significant leaks and implement repairs faster and more efficiently.
- Piloting of thermal cameras for remote monitoring of flares, ponds and other locations

Consequently, our methane intensity has decreased by 28% from 2019 to 2021. We continue to seek improvements to reduce our methane emissions and partner with industry groups to achieve these goals, including those of TXOGA and API's The Environmental Partnership.

Methane Intensity[5]

Metric Tons CO_2e/MMBOE



5 2017 and 2018 data includes Malaysia.

RESPECT THE ENVIRONMENT

Retrofit of High-Bleed to Low-Bleed Pneumatic Instruments in Tupper Montney, Canada

The upstream oil and natural gas industry utilizes automated pneumatic instruments in its routine production operations for maintaining process conditions such as fluid level regulation, pressure and temperature. These instruments may be powered by compressed air, electricity/solar, propane or natural gas, and be designed as high-bleed or low-bleed (or intermittent-bleed) depending on their application and static vent rate versus dynamic vent rate properties.

Historically, due to the immediate availability of pressurized natural gas and its simplicity and reliability of use in remote locations, it was the energy source of choice. However, low-bleed instruments vent less natural gas than their high-bleed alternatives, and using electricity/solar or compressed air as an energy driver eliminates this routine venting source of natural gas completely.

In 2021, Murphy implemented a pneumatic instrument venting-reduction program in Tupper Montney, whereby 120 high-bleed instruments were retrofitted with their low-bleed relay alternatives. In doing so, approximately 3,300 metric tons of carbon dioxide equivalent ($mtCO_2e$) of vented natural gas has been eliminated on an annual basis, a 60% performance improvement. As a further natural gas venting-reduction enhancement, all new greenfield pads and the build-out of existing brownfield pads in Canada, in both Tupper Montney and Kaybob Duvernay, will be engineered with instrument air (and/or electric) systems to power all pneumatic instrumentation, including pneumatic chemical pumps.

IMPROVING OUR EMISSIONS PERFORMANCE: COMBUSTION

A large source of emissions across our operations is associated with the combustion of fuel to run equipment critical to our operations. Improving the efficiency of our combustion practices reduces associated GHG emissions, as well as emissions of nitrogen oxide (NO_X), sulfur oxide (SO_X) and VOCs. Strategies we are using to reduce combustion-related emissions include:

- **Dual-fuel fracturing fleet** – Beginning the fourth quarter of 2019, Murphy shifted to using dual-fuel fracturing fleets in Canada whenever possible. The dual-fuel fleet partially displaces diesel consumption with natural gas (field gas where readily available, or compressed natural gas, CNG). This is expected to reduce both GHG and NO_X emissions. In Canada, Murphy also conducted trials of a dual-fuel drilling rig in its 2021 drilling program in Tupper Montney, further displacing diesel consumption with natural gas and driving down emissions. In the Eagle Ford Shale in Texas, Murphy started using dual-fuel fracturing fleets for its 2021 completions and is currently evaluating the use of electric fracturing units.
- **Truck transportation** – We have reduced truck transportation by connecting production in our operating fields via pipelines whenever practical and cost-efficient, and utilizing lay-flat hose to transport fresh water and high-density polyethylene (HDPE) pipelines to move fresh water and non-fresh water through the field, where applicable.
- **Onshore drilling and completion's projects** – In 2022, we commenced implementing a dual-fuel drilling rig in Eagle Ford Shale. To further reduce emissions, we are currently evaluating enhancement technologies on the dual-fuel in the drilling and fracturing operations, including CNG-hydrogen blend, CNG with a combustion catalyst additive and CNG-hydrogen blend with a combustion catalyst additive.
- **Natural gas compressors** – In our onshore operations, we continue to add the latest catalyst technology.
- **Electrification** – We continue to electrify facilities, pumping units and instrument air compressors.

We also continue to seek opportunities to partner with service providers on emission-reducing innovations. In 2022, we are participating in the ESG Plus pilot in partnership with ISNetworld. ISNetworld is our supplier/contractor management system, which screens and grades our contractors on various performance and company policies and procedures. The pilot is aimed at helping our contractors and Murphy assess and document ESG performance, including desktop review and verification of their emissions data and implementation assessments of ESG programs. This will not only provide further transparency but also allow us to strengthen partnerships with our contractors as part of our Company's goal to reduce emissions

DON'T SETTLE FOR "GOOD ENOUGH"

Reducing Combustion Emissions in Offshore US Gulf of Mexico

Rather than using traditional diesel-fuel cranes, our investment in electric cranes on the King's Quay floating production system, installed in the US Gulf of Mexico in 2022, is expected to reduce emissions by over 92 $mtCO_2e$ each year, or ~2,800 $mtCO_2e$ over the life of the field. This is equivalent to a pickup truck driving over 6 million miles,[6] or the annual energy consumption of 370 US homes.[6]

6 Based on data from **www.fueleconomy.gov** and **www.ccfpd.org**.

IMPROVING OUR EMISSIONS PERFORMANCE: FLARING

Flaring of natural gas is a controlled process for eliminating emissions of methane and VOCs. This elimination is necessary for safe operations within the oil and natural gas production process. Murphy is committed to limiting flaring as much as possible at all of our locations, to protect the environment and to capture as much natural gas as possible. Our first choice is always to eliminate flaring through natural gas conservation. Per the US Bureau of Safety and Environmental Enforcement (BSEE) regulations, we conduct zero routine flaring at our Gulf of Mexico offshore facilities. In 2021, we endorsed the Texas Methane & Flaring Coalition's goal of eliminating routine flaring by 2030, under the current World Bank definition of routine flaring.

Our process improvements to reduce flaring include:

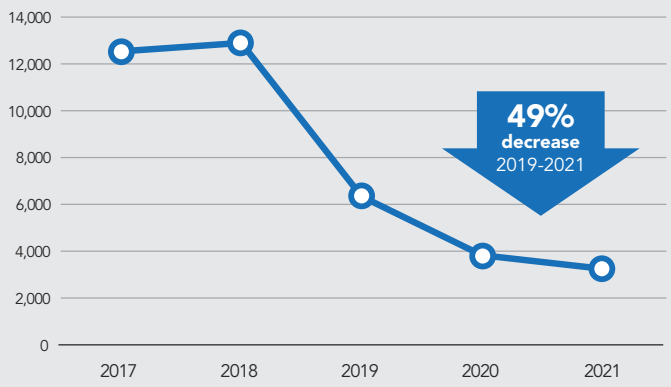
- Eliminating flare stacks from the design of new facilities in our Tupper Montney operations. The new designs use automated pressure controls to shut the wells in automatically, to eliminate flaring. We have also continued to decommission existing flares on locations in Tupper Montney to reduce emissions from the continuous pilots.
- Implementing facility slugging prevention projects in the Eagle Ford Shale to reduce process fluctuations and upsets, thereby reducing downtime and flaring
- Reducing export constraints in the Eagle Ford Shale through the addition of secondary natural gas sales points
- Introducing electronic control upgrades, in both our US and Canada operations, to reduce upsets and provide data for continuous operational improvement
- Improving our overall equipment reliability in the Eagle Ford Shale to drive down failures that can result in flaring
- Extending our operated flowline and pipeline network and using third-party underutilized pipelines and infrastructure, where possible, to increase natural gas handling capabilities and reduce flaring

These efforts will drive improvement in our management of emissions and climate-related risk exposure, reduction of regulatory and policy risk and responsible production of oil and natural gas.

As a result of our focused efforts described above, between 2019 and 2021, our flaring intensity on a $mtCO_2e$ per MMBOE basis fell by about 49%. As we work to achieve our commitment to reduce flaring, we anticipate continued improvement in the methane intensity of assets under our operational control.

Flaring Intensity[7]

Metric Tons CO_2e/MMBOE



OFFER SOLUTIONS

Improving Compressor Reliability to Reduce Flaring Events at Eagle Ford Shale, Texas

Compressors are critical to our operations. In Eagle Ford Shale, compressors are used to increase the pressure of natural gas to allow it to be transported for sale, and also for gas lift. Gas lift is a process where compressed natural gas is injected or recycled into the well to help fluids, primarily oil, flow more easily to the surface. When a compressor goes down, the natural gas is flared, which is undesirable, both from an environmental and an economic standpoint.

In 2017, the Facilities Engineering Team began tracking statistics on compressor downtime, to reduce downtime events and the resultant flaring. Internal process reviews concluded that most of the downtime originated from process upsets. To address the process upsets, equipment upgrades and system retrofits were undertaken, resulting in greater than 42% improvement in compressor downtime events from 2019 to 2021.

7 2017 and 2018 data includes Malaysia.

Committing to Emissions Reductions and Industry Partnership

Murphy is one of the 26 founding members of **The Environmental Partnership**, launched by the API in 2017. The Partnership, which includes 65 participating oil and natural gas producers, is focused on voluntarily reducing emissions from oil and natural gas production through a series of best practices that members commit to implementing. As a member, Murphy has committed to and is working to achieve the following:

- **Implementing leak detection and repair (LDAR) programs** – at all relevant assets, including regular optical gas imaging and timely repair of identified leaks
- **Replacing high-bleed pneumatic controllers** – by eliminating the use of these controllers in new facilities and working to replace the controllers in existing facilities with primarily air-actuated devices
- **Reducing emissions from pipeline blowdowns** – by reducing pressure and gas volumes prior to pipeline blowdowns, and when possible, routing gas to flare for destruction
- **Implementing flaring-reduction best practices** – by following a range of best practices (see Improving Emissions Performance: Flaring, see page 19)

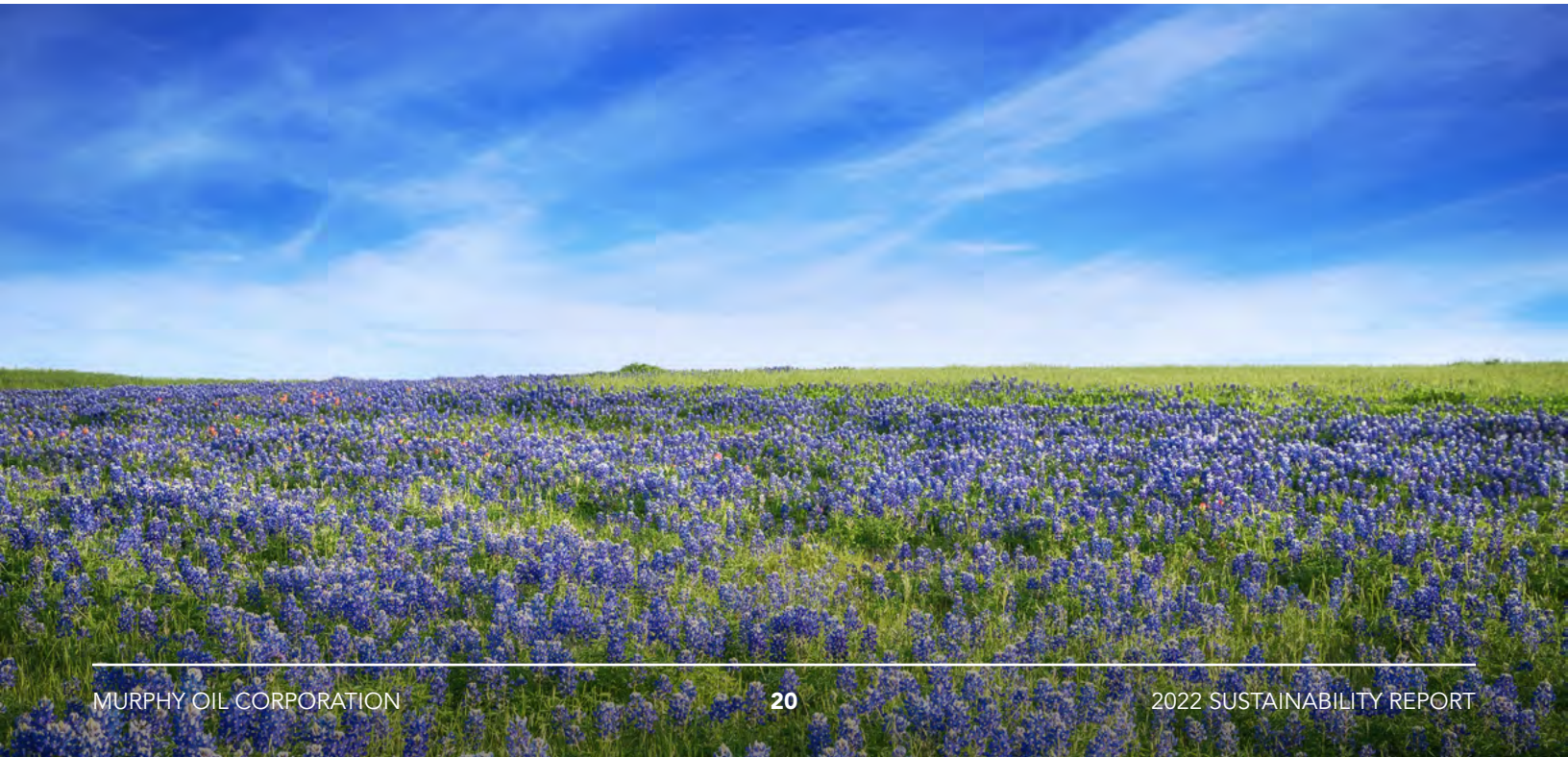
Scope 3 Emissions

Scope 3 emissions are other indirect emissions as a result of Murphy's activities, from sources not owned or controlled by the Company. As an exploration and production company, we have no direct control over Scope 3 emissions.

We use the guidance prescribed in the "Estimating Petroleum Industry Value Chain (Scope 3) Greenhouse Gas Emissions: Overview of Methodologies," published by Ipieca in 2016, to estimate our Scope 3 emissions. The "GHG Protocol Scope 3 Standard," published by the World Resources Institute and the World Business Council for Sustainable Development in 2011, classifies Scope 3 emissions into 15 categories. In establishing the boundary of our Scope 3 inventory, we have determined that only one of the 15 categories is material to our GHG inventory, Category 11: Use of Sold Products. We will continue to evaluate the other categories for materiality and report accordingly. There is continuing debate and development of standards for estimating Scope 3 emissions, partly because much of a company's Scope 3 emissions are also counted in other companies' Scope 1 and Scope 2 emissions. We will continue to monitor these developments to maintain consistency with accepted standards.

The table below outlines our estimated Scope 3 emissions for 2020 and 2021, on a net equity production basis.

Estimated Scope 3 Net Equity Emissions	2020	2021
Category 11: Use of Sold Products Metric Tons CO_2e	21,500,000	20,600,000



CLIMATE GOVERNANCE

Our Board and senior management are actively engaged in overseeing our climate change and emissions strategy, which is based on our climate change position.

Board Oversight

The Board of Directors oversees climate-related risks and opportunities, as well as overseeing the executive leadership team in its assessment, agenda-setting and strategic initiatives. Established processes for performance and risk assessments are in place and are informed by experts from within and outside the organization, as well as by the executive leadership team.

The Health, Safety, Environment and Corporate Responsibility (HSE&CR) Committee of the Board has specific responsibility for overseeing issues related to Murphy's climate and emissions strategy, performance and external reporting. Additionally, the Audit Committee has oversight of our risk processes, while the Board reviews the Enterprise Risk Management (ERM) outcomes. The Executive Compensation Committee aligns our compensation program with our environmental and climate goals as well as performance. Please refer to Board and Managerial Oversight of ESG Topics (see page 11) for more details on the responsibilities of these Board committees.

Climate-related information is reviewed at least biannually during the HSE&CR Committee meetings, as well as through frequent updates to the Board, to help ensure our members are apprised of climate matters. At least annually, external experts present to the Board on a broad range of topics relating to climate and sustainability. Additionally, our own internal personnel from government affairs, enterprise risk management, corporate planning, sustainability, HSE and operations provide updates on relevant topics, including but not limited to:

- Strategy and initiatives relating to climate change policy
- Significant legislation or regulations, treaties, conventions or other agreements, public policies or scientific developments involving environmental matters
- Significant risks to, and the physical security of, the Company's facilities
- Annual GHG inventory and progress against climate-related goals, including our 2030 goals of Scope 1 and Scope 2 GHG emissions reduction intensity and zero routine flaring
- Climate-related scenarios and energy transition matters
- Impact of climate-related risks and opportunities on our capital allocation process for our budget, long-range business plan and strategy

Management's Role

Our ESG Executive Management Committee, comprised of the President and Chief Executive Officer and senior executives, provides executive direction on and oversees the identification and management of climate-related risks and opportunities, and delegates responsibilities to relevant working groups or teams. To keep abreast of climate-related issues and trends, the committee is briefed by staff who participate in industry associations, think tanks and policy discussions, further detailed under Climate Risk Management (see page 25).

This ESG Executive Management Committee reports to the HSE&CR Committee and coordinates closely with our HSE Executive Management Advisory Committee. The HSE Executive Management Advisory Committee includes the President and Chief Executive Officer and senior executives and management from HSE and operations, and is responsible for executing on our environmental strategy.

Further, we have a Capital Allocation Investment Committee made up of the President and Chief Executive Officer; Executive Vice President and Chief Financial Officer; Executive Vice President, Operations; and senior finance leaders who oversee capital allocation, including climate- and emissions-related investments.

Additionally, members of the Risk Committee include the Executive Vice President and Chief Financial Officer; Senior Vice President, General Counsel and Corporate Secretary; Executive Vice President, Operations; other senior executives and the Enterprise Risk Manager who identify, prioritize and assign owners to risks, including climate-related risks, with reporting lines up to the Board or applicable Board committee(s), as discussed under Enterprise Risk Management in the Governance and Responsible Business Practices section (see page 68).

As mentioned in the Board and Managerial Oversight of ESG Topics section (see page 11), the Operations Sustainability Focus Team, comprised of operations and HSE specialists, is responsible for identifying, evaluating and implementing technologies to support our corporate climate and emissions strategy and goals.

Climate Change Position

We originally developed a set of climate change principles in 2008 to guide our climate strategy. In 2021, we reviewed and updated these principles into our current **climate change position**, with the commitment to re-evaluate the position periodically with our executive leadership team and HSE&CR Board Committee. As part of our climate change position, we endeavor to:

- Provide strong internal oversight and governance
- Communicate with transparency
- Further integrate risks and opportunities into our strategy and business planning cycle
- Promote operational excellence to minimize impact to the environment
- Collaborate with stakeholders and promote responsible policy solutions

Our positions on key ESG issues do not always align exactly with those of the industry associations and other groups of which we are members. Therefore, our membership does not necessarily indicate our support for all the organizations' positions. To understand the alignment of our climate change position, highlighted above, with that of our key trade associations, we conducted an assessment. We selected organizations that received more than $50,000 a year from Murphy, and identified three associations: the American Petroleum Institute (API), Canadian Association of Petroleum Producers (CAPP) and National Ocean Industries Association (NOIA). Our analysis concluded that our climate change position is consistent with that of these three associations.

CLIMATE STRATEGY

Our strategy and asset portfolio position the Company to deliver on the dual challenge of providing affordable, reliable and secure energy while lowering the intensity of emissions associated with our activities. Through our annual strategic planning process, we build a strategy and business adaptable to alternative low-carbon pathways by providing a qualitative and quantitative perspective of energy transition risks and opportunities.

Our risks fall into the following broad climate-related issues most relevant to our business model:

- **Regulatory** – Policies and regulations related to GHG emissions and climate change, covering the short and medium term
- **Market transition** – Global demand change toward non-fossil fuel energy sources, covering the medium to long term
- **Physical** – Severe weather events, covering the short term and beyond

Elements of the above-described issues manifest themselves over different time horizons. We consider the following horizons when assessing and planning for risks and opportunities:

- **Short-term** – one to three years, which includes our annual budget and reporting period and allows for the realization of near-term operational decisions
- **Medium-term** – four to eight years, which includes our planning cycle and captures strategic initiatives such as the materialization of exploration ventures and further capital allocation into our larger assets
- **Long-term** – beyond eight years, and evaluated more fully against the external scenarios that represent alternate transition pathways and the underlying policy, technical and market assumptions, such as those defined by the International Energy Agency (IEA)

We also see significant opportunities over similar time horizons. A detailed discussion of these risks and opportunities can be found in the Climate Risk Management section (see page 25).

Climate Scenario Analysis: Overview

The scenario work of the IEA helps inform our view of long-term energy fundamentals. In particular, the Stated Policies Scenario (STEPS), Announced Pledges Scenario (APS) and Sustainable Development Scenario (SDS), as presented in the World Energy Outlook 2021, frame potential oil and natural gas demand, as well as technology, policy and societal requirements tied to energy transition pathway objectives. As promised in our 2021 report last year, this year, we have included the Net Zero Emissions by 2050 Scenario (NZE) in our analysis to investigate the implications of a broader range of potential business environments and activities.

The STEPS reflects the impact of announced policy intentions and targets – Nationally Determined Contributions (NDCs) – submitted by the Paris Agreement signatories to reduce their emissions. This scenario projects oil demand to increase by 17% by 2030 and then flattening, while natural gas demand rises by 28% by 2050. This scenario projects that the global average temperatures will hit 2.6°C above pre-industrial levels in 2100.

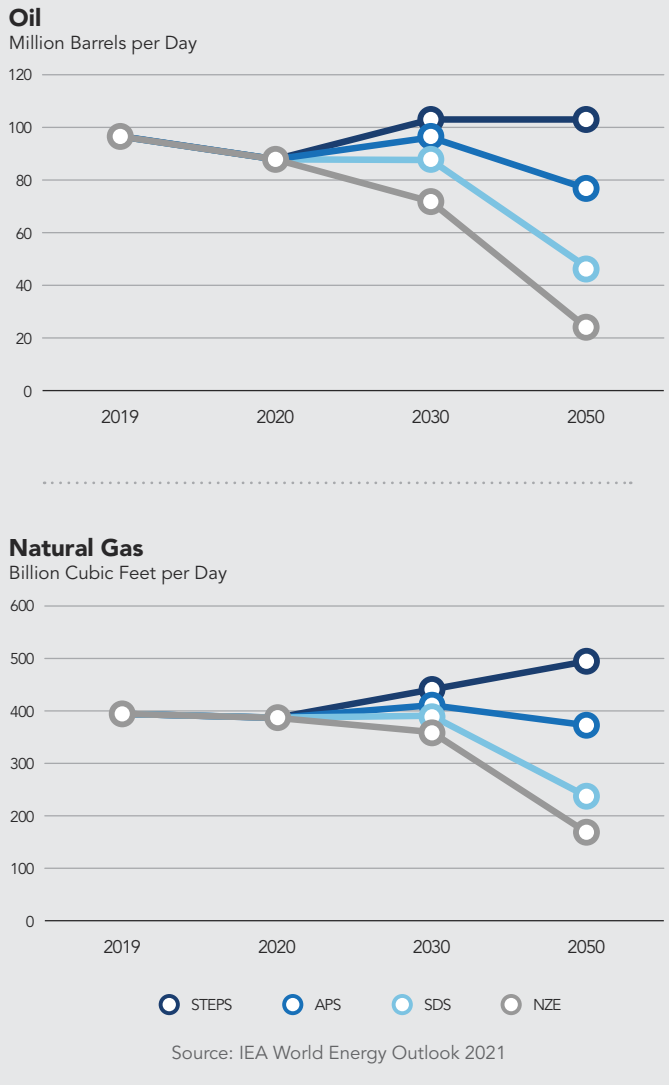
The APS assumes that all climate commitments made by governments around the world, including NDCs and longer term net zero targets, will be met in full and on time. This scenario projects that oil demand will fall by 13% and natural gas demand will decrease by 4% by 2050. The global average temperature rise in 2100 is around 2.1°C.

The SDS reflects a pathway aligned with the aim of the Paris Agreement of keeping a global temperature rise this century well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase even further, to 1.5°C. This scenario projects that oil demand will fall by 47% and natural gas demand will decrease by 39% by 2050. Global CO_2 emissions in the SDS are projected to reach net zero by 2070. If emissions are held to zero, there is a 50% probability, according to the IEA, of limiting the temperature rise to less than 1.6°C.

The NZE is more ambitious and goes further than the SDS to align with the Paris Agreement objective of pursuing efforts to limit the temperature increase to 1.5°C. The NZE shows a narrow pathway to achieve net zero emissions by 2050 and is highly dependent on several factors, including: the timing and emergence of new innovations and technologies, the willingness of society to change behaviors, and global, lasting co-operation and policy changes. This scenario requires that oil demand fall by 73% and natural gas demand by 56% by 2050.

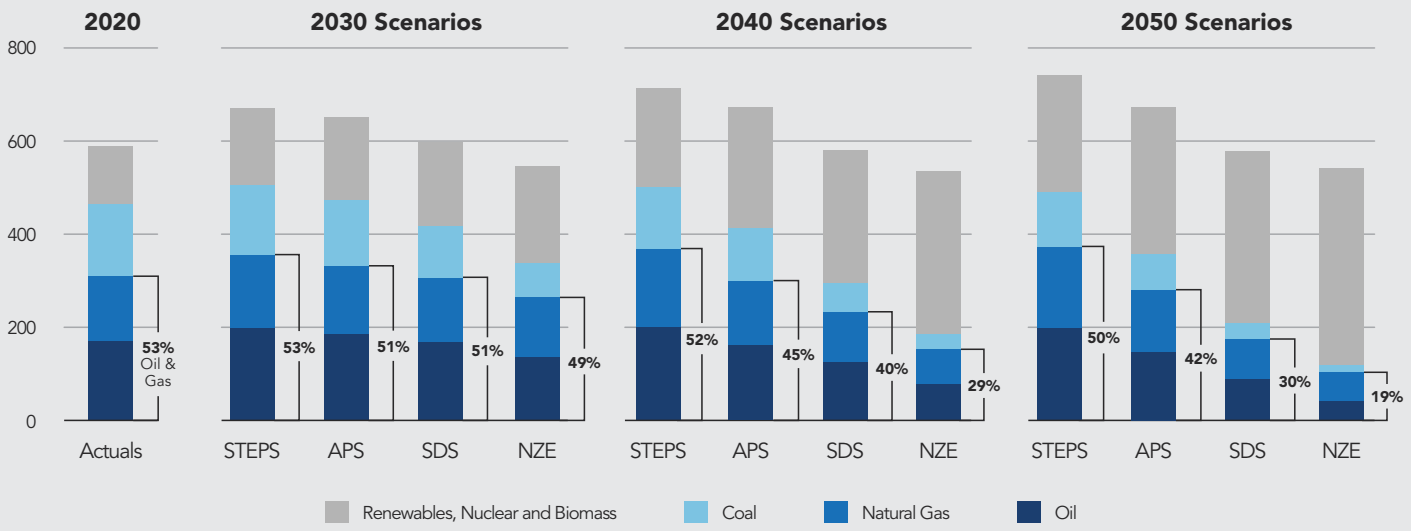
The IEA highlights the important role that both oil and natural gas continue to play in the energy mix in the STEPS, APS and SDS. By 2040, oil and natural gas combine to meet 52%, 45% and 40% of the overall world energy demand, respectively. Even by 2050, oil and natural gas remain key. Due to natural depletion of existing production supply, there is need for continued

Global Oil and Natural Gas Demand



Source: IEA World Energy Outlook 2021

Global Energy Demand by Fuel (Exajoules, EJ)



Source: IEA World Energy Outlook 2021

significant investment. In the STEPS, annual upstream oil and natural gas investment averages around $650 billion between 2021 and 2030 and about $700 billion through to 2050, with 60% spent on developing new fields. In the APS, annual investment averages about $570 billion between 2021 and 2030 and about $460 billion from 2031 to 2050.

We believe our strategic positioning enables the Company to contribute to the replacement of oil and natural gas supplies over this time horizon. Our existing portfolio reflects oil and natural gas resources that can be developed and produced at an emissions intensity per unit of production that is lower relative to other sources on the supply curve.

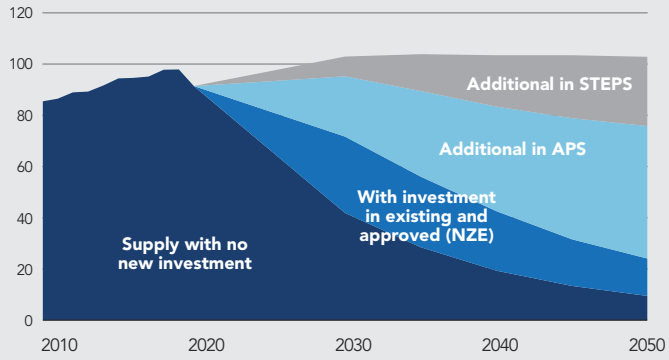
In the NZE, demand for oil and natural gas drops to levels that do not require new field developments beyond those already approved. However, investment in existing fields continues, with the annual upstream oil and natural gas investment averaging $235 billion between 2021 and 2050. The IEA highlights that if demand is higher than assumed in the NZE, the reduced investment in new fields would cause a supply shortage, leading to higher and more volatile prices. It further states that to counter this, a strong policy push to reduce oil and natural gas demand is required to meet the emissions goals of the NZE and to avoid the risk of market tightening.

Climate Scenario Analysis: Methodology

We consider the SDS and NZE when analyzing the resilience of our strategy. We also apply the associated crude oil, natural gas and CO_2 price projections to our annual Long Range Plan (LRP) base case through the end of life of our existing and known future producing assets. The figures below reflect these projections from the SDS and NZE. We do not consider the STEPS and APS, as the associated price projections are significantly more favorable than our internal base price decks.

Global Oil Supply

Million Barrels per Day



Source: IEA World Energy Outlook 2021

Climate Scenario Analysis: Outcomes

Relative to our internal forecasts, the SDS forecasted oil price is slightly more optimistic, while the SDS forecasted US natural gas price is slightly more pessimistic. The SDS carbon price assumption is markedly higher than our carbon price assumption.

When we applied the SDS oil, natural gas and carbon price projections and compared the impact to the net present value (NPV) of our portfolio of existing and known future producing assets, the Murphy portfolio value remained relatively flat to our LRP base case. The optimistic SDS oil price offset the unfavorable effects of carbon pricing. We believe our current portfolio of existing and known future producing assets is resilient under the 2°C transition pathway, as represented by the SDS. As we perform the scenario analysis, we also confirm that our 2030 GHG emissions intensity target is still viable.

Maintaining the resilience of our strategy will continue to be a priority. We believe that there is no conflict between leveraging the strength of our portfolio to deliver healthy returns while also continuing to lower our Scope 1 and 2 emissions intensities.

The NZE's significantly lower oil and natural gas prices coupled with a much higher carbon price result in lower NPV than our LRP base case. As discussed earlier, the NZE is highly dependent on many complex factors coming together in a relatively short timeframe. However, should aspects of the NZE scenario play out, our portfolio allows us the optionality to shift to the Tupper Montney natural gas asset in Canada. This presents an opportunity that is discussed further in the Climate Risk Management section (see page 25). Similar to the SDS, in this scenario, our 2030 GHG emissions intensity target remains viable.

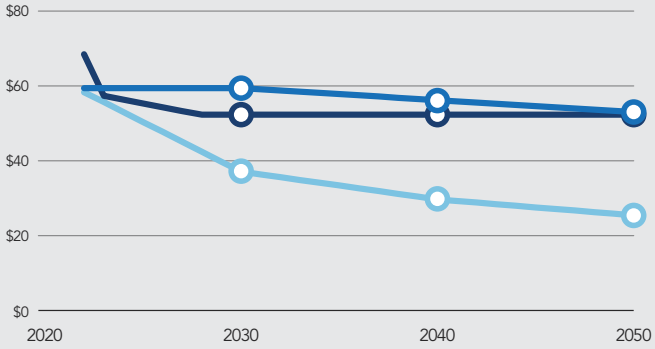
Since the NZE is a narrow pathway, we extended our analysis to look at the net zero emissions scenarios from another third party, IHS Markit, which is now part of S&P Global Commodity Insights. IHS Markit develops a set of proprietary climate scenarios for clients to use for stress testing and strategic decision-making purposes. Like the IEA, IHS Markit "back-casts" its net zero scenarios. In the IHS net zero scenarios, the commodity prices are higher than the NZE. From our view, this indicates that the loss of oil growth opportunities is not as stark and the profitability of future natural gas opportunities is noticeably higher than in our LRP base case.

We also considered the impact of the IEA SDS and NZE pathways on our year-end 2021 proved reserves. Our analysis indicates that under these scenarios, our proved reserves are not likely to be stranded.

Commodity Price Scenarios[8]

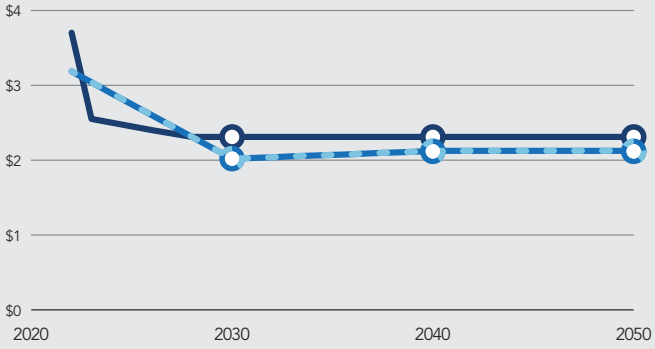
Crude Oil

2022 $ per BBL



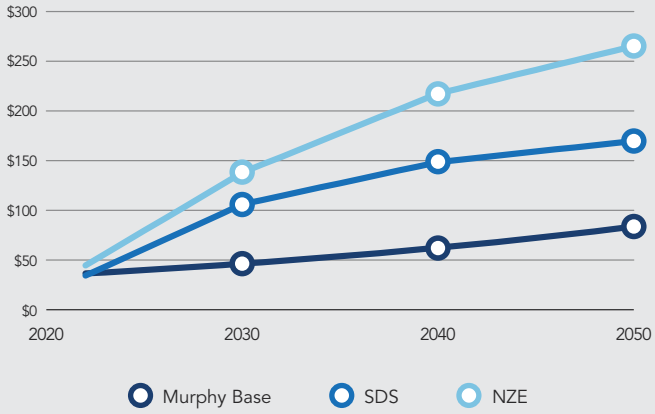
US Natural Gas

2022 $ per MMBTU



CO_2

2022 $ per Tonne



Source: IEA World Energy Outlook 2021, Murphy internal

8 Interpolation was necessary for the IEA price projections, since the IEA only publishes decadal milestones. The carbon price has already been netted out of the commodity prices, and is therefore applied to our Scope 1 and Scope 2 equity emissions, and not to Scope 3.

CLIMATE RISK MANAGEMENT

Identifying Climate Risks

Through our Enterprise Risk Management (ERM) process, as described in the Governance and Responsible Business Practices section (see page 68), we identify, assess, evaluate, mitigate and monitor our climate-related risks. We determine the likelihood and impact on a qualitative scale, and rank and prioritize the identified climate-related risks against other risks.

Our views on climate-related risks are shaped by internal and external insights gained from climate policy discussions at federal, state and local levels; energy outlooks from the IEA and others; industry associations and think tanks. For example, Murphy participates in several external associations:

- We are members of the American Petroleum Institute (API), Canadian Association of Petroleum Producers (CAPP) and National Ocean Industries Association (NOIA). We are active in many committees of these associations, including the climate and ESG committees, as they work on addressing climate-related issues. As mentioned in the Climate Governance section above, in 2022, we assessed our climate change position with that of these associations and concluded that we are consistent.
- We joined **Ipieca**, a non-lobbying group, in 2019 and are members of several of its working groups, including Climate Change, Environment, Reporting and Water. Ipieca leads engagement with United Nations agencies on behalf of its membership, including UNFCCC, IPCC, UNEP and ICAO, and has an ongoing record of convening expert workshops to explore key climate-related issues, informing the industry and stakeholders.
- We have been a sponsor of the **Massachusetts Institute of Technology (MIT) Joint Program on the Science and Policy of Global Change** since 1998. The research conducted at MIT is valuable to government agencies, which aim to formulate efficient and effective policies, to industries that aim to create risk management strategies within national, regional, and global market realities, and to other decision makers, who value a systemic view of the broad interactions inherent in global change.

Managing Climate Risks and Opportunities

As we seek to maximize the long-term value of our assets, we know that we must manage foreseeable short-, medium- and long-term risks and opportunities, including those related to climate change. Through our ERM process, we have identified the following key climate-related transition and physical risks that might impact our strategy, and are actively managing mitigation efforts.

Key Climate-Related Transition and Physical Risks

Our reporting in this section is guided by the Task Force on Climate-related Financial Disclosures (TCFD) framework and the references to climate risks and opportunities, including transition and physical risks, are intended to align with such framework. The terms used herein are intended to be consistent only with their meaning under the TCFD framework. The disclosure of the information does not represent our belief regarding the materiality of that information under the federal securities laws. For a discussion of information that is material to Murphy Oil, please see our filings with the SEC, including our Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q.

Type	Risk Description	Potential Time Horizon	Potential Financial Impacts	Mitigation Strategies
Transition: Policy and Legal	Policies/regulations related to GHG emissions, climate change, reporting obligations, and exposure to litigation	Short- and medium-term	Increased operating expenses Increased cost of capital Write-offs, asset impairment and early retirement of existing assets due to policy changes	Murphy has developed focus areas to streamline our approach: • Monitoring policy and regulatory proposals for specific risks to our business, by our Risk Management, Government Affairs and Regulatory personnel. • Increasing internal awareness and transparency to increase communication both within and across business units, ensuring that cross-functional disciplines are aware of their contribution to emissions and opportunities for improvement. • Enhancing data quality and tracking to provide higher-quality data, processes and consistency for improved benchmarking and setting key performance indicators (KPIs) and emissions reduction targets. • Improving external reporting and disclosure to highlight to our employees, shareholders, in addition to our other stakeholders, our understanding of and commitment to climate change initiatives. • Utilizing a process for evaluation and innovation, ensuring that our technical experts have access to the latest technological advancements and opportunities for participation in research and development, and increasing our ability to effectively evaluate solutions and act quickly upon opportunities. For more information, see Improving Emissions Performance in this section (see page 16).

Time horizon definitions: short-term – one to three years; medium-term – four to eight years; long-term – beyond eight years

Type	Risk Description	Potential Time Horizon	Potential Financial Impacts	Mitigation Strategies
Transition: Market	Three key potential risks of the market transitioning away from fossil fuels and into lower carbon emission sources are:			
	Fossil-Fuel Business Model Disruption – Technologies for using energy from non-emitting sources have developed rapidly over the last two decades and, in some cases, the usage cost has been decreasing at a noticeably faster rate than previously anticipated.	Medium- to long-term	Decreased revenue from reduced demand for oil and natural gas Increased cost of capital	There is a large range of uncertainty regarding future rates of change, and timing is unknown. We continue to investigate low-carbon technologies that complement our existing assets, strategy and competencies. As discussed above, the IEA alternative transition pathways suggest that oil and natural gas will continue to play a significant role in future energy demand. We will remain disciplined in our capital allocation, to ensure that our future investments are competitive in these various pathways.
	Price Volatility – If consumers embrace less carbon intensive energy sources and carbon pricing, demand could drop and significantly impact long-term net oil and natural gas prices.	Medium- to long-term	Decreased revenue from reduced demand for oil and natural gas Increased cost of capital	We use an analytical framework that includes scenario analysis to help us understand and manage this risk.
	Reserves Estimation – Carbon prices will impact calculations of future reserves.	Medium- to long-term	Write-offs, asset impairment, and early retirement of existing assets Increased cost of capital	Our risk, reserves and planning functions work collectively with management and the Board to understand the potential impact and maintain our capital discipline.
Physical: Acute	Our US and international operations are exposed to different types of physical risks, such as tropical systems, floods and other forms of severe weather.	Short-term and beyond	Deferred revenue from deferred production capacity Increased operating expenses Property damage, liability for third-party damage Increased insurance premiums	We have robust safety protocols in place, and we maintain thorough emergency response and crisis management plans. As described in the Protecting Our People section (see page 43), Murphy performs exercises and drills based on different scenarios for all our businesses. Additionally, we have experience in responding to actual events, such as the devastating floods experienced in Houston in 2017 after Hurricane Harvey and the Winter Storm Uri in 2021.

Time horizon definitions: short-term – one to three years; medium-term – four to eight years; long-term – beyond eight years

Key Climate-Related Opportunities

Our reporting in this section is guided by the Task Force on Climate-related Financial Disclosures (TCFD) framework and the references to climate risks and opportunities, including transition and physical risks, are intended to align with such framework. The terms used herein are intended to be consistent only with their meaning under the TCFD framework. The disclosure of the information does not represent our belief regarding the materiality of that information under the federal securities laws. For a discussion of information that is material to Murphy Oil, please see our filings with the SEC, including our Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q.

Type	Opportunity Description	Potential Time Horizon	Potential Financial Impacts	Ongoing or Future Initiatives
Resource Efficiency	Improved methane capture	Short-term	Increased revenue	Continue with our efforts to reduce methane (see page 17).
Energy Source	Use of lower-emission sources of energy and new technologies	Short- and medium-term	Reduced exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon Increased capital availability (as more investors favor lower-emissions producers) Reputational benefits resulting in increased demand for goods	Fulfill our commitments to **The Environmental Partnership**, as well as identifying electrification, renewables (like solar and hydrogen) and infrastructure opportunities throughout our operations, as discussed in Improving Our Emissions Performance (see page 16). Evaluate and implement design concepts for new offshore facilities that improve emissions intensity over the life of the facility, such as the improvements we implemented in the King's Quay floating production system.
Products, Services and Markets	Natural gas as lower-emissions fuel Development of natural gas markets with carbon capture for power generation Development of natural gas markets with carbon capture for blue hydrogen production Entering the carbon value chain as a storer in enhanced oil recovery	Long-term	Increased revenue Increased capital availability (as more investors favor lower-emissions producers) Reduced exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon	Use our natural gas assets in Canada as low-intensity resource. Allocate capital to investments in resources that will remain economically attractive under various transition pathways.

Time horizon definitions: short-term – one to three years; medium-term – four to eight years; long-term – beyond eight years

CLIMATE METRICS AND TARGETS

We use a range of metrics to assess our climate and emissions efforts and performance, including absolute and intensity metrics for Scope 1 and 2 GHG emissions, Scope 3 GHG emissions, methane, flaring, air quality, water and waste management. We also track and report metrics recommended by the Sustainability Accounting Standards Board (SASB) for oil and natural gas exploration and production companies (see page 83 for our SASB index) and the Global Reporting Initiative (GRI) (see page 89 for our GRI index). For a full list of metrics and data over the preceding five years, see Performance Data section (page 72).

We have established two external targets to drive our emissions performance: a commitment to eliminate routine flaring by 2030 and a goal to reduce Scope 1 and 2 GHG emissions intensity by 15% to 20% by 2030 from a 2019 baseline. As discussed in Improving Our Emissions Performance (see page 16), our performance in 2021 puts us on a clear path to achieving our 2030 targets. Our GHG emissions intensity decreased by about 20% from 2019 to 2021.

We are committed to reducing emissions and progressing towards our emissions intensity goal. To ensure the integrity of our emissions data, for a second consecutive year, we have engaged ERM Certification and Verification Services (ERM CVS) to conduct an independent limited assurance on our absolute Scope 1 and 2 GHG emissions. For ERM CVS's Independent Assurance Statement see page 81.

For 2021, the Executive Compensation Committee of our Board added an annual GHG emissions intensity goal as a performance metric in our Company's annual incentive plan. The plan also includes safety and spill performance metrics, which we incorporated several years ago. The target metric for 2022 was set to ensure we remain on the path to achieving our medium-term goal of reducing our gross operationally controlled GHG emissions intensity.

WATER MANAGEMENT

Water is essential to our communities, ecosystems and industry. Murphy is committed, from the Board and Chief Executive Officer level down to field personnel, to responsible water management practices, stewardship and conservation in all areas where we operate. We strive to be a leader in water management planning and practices, with the ultimate objective of reducing the withdrawal and use of fresh water in our operations.

The availability of fresh water is being affected by human consumption, farming and industry water users, and climate shifts. We integrate water scarcity into our regular risk assessments and our business strategies. For example, over the last five years, Murphy has invested over $40 million in infrastructure to minimize our dependence on fresh water and maximize our use of recycled produced and flowback water and other alternative sources.

ONSHORE

Water is a key input for our hydraulic fracturing operations and is therefore critical to maintaining our onshore production targets. To help ensure our water use is sustainable, we have a comprehensive water management policy and strategy that addresses planning and forecasting, water sourcing, treatment, storage, recovery and recycling, permitting and optimization.

Water Management Policy
Our recently formalized onshore Water Management Policy outlines our commitment to reduce consumption of fresh water and conduct responsible water management practices. Our policy focuses on:

- Reducing our impact and demand on the local freshwater sources
- Complying with regulations and standards
- Protecting the environment and the diversity of plant and animal life while minimizing the impact of our operations
- Deploying new treatment technologies to our water management process
- Continually expanding our water infrastructure network
- Tracking and reporting water metrics to drive transparency, learnings, optimization and future planning

Water Management Strategy and Risk Management
Our water management strategy provides the philosophy and framework for how we identify and manage short-term and long-term needs, develop solutions and optimize our programs. Our Vice President, Drilling and Completions, is responsible for

Water Definitions

We have adopted the following definitions for our internal and external reporting purposes, based on SASB and Ipieca's guidance.

Fresh Water – Defined according to the local statutes and regulations where we operate

- In Texas, the Railroad Commission's Groundwater Advisory Unit (GAU) defines freshwater zones as generally less than 1,000 mg/L total dissolved solids (TDS). This is consistent with the US Geological Survey definition.
- In Alberta, the Alberta Energy Regulator (AER) defines fresh water as non-saline water less than or equal to 4,000 mg/L TDS.
- In British Columbia, the Oil and Gas Commission (BCOGC) defines fresh water as non-saline water less than or equal to 4,000 mg/L TDS.

Freshwater sources include surface water (rivers, lakes, streams, surface run-off, etc.) and groundwater.

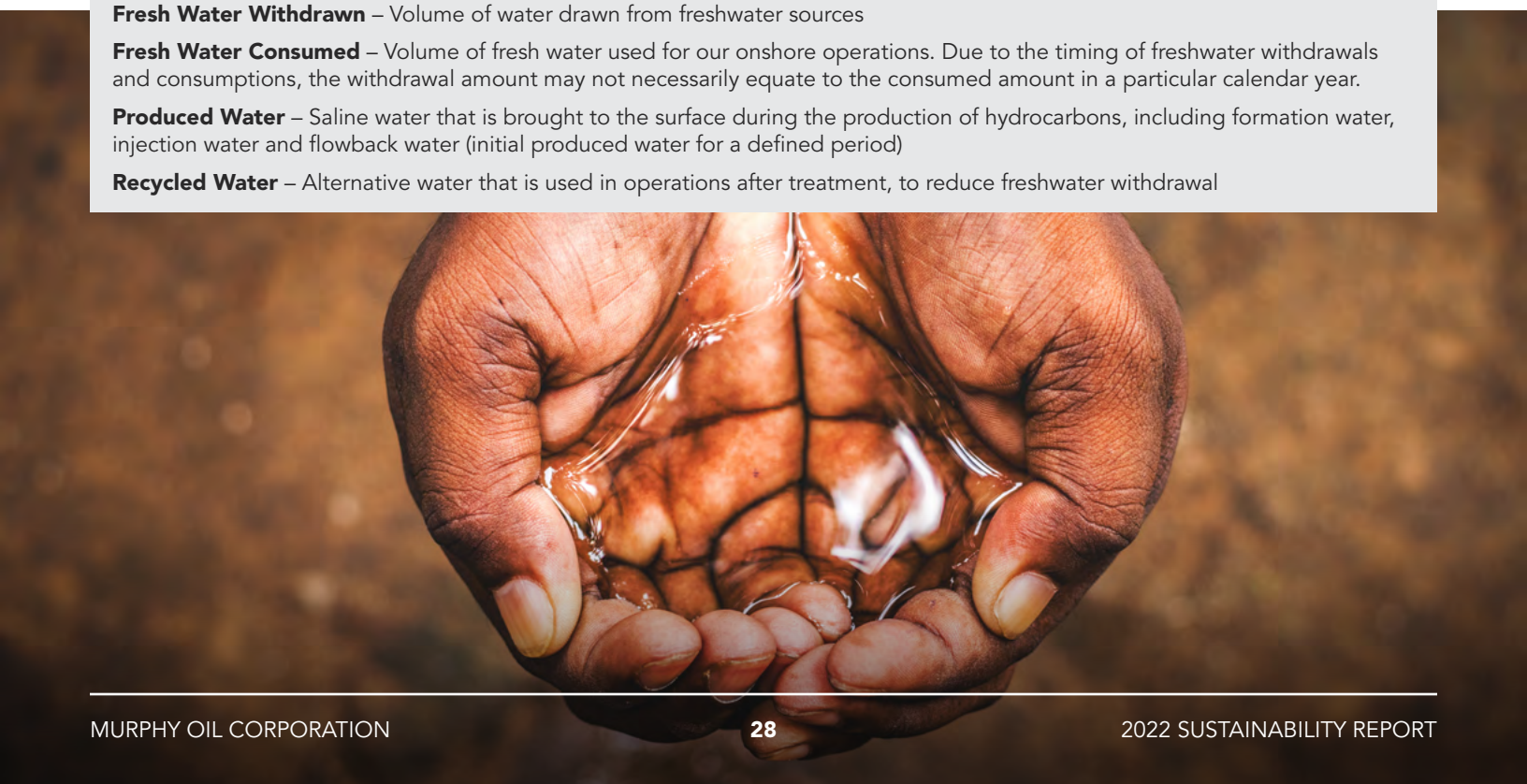
Alternative Water Sources – Water obtained from sources such as saline groundwater, recycled produced water, municipal effluent, and sharing/collaborative opportunities

Fresh Water Withdrawn – Volume of water drawn from freshwater sources

Fresh Water Consumed – Volume of fresh water used for our onshore operations. Due to the timing of freshwater withdrawals and consumptions, the withdrawal amount may not necessarily equate to the consumed amount in a particular calendar year.

Produced Water – Saline water that is brought to the surface during the production of hydrocarbons, including formation water, injection water and flowback water (initial produced water for a defined period)

Recycled Water – Alternative water that is used in operations after treatment, to reduce freshwater withdrawal



the overall water management for the Company. We undertake comprehensive planning to ensure adequate volumes and quality of source water are available when required, with the goal of maximizing water recycling, improving efficient water use and lowering costs. This planning includes managing, storing, treating and transporting produced water when wells are on production.

When considering water sources for our development projects, we assess opportunities to use fresh and alternative water. We consider a range of factors, including ways to reduce freshwater use, preferences of area stakeholders, regional regulations, water stress, physical characteristics, as well as economic and technical feasibility.

Mitigating risks and potential impacts to water resources is a key component of Murphy's water management strategy. Our Water Management team, led by our Senior Water Management Technologist, works closely with the Operations and the Regulatory teams to integrate water-related risks into our operations risk assessments and business strategy and develop mitigative measures. Water challenges and risks can include:

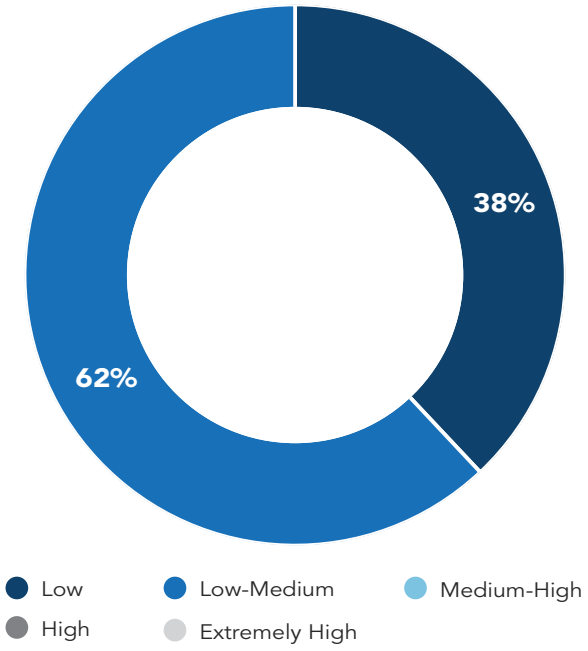
- Access to alternative water and freshwater sources
- Water treatment options
- Storage and conveyance opportunities
- Water forecasting
- Understanding of development plans, seasonality factors and lead times
- Understanding of flowback and produced water rates
- Disposal options, when required

Water Sourcing

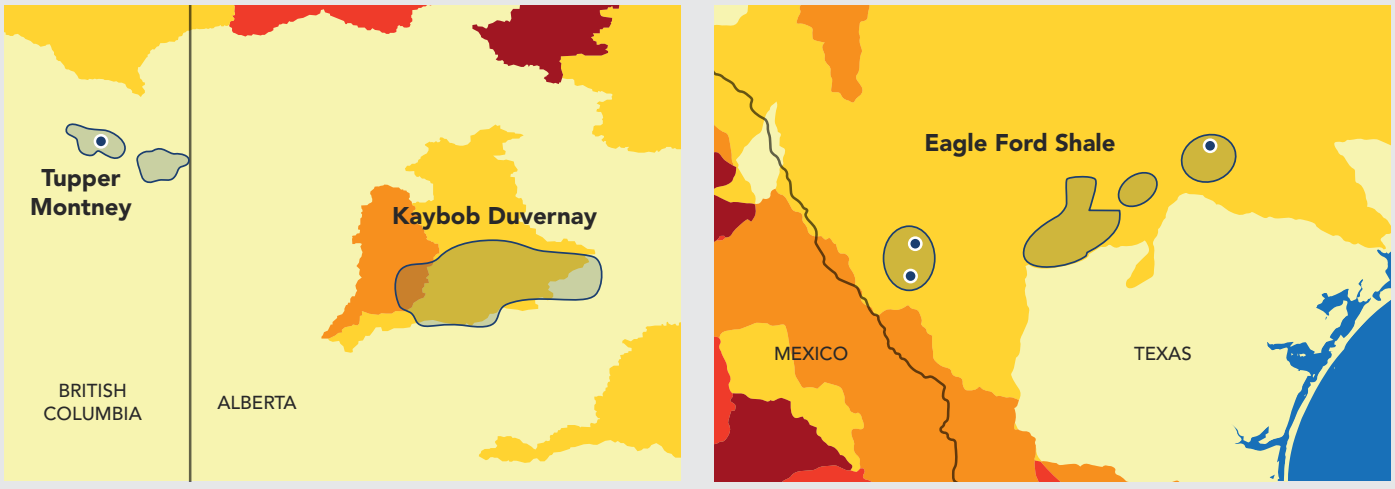
Whenever possible, we seek to use alternative, non-freshwater sources including flowback and produced water, saline groundwater and effluent wastewater. When we have exhausted or are not able to use alternative water sources and freshwater sources are required, we strive to avoid impacts on wetlands, streams, ponds and lakes, waters of the US (WOUS) or US Army Corps of Engineers (USACE) waterbodies, as well as areas with higher water scarcity and wildlife biodiversity.

We use the World Resource Institute's Aqueduct Water Risk Atlas tool to determine baseline overall water risk levels to aid in decision-making processes. While there are shifts season to season, when considered on an annual basis, in 2021, 38% of our fresh water used was sourced from low water risk regions, as defined by the Aqueduct Water Risk Atlas. The remaining 62% of the water was sourced from areas with low-medium water risk, which are mainly in the Eagle Ford Shale, Texas. This analysis is illustrated in the chart and maps below. We have constructed and plan to construct produced water ponds in these low-medium areas to further reduce our freshwater consumption.

2021 Overall Water Risk[9] Analysis



Water Risk Maps[10]



9 As defined in the World Resource Institute's Aqueduct Water Risk Atlas tool.
10 Source: World Resource Institute's Aqueduct Water Risk Atlas tool and Murphy internal.

Before any fresh water can be withdrawn and used for our operations, including when we may be near or within critical habitat or high biodiversity value areas, we must secure an approval from the local regulatory or governmental agency. We work with trained natural resource specialists to conduct environmental site assessments, including assessing the volume and timing of water flow required for proper functioning of the local aquatic ecosystem when required for water permit applications. We also conduct other precautionary measures as required, such as adhering to riparian habitat and wildlife setbacks and timelines.

In 2021, we worked with water disposal vendors to develop an agreement for us to use third-party produced water that would otherwise be sent to a disposal well, resulting in reduced need for freshwater. These vendors have pipeline connections to our ponds and facilities. We are also in discussions with local city districts to use effluent water and have had success with produced water sharing opportunities with other operators in and around our operating areas.

Water Management Networks

Water management networks allow us to strategically withdraw and impound water volumes necessary to support operational activities. These networks include ponds (fresh water and produced water), pipelines and facilities such as tanks and filters.

In the **Eagle Ford Shale**, Texas, resource play, a hybrid reservoir infrastructure network, with more than 40 fresh/produced water reservoirs, allows us to store water in preparation for future operations, and serves to capture water from frac flowback and production operations once wells are online. We also have an above-ground pipeline system and access to groundwater wells and surface water in our key areas of operation. In 2021, we invested capital to optimize our facilities and produced water ponds, allowing larger volumes of production water for storage and reuse rather than trucking the water off to disposal. Murphy plans to construct a new pond annually to increase the recycled volumes, reduce dependence on fresh water, and save costs.

In the **Tupper Montney**, Canada, resource play, we operate two discrete water infrastructure networks, a 472,000 BBL produced water pond and a 1.25 million-BBL freshwater pond. Approximately 59 miles of water pipeline supports the saline reservoir by allowing direct displacement, storage and withdrawal without the need for trucking or third-party disposal. This infrastructure reduces our demand on local freshwater sources and substantially reduces the number of trucks needed to support day-to-day operations. Our produced water network allows us to capture up to 100% of the water from frac flowback and production operations for storage and recycling.

In the **Kaybob Duvernay**, Canada, resource play, a unique area posing unique logistical challenges, Murphy invested in a 22-mile freshwater pipeline and reservoir infrastructure in 2019 and 2020. Reducing our operational footprint across the Kaybob East and Two Creeks fields enables us to strategically withdraw fresh water during high-flow periods for impoundment, staging and future use during low-flow periods. The reservoirs also allow us to operate and impound groundwater when local surface water sources are not available. We continue to evaluate solutions to increase recycled water utilization in the area by working with other operators and third-party services.

DO RIGHT ALWAYS

Predicting High Flow Periods in Canada

In the Kaybob Duvernay and Tupper Montney resource plays in Canada, withdrawing and impounding water volumes for operations occur during water-rich or high-water flow during spring, when streams rise and have higher flow rates as a result of snowmelt. Withdrawing the fresh water required during the high flow periods reduces the chance of negatively affecting the environmental flow needs of downstream aquatic ecosystems, maintains available free water allocation for other local area water users and decreases the potential of needing to withdraw water at times of stress or drought where access to water may be restricted.

Murphy actively monitors our fresh water sources with automated lake hydrometric stations and river monitoring aids, both of which help us predict the high-flow periods for long- and short-term forecasting. Fluctuations in moisture levels year-over-year, and the potential impacts of climate change on water resources, make it increasingly necessary to understand the impact on freshwater availability.

Automated lake hydrometric stations record water level, oxygen saturation and water temperature. These stations are monitored electronically, which ensures data integrity and makes data analysis more efficient.

Additionally, rivers and streams are monitored by a third party to assess fish habitat, fish-screen sizing and placement and river flow conditions. They also monitor flow rates weekly to bi-weekly while withdrawing, to ensure compliance.

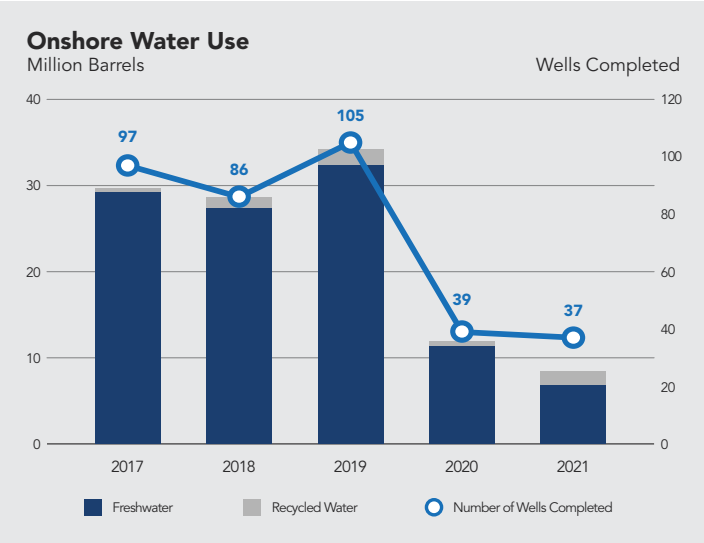
In the future, we plan to expand the scope of the program to include local and regional precipitation and snowpack, which will provide data trends to predict possible drought or high moisture levels.

Produced Water Pond and Facility
in Tupper Montney, British Columbia

Water Consumption

We always prioritize using non-freshwater when possible. However, at some of Murphy's locations, storage and conveyance restrictions limit our ability to reuse flowback and produced water. Similarly, consuming alternative water types can be dependent on achievable treatment quality, water compatibility, local regulations, geography and hydraulic fracturing activity levels, scheduling and partner water-sharing arrangements, necessitating a unique approach to water management within each of our different operating areas.

In 2021, we completed a total of 37 wells, 23 in Eagle Ford Shale, 14 in Tupper Montney and zero wells in Kaybob Duvernay; this is similar to our overall activity levels in 2020. The percentage of recycled water to total water consumed increased from 4% in 2020 to 17% in 2021, which is the highest annual recycling performance achieved in our corporate history. We have continued to lower our average water use per stage across our North America operations, while maintaining or improving well performance. In 2021, 15% of the flowback and produced water generated was recycled, compared to 9% in 2020. We continue to explore opportunities and technologies to support efforts to increase our recycling ratio.

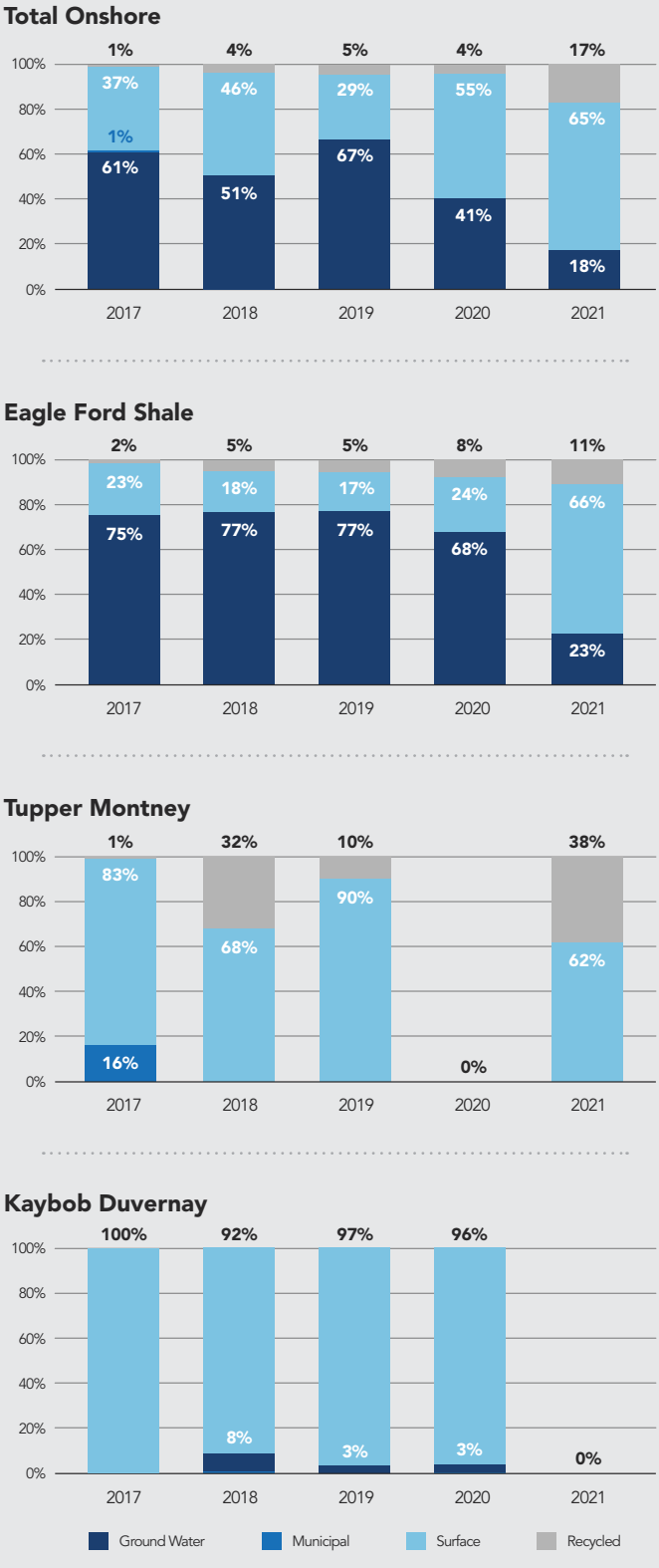


In the **Eagle Ford Shale**, we have increased the recycled volumes to 11% in 2021 from 8% in 2020. The majority of our operations in 2021 were in close proximity to the San Antonio River, allowing us to use more surface water while decreasing the overall ground water use.

In **Tupper Montney**, we had no completion operations in 2020, resulting in produced water stored for future use. As a result of this large availability of recycled water, we increased our produced water use to 38% in 2021, the highest performance achieved since development of the asset began.

In **Kaybob Duvernay**, due to its unique logistical and regulatory challenges, our ability to reuse significant volumes of alternative water is constrained. In response, we constructed two large freshwater reservoirs in 2019 and 2020, to minimize the risk of not having an adequate supply of freshwater sources during low-flow periods. This helps us to limit the local environmental impact until such time that Murphy can reuse larger quantities of alternative water. In 2021, we did not have any completion activities.

Water Use Balance



Groundwater Quality

Rigorous protection of groundwater quality is an important element of our approach to water management. Murphy monitors groundwater in and around our Tupper Montney saline pond in accordance with regulatory requirements. We have installed ground water monitoring wells around the perimeter of the pond and take water samples quarterly. The water is analyzed against the baseline samples to ensure there have been no changes in the quality of the groundwater.

Though it is not a regulatory requirement to actively monitor groundwater quality in connection with hydraulic fracturing, we proactively sample landowners' groundwater wells prior to completions if the water wells are within proximity to the pad being completed. These baseline samples prior to the completion are sent for analysis and stored for future reference and analysis.

SHARE OPENLY AND ACCURATELY

Onshore Water Management App

We continue to evolve and enhance the water management software application, which we first developed for our Tupper Montney asset in 2019. Today, the app supports our entire onshore water operations in the US and Canada with real-time monitoring, reporting and alerts. Features include:

- Tracking of produced water pond leak detection volumes, with alerts sent out if the leak detection volumes are over the set threshold. This allows Murphy to act quickly and activate the Emergency Response Plan to drain the pond.
- Tracking of daily and monthly water pond volume and inspections. This leads to improvements in the quality of the pond volume measurements and inspections.
- Tracking each pond's inventory in tabular and visual formats
- Ability to perform data analytics
- Recording of produced and freshwater volumes in and out of the pond for accurate forecasting purposes, including water volume composition (i.e., groundwater, municipal water, surface water and recycled water)
- Calculating the ratio of produced water to freshwater consumption for each stage of a completion
- Live dashboard that anyone within the Company with access can view
- Providing auditable data trail and storing all data for automated reporting to our sustainability reporting data system

OFFSHORE

Our **Gulf of Mexico** business does not use fresh water for oil and natural gas production. Water uses are for functions typical to marine environments, including ballast systems, machinery cooling and potable water. All water provided to facilities is sourced from seawater and is either untreated or treated with metal ions.

Potable water for hygiene and galley use is generated through reverse osmosis, and then returned to the sea through overboard discharges, with regular monitoring for low oil content and toxicity to ensure it has no impact on aquatic environments. When discharging water offshore, we comply with the National Pollutant Discharge Elimination System (NPDES), managed and regulated by the EPA.

WATER-RELATED INDUSTRY AND MULTISTAKEHOLDER COLLABORATIONS

Murphy belongs to and is an active participant in several stakeholder and industry initiatives that aim, in part, to mitigate water risks. These groups include the Offshore Operators Committee (OOC) Water Subcommittee, Montney Water Operators Group (MWOG), Fox Creek Operators Group (FCOG) Water Management Sub-Committee, Kiskatinaw River Users Group, Ipieca Water Working Group, and the South Texas Energy & Economic Roundtable (STEER) Water Committee. These initiatives provide a forum to allow exploration and production companies to work together, cooperate and facilitate on key water issues, including responsible development through water sharing, alternative non-freshwater source research and development, infrastructure sharing and best operating practice discussions.

BIODIVERSITY PROTECTION

As stewards of the environment, we comply with all local biodiversity laws and regulations in the areas where we operate, and we currently operate in areas with very stringent biodiversity regulations. We refrain from operating in protected areas such as those designated by UNESCO World Heritage, the Ramsar Convention on Wetlands and US Fish and Wildlife Service. By SASB definitions, only 1% of our proved reserves are in or near sites with protected conservation status or endangered species habitat. In these High Conservation Value areas where we operate, we follow all rules and regulations as defined by local, state and federal regulations. We are committed to protecting biodiversity at all stages of project lifecycles. From planning through execution and on to project decommissioning, all teams collaborate to minimize project footprint and impacts to local biodiversity.

Our Health, Safety and Environmental (HSE) Department is responsible for the oversight and management of biodiversity and site impact assessments for both our offshore and onshore operations. At the end of every project, the HSE team is in charge of implementing a decommissioning, remediation and restoration standard, which is part of the Murphy HSE Management System and our policies. As relevant to their work, employees are trained on environmental protection, including information on biodiversity and cultural/heritage sensitivities as defined by the IUCN and other international conservation groups.

LIFECYCLE APPROACH TO BIODIVERSITY PROTECTION

Our overall approach to biodiversity protection and conservation – which is aligned with the mitigation hierarchy – is summarized below:

- **Avoid** – In pre-operations assessments, we evaluate potential impacts and plan for mitigative action.
- **Minimize** – When impacts cannot be avoided, we design our activities to minimize the effects.
- **Restore** – We work diligently to remediate an area so that it is brought back to its original condition as reasonably as practical.

A more detailed description of our approach at various stages of operations is outlined below.

Pre-Operations Assessments and Mitigation Planning

- Pre-disturbance biodiversity analyses are conducted by experts from multiple disciplines to ensure potential environmental, ecological and archaeological impacts are assessed and addressed.
- Project areas are demarcated in mapping databases for use by industry. Mapped project areas are cross-referenced against public databases of biodiversity and cultural information to create a Regulatory Site Assessment (RSA), which determines if any state, provincial or federal government-established areas of High Conservation Value of concern exist in the proposed project area.
- Once this public information is processed, an Environmental Site Assessment (ESA) is drafted by conducting an on-site inspection to verify the public data and determine if there are any other concerns related to ecology, environmental geology, hydrology and urban impacts not provided in the public data.
- The RSA and ESA identify areas of concern and include a mitigation plan to avoid, minimize or mitigate impacts. Mitigation plans may include environmental monitoring devices, sharing the use of existing third-party owned infrastructure instead of impacting the surface by building new infrastructure, extending project timelines to account for migratory species, and relocating projects when mitigation efforts are not possible.
- For offshore operations, the HSE Regulatory team identifies critical habitats, known as Marine Protected Areas, and includes them on the no-activity zone watch list. In addition to the Marine Protected Areas, planned oil and natural gas projects undertake extensive Archaeological and Geohazard (A&G) assessments prior to the design and installation of any subsea equipment and facilities for oil and natural gas development. These assessments are used to plan infrastructure layouts to avoid any sensitive areas identified.

Operations

- Prior to the construction of a project, locations are screened for wildlife presence. If wildlife is detected, a local expert is brought to the location to properly identify the wildlife species and indicate the proper mitigation methods. These methods generally focus on avoidance of the area entirely until nesting, mating or hibernation periods have concluded.
- Once a project footprint has been reviewed and no wildlife has been identified, project construction may commence. We continue to surveil surrounding wildlife from the beginning stages of construction until a project is closed and/or decommissioned, to help keep wildlife disturbance to a minimum while protecting the safety of field employees.
- While conducting operations, the project footprint is continuously monitored for impacts that are not intended or outside project scope. Should impacts be identified, the impacts are handled pursuant to site closure procedures rooted in local, state and federal law.
- Well pad sites and pipelines are built with containment berms and erosion protection to contain materials on-site and help prevent anything from our operations from contacting contiguous lands.
- If a site becomes saturated by either rain or snowfall, runoff liquids are tested on-site before they are allowed to drain off-site through pre-installed drainage, which is plumbed through the berm.

Site Closure, Decommissioning and Restoration

- For all projects, we conduct extensive sampling and testing of the soil to establish its condition prior to making any impact. We catalogue the samples for each site and review them upon site closure to help us remediate each site back to its original condition, as reasonably practical.
- The HSE department, led by its Vice President, Health, Safety and Environmental, manages the closure of each impacted area to ensure our remediation goals are met and that all reporting documentation is properly finalized for governmental purposes and for landowner reporting.
- Remediation goals include a commitment to rehabilitate land to minimize negative impacts and maximize benefits, community involvement in closure planning, reporting on closure plan implementation and site rehabilitation, and to implement measures to address or avoid significant environmental or landscape impacts.
- Along with remediation procedures for each impacted site, there is an annual review to ensure sufficient funds are in place to cover closure and rehabilitation for all operational areas.

PROACTIVE COMMUNITY ENGAGEMENT ON BIODIVERSITY AND SITE IMPACTS

We involve the surrounding community in our biodiversity assessments, mitigation planning and site closure process. For example, in British Columbia, we notify landowners, local Indigenous Nations, municipalities and regional districts of all closure plans. Additionally, we abide by government consultation requirements with Indigenous communities when seeking permit approvals in British Columbia and Alberta. When local issues arise, we seek a resolution that weaves community concerns into Murphy's Project Reclamation and Closure Strategy, ensuring a unified solution that works for all parties. Community concerns, along with updated government mandates, are an important guide to our physical site remediation and reclamation processes.

We provide a variety of channels for stakeholders to engage with us regarding concerns of biodiversity protection. For example, in Canada, external stakeholder engagement is a required component of permit issuance for all well sites, pipelines and any other facilities. Soils, archaeological, wildlife and vegetation studies are also required as part of the RSA and ESA process. When permit applications are filed, contact information for any stakeholder concerns are provided in the public notification letter. In the US, even though external stakeholder engagement is not always required, Murphy routinely involves its surface stakeholders in the development process to ensure surface land concerns are fairly balanced against ongoing production and development operations.

Biodiversity Concern Reporting

Murphy stakeholders can raise biodiversity concerns or grievances using the following methods:

- **By Phone or Website** – We have a dedicated center to process and document any concerns or comments raised by phone or via the website. The call center refers comments to the Land Department, which is responsible for recording, referring, monitoring and ultimately resolving all queries.
- **Surface Land** – All Murphy landowners are provided with a dedicated surface landman that they can call for any issue. The landman is responsible for ultimate issue resolution.

SPILLS MANAGEMENT

Managing spill risk is a critical element in reducing our environmental impact. Procedures to minimize such incidents are covered by our HSE Policy and HSE Management System, Asset Integrity Management and internal annual targets.

Murphy tracks its environmental releases throughout the year and evaluates the data for preventative measures and continual improvement. Historically, internal targets were set based on the number of spill events in any year, utilizing the International Association of Oil and Gas Producers (IOGP) calculation of hydrocarbon spill events of more than 1 BBL outside secondary containment.

In 2019, we modified the spill metric target used in our annual incentive plan to focus on our overall hydrocarbon spill volumes rather than just the number of events. Based upon a review of peer data, we set our target to drive for favorable performance relative to the industry as a whole.

Thanks to the efforts of our employees, contractors and those performing work at Murphy operations, our spill rate was zero BBL spilled per MMBOE produced for 2021, substantially below our target of 3.2 BBL per MMBOE and better than the IOGP North America 2020 benchmark of 1.6 BBL per MMBOE. This rate is calculated as the total hydrocarbon spill volume of more than 1 BBL outside secondary containment per million barrels of oil equivalent of operated production.

More notably, Murphy has not had an offshore spill greater than 1 BBL since 2003. We remain vigilant to minimize risk across our operations.

0
Offshore Spills Over 1 Barrel Since 2003

3
Years Running Beat IOGP North America Industry Average Spills Rate

0
Barrels Spilled per MMBOE Produced, Surpassing 2021 Spill Target

ASSET INTEGRITY AND PROCESS SAFETY

Asset integrity and process safety are central elements of our HSE Management System. Our Global Asset Integrity and Reliability team continues to focus priorities, increase collaboration across business units and standardize practices and procedures throughout the organization.

ASSET INTEGRITY

Asset Integrity is an engineering discipline managed within the Global Engineering department, headed by the General Manager of Engineering. The team is structured as an international team providing global operational support for our integrity management programs. We plan for and evaluate the integrity of our assets throughout the life cycle from design, construction and operations to abandonment. Qualified and competent personnel, certified to international standards such as the American Petroleum Institute (API) 510 – Pressure Vessel Inspector, API 570 – Piping Inspector and National Board Pressure Equipment Inspector, perform all field inspections. Data from these inspections is analyzed by integrity engineers.

Our Integrity Management Programs are part of a training curriculum for Operations, Maintenance, Engineering and Procurement functions. We use a variety of metrics and key performance indicators to determine the effectiveness of our programs. Each asset has created integrity management programs that detail requirements for the management and review of pressure equipment, pressure piping, pipelines and structural integrity.

In many cases, our requirements exceed regulatory requirements. The effectiveness of our approach is illustrated by the results of third-party and regulatory audits of our programs. For example, in Canada, we have undergone regulatory audits, and since 2018, we have received grades consistently above 90% on our asset integrity management programs – including in the most recent regulatory audits of our Canadian operations, conducted in 2021.

We emphasize risk-based inspections. We implement digital information systems to improve awareness of risk and the evaluation of inspection data across our operations. For example, we continue to improve on our use of a commercial pipeline risk-assessment tool, which houses risk assessments for our entire North America onshore pipeline system. Murphy was the first operator in the industry to include US onshore pipelines, in this tool. The pipeline risk-assessment tool runs algorithms on approximately 750 miles of Murphy's operated active pipelines, which are updated monthly with the latest operating conditions. Through these assessments, we identify areas of higher risk and are able to run targeted projects to mitigate risks. These projects include construction activities as well as improved maintenance programs such as optimized pigging programs, in-line inspections (ILI), verification digs, chemical programs and coupon programs.

In the last few years, we have enhanced ILIs of our North America onshore pipeline systems. We have completed baseline ILIs for approximately 90% of all Canadian production pipelines older than five years. In Eagle Ford Shale, we completed 29 ILIs from 2019 to year-end 2021, with another 19 scheduled for 2022. Locations are determined through risk assessment and priority is given to those with higher risk. We use the results from these ILIs to support continuous improvement of our integrity programs, to help us respond more effectively to the dynamic nature of our operations.

We regularly monitor asset integrity factors for other equipment, including pressure piping, pressure equipment, offshore handrails, grating, riser and structural integrity, through visual assessment, thickness measurement programs and anomaly repair strategies. We monitor approximately 120,000 condition monitoring locations for approximately 2,200 pressure vessels and their associated piping across all assets. Inspection data is uploaded into a database that is reviewed regularly with operations, maintenance, reliability and facilities engineering to support continuous improvement of our integrity programs.

In addition to conducting inspections on defined schedules, we also continuously monitor our systems for abnormal conditions. The Remote Operations Center (ROC) continuously monitors our operations, beyond just pipelines, for changes in pressure, flow shutdowns or alarms, in order to dispatch operations personnel to intervene when necessary. Equipment, pipelines and well pads with a higher risk rank and criticality are prioritized for ongoing maintenance, operator checks and inspections. When necessary, components are proactively replaced to avoid failure and loss of primary containment.

PROCESS SAFETY

In 2018, we kicked off a multidisciplinary effort to create a focused and structured approach for process safety event tracking and overall improvement, through defined key performance indicators. This has included working to better understand and mitigate risks in our operations across all assets, modeling our program on the American Petroleum Institute's Recommended Practice 754 (API RP 754).

Process Safety Events (PSE) are tracked and ranked by severity following guidance from API RP 754. Tier 1 through Tier 3 events are categorized as lagging indicators, which we log in our incident management database. We also track near-misses (Tier 4 events) as a leading indicator, which are summarized in data dashboards. All PSE 1 and 2 events are investigated for root cause, and we implement corrective actions to avoid repeat incidents. When multiple low-consequence and PSE 3 events occur, we may perform root-cause analysis to identify potential underlying systemic issues that could result in higher severity incidents. The data collected from the Process Safety efforts are reviewed in the HSE Steering Committee meetings with senior management and also reviewed in field-level safety meetings.

Key highlights of our process safety efforts include:

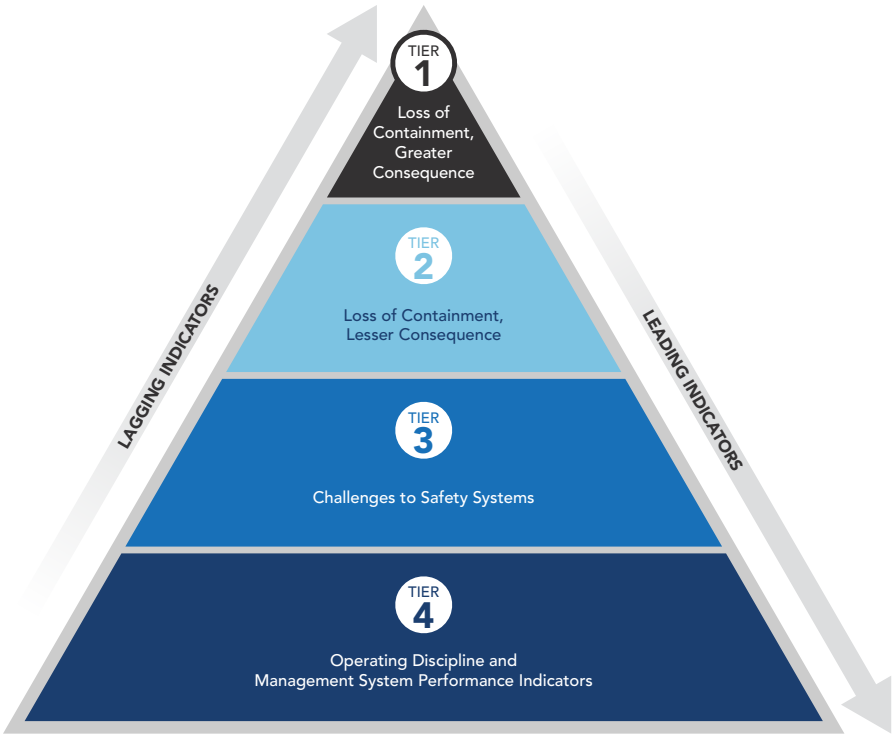
- We developed a **Computer-Based Training** that details Murphy's Process Safety Program for all personnel who interact with Operations. This program is based on API RP 754.
- We implemented an **Alarm Management Dashboard** that allows us to increase performance and safety by improving our response time to rationalized alarms. It prioritizes maintenance issues by identifying repetitive processes that can lead to process safety events, identifying nuisance alarms, and tracking the alarms in place for improvement over time. We now have quantitative data for auditing and comparing to standards, and using benchmarks Engineering Equipment and Materials Users Association (EEMUA) 191 to qualify our system's current state.

- Established a **Management of Change (MOC) Dashboard** that allows for more detailed scrutiny of which MOCs are in evaluation, collaboration, approval and implementation stages. This dashboard has improved start-to-closeout timing and has improved overall adherence to our management of change program.

These data-focused efforts allow us to specifically target reduction in elements that pose higher risk.

While the number of Tier 1 events increased in 2021 from 2020, the overall environmental impact (the production fluids release to the atmosphere) has been reduced, with zero IOGP spills occurring in 2021.

Process Safety Indicator Pyramid
from American Petroleum Institute's Recommended Practice 754



Process Safety Events (PSE)	2018	2019	2020	2021
PSE Tier 1[11] Count	9	5	3	5
PSE Tier 1[11] Rate, per 200,000 work hours	0.15	0.10	0.12	0.20

SUBSEA LEAK DETECTION

The subsea leak detection (SSLD) program began in 2018 as part of our "Think Leak First" philosophy, designed to empower our staff to "Own It" and use stop-work or stop-production authority where required. All subsea assets are reviewed on a case-by-case basis, and the appropriate leak detection methodology was implemented and put into operation. Leak detection methodologies implemented include visual surveillance, flowline hydrostatic monitoring, rate of change (ROC), conditional rate of change (C-ROC) and modified mass in mass out (MMIMO). All offshore production operations staff have been trained on SSLD, which is now included as part of our competency program.

Murphy uses a risk assessment methodology to manage the integrity of the subsea system, including risers, flowlines, subsea equipment and subsea export pipelines, for all the operated assets in the Gulf of Mexico.

11 Per the API RP 754 and IOGP Report 456 definition.

WELL INTEGRITY

Effective well management and well integrity are critical to the safety, environmental and operational performance of our operations. It is the responsibility of every operations manager and employee to maintain well integrity while managing our onshore and offshore wells. We ensure that our wells are designed, drilled, completed and maintained to high and consistent standards, complying with all relevant laws and regulations, and compatible with the balanced economic and environmental needs of the community.

The Murphy Worldwide Drilling and Well Operations Policy Manual outlines the relevant policies, standards and practices for design, risk management, installation, testing verification and operational procedure management. This Policy Manual underpins our ability to meet our HSE goals; remain in compliance with our HSE Management System; and prevent incidents that could have a negative safety, environmental or economic impact. We review it periodically to assess changes and continuous improvement opportunities.

Our well integrity guidelines, policies and procedures are aligned with best practices and exceed regulation standards around the world where we operate. This includes best practices for barrier management, as well as the barrier between the formation and the environment throughout the life cycle of a well. Our Barrier Policy includes specifications for barrier types, barrier verification and independence, well life cycle, barrier hazard assessment and well abandonment.

ENGINEERING DESIGN

We begin engineering well design long before a well is permitted. Geologists and engineers evaluate formation depths, pore pressures and rock fracture gradients, to site and design wells in ways that will prevent loss of well control and, in the case of onshore wells, ensure the protection of freshwater aquifers. Key engineering and design best practices that we follow include:

- **Install multiple isolation barriers** – We place steel casing and then pump cement to protect the steel and provide multiple isolation barriers for each steel casing run in the well.
- **Identify and mitigate potential drilling hazards** – We identify zones with potential drilling hazards (such as hydrogen sulfide, carbon dioxide or high pressure) and use American National Standards Institute/National Association of Corrosion Engineers (ANSI/NACE) standards to select proper materials and chemicals to ensure integrity of the wellbore and surface equipment to prevent corrosion for the life of the well.
- **Implement careful casing design and testing** – When developing casing designs, we take into account considerations such as temperature, pressure, bending, cementing, running casing, shock loading, pressure testing, lost circulation, buckling and well testing loads. We apply additional safety factors for various load conditions, including burst, collapse, tension, compression and triaxial stresses.

DRILLING AND COMPLETIONS

As part of the completions process, physical isolation devices are put in place to ensure that activities are executed in a flow-controlled and safe manner. Murphy requires multiple isolation devices, all of which are tested and capable of operating both independently and simultaneously throughout the lifecycle of a well, including blowout preventers, wellhead, casing, cement, packers and bridge plugs. Before completions, pressure tests are performed to ensure integrity of all the casing strings installed. During completion pumping operations, pressures are monitored to inspect potential communication between casing strings and existing offset wells. Additionally, the onshore Remote Operations Center (ROC) monitors dashboards for offset frac mitigation while hydraulic fracturing operations are ongoing.

Our engineers participate in quarterly Gulf of Mexico deepwater drilling and completions operators group meetings with other operators, to share lessons learned and best practices for deepwater well operations. Industry lessons learned and best practices are referenced when the Murphy Worldwide Drilling Policy is reviewed, to support continuous improvement. The engineers work with vendors to identify and analyze technological and operational improvement opportunities for application to our assets/projects.

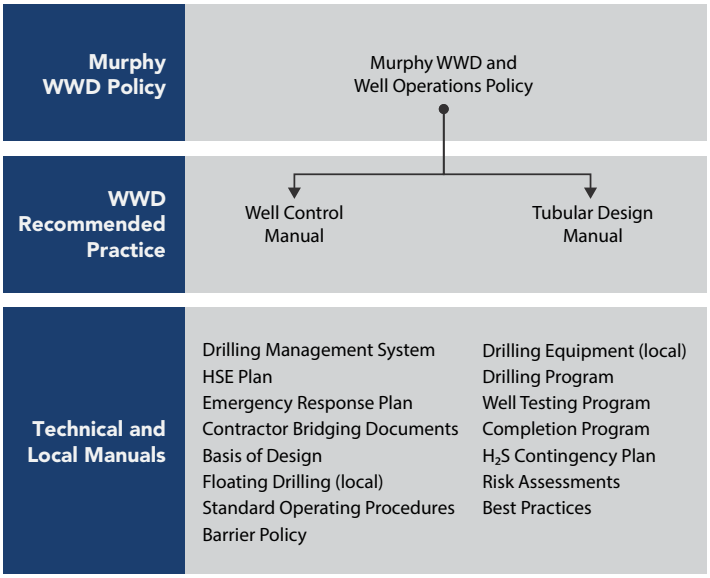
Our vendor selection process includes criteria for environmental and safety performance; we choose to work with contractors that support our sustainability goals. We also contract with drilling rig quality assurance audit companies, whose highly skilled consultants create value by advising on HSE risk mitigation and the optimization of rig equipment performance. Their goal is to assist clients in achieving their objectives of working safely with no incidents, accidents or injuries and recognizing issues that will reduce nonproductive time, while lowering overall cost.

PRODUCTION OPERATIONS

All well performance data is centrally stored in WellView®, a drilling and well operations data management software program, to maintain downhole well records. Once an onshore well is brought online, its parameters, such as flow and pressures, can be monitored remotely 24/7 in our ROC.

We continuously monitor offshore wells to ensure all wellbore parameters stay within engineered wellbore design limits. We adhere to all prescribed regulatory testing, which includes surface-controlled subsurface safety valves, underwater safety valves and boarding shut-down valves. All of these regulated tests are verified by relevant government organizations.

Worldwide Drilling (WWD) and Well Operations Policy Hierarchy



WELL ABANDONMENT

Murphy performs well abandonments according to federal or state laws and regulations. We work to ensure downhole isolation of hydrocarbon and sulfur zones, protection of any freshwater aquifers, and to prevent migration of formation fluids within the wellbore or to the seafloor.

A significant effort in our onshore business is the review of reusing or expanding old pad sites in order to place new future wells. This has been successfully done in Canada and is being reviewed in our Eagle Ford Shale operations in order to minimize future land use and impacts.

Murphy undergoes yearly reviews of lease statuses and land maintenance requirements. We include funding each year in our Long Range Plan and Budget to reclaim certain pad and road sites when applicable, on a yearly basis. During the Civil Construction building phase of pads and the reclamation process, we use biodegradable materials so that over time the natural landscape is maintained, and we use local native soils and vegetation for regrowth to maintain local biological profile.

During recent Eagle Ford Shale Reclamation efforts in 2020, we were able to reuse reclaimed pad site material on surrounding roads for maintenance purposes, thus reducing the amount of new material needed from third-party sources.

We record a liability for asset retirement obligations and also include these obligations in our Long Range Plan.

INDUSTRY COLLABORATION ON WELL INTEGRITY

In 2018, Murphy participated in the update of the Well Control/ BOP Industry Standard (API Standard 53). Representatives sat on various committees and provided engineering and operational expertise and advice to API and other industry associations.

We are members of the Center for Offshore Safety (COS), an industry-led initiative to promote continuous safety improvement for offshore drilling, completions and operations through effective leadership, communication, teamwork, disciplined management systems and independent third-party auditing and certification. COS draws on expertise and input from the US oil and natural gas offshore industry and the regulatory community.

CHEMICAL STEWARDSHIP

ONSHORE

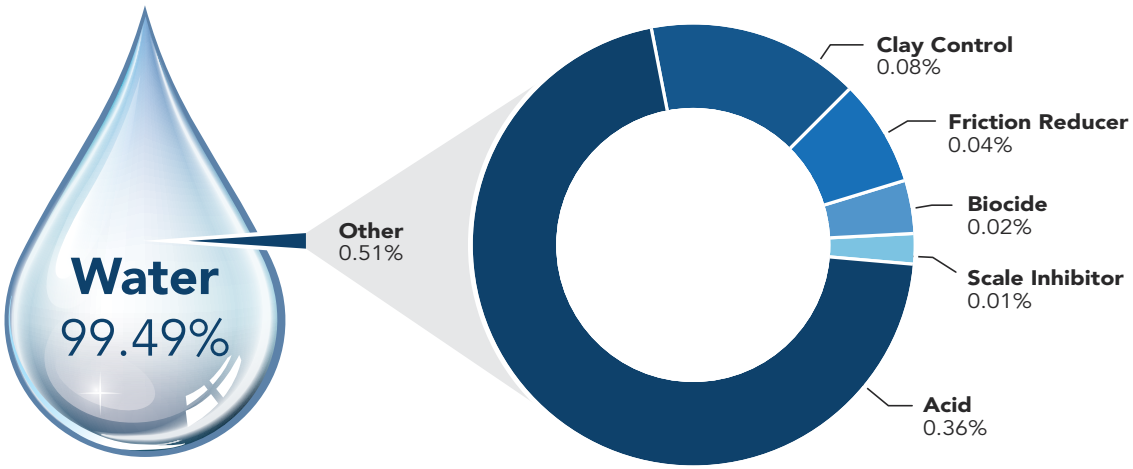
Approximately 99.5% of the frac fluid that Murphy pumps down a well on a typical onshore unconventional hydraulic fracturing job is composed of water and sand, with just 0.5% other additives.

We do not pump any fracturing fluids downhole that contain diesels, heavy metals like arsenic, cadmium, chromium, lead or mercury, or harmful ingredients. We do not store additive chemicals on location. Instead, they are blended in real time on-site as needed, and Safety Data Sheets (SDS) are located at Murphy work sites and available for all personnel. SDS include physical, health and environmental hazards, as well as protective measures for proper handling, storing and transportation of each chemical.

In accordance with US and Canadian regulatory bodies, we utilize and require our pumping service providers to utilize **FracFocus**, a US online chemical disclosure registry, to publicly disclose the chemicals used to hydraulically fracture our unconventional wells, while protecting trade secrets and confidential information.

FracFocus Chemical Disclosure Registry

Average Onshore Hydraulic Fracturing Fluid Composition



OFFSHORE

In our offshore operations, our optimized chemical usage reduces risks associated with the transportation of materials, as well as transportation-related emissions. In addition, we require chemical vendors to commit to improvements in sustainability and safety. We are also working with vendors on new product development to improve efficiencies to reduce overall usage. We conduct research into new sustainable chemistries and into implementing short- and long-term sustainability and environmental science-based targets, including reduction in emissions and waste.

Key improvements we have achieved recently include:

- Through continued digitization and automation in the chemical treatment program, we have been able to more closely monitor and optimize chemical usage. This allows for targeted rightsizing of pump infrastructure and the identification of operational strategies to optimize the need for chemical treatment. The process, along with dedicated technical optimization efforts, facilitated the average reduction in facility chemicals of 19% from 2021 to 2020 at Murphy's operated facilities.
- Our Delta House Facility in the Gulf of Mexico completed a comprehensive optimization program for the topsides defoamer and demulsifier chemical usage, resulting in a 25% reduction in total chemical usage in 2021 from 2020.
- Our Front Runner and Medusa facilities were able to optimize defoamer usage, resulting in a 50% reduction in chemical usage in 2021 from 2020.
- Our Delta House Facility continued with technology trials and optimization efforts for produced water treatment, resulting in a 30% reduction in non-regenerable filter media usage in 2021 from 2020.

SEISMICITY

ONSHORE

Induced seismicity refers to earthquakes that are caused by human activity. Although the risk and occurrence are generally low, induced seismicity can be associated with hydraulic fracturing operations and wastewater disposal sites in unconventional oil and natural gas fields.

We actively assess the potential for these risks, monitor for anomalous induced seismicity and mitigate in full compliance with regulatory agency standards. Key regulators with which we collaborate on seismicity include:

- **Alberta Energy Regulator (AER)** – Kaybob Duvernay operations are governed by Subsurface Order No. 2.
- **British Columbia Oil and Gas Commission (BCOGC)** – Tupper Montney operations are conducted outside the BCOGC induced seismicity traffic light protocol areas.
- **Texas Railroad Commission (Texas RRC)** – Although the Texas RRC has no induced seismicity regulations for the Eagle Ford Shale, Murphy has voluntarily adopted the Texas Oil & Gas Association (TXOGA) recommended best practices initiative on induced seismicity.

Murphy has developed a robust Induced Seismicity Protocol to manage induced seismicity and ensure continued safe and responsible operations for the Kaybob Duvernay, where anomalous induced seismicity occurs. The operational procedures documented in the protocol are updated for each pad in the Kaybob Duvernay and applied more regionally in the Tupper Montney and Eagle Ford Shale.

Murphy is also an active participant in industry associations that support knowledge sharing and induced seismicity research. In Canada, Murphy is aligned with the Canadian Association of Petroleum Producers (CAPP) and participates in its induced seismicity working groups for both the Kaybob Duvernay and Tupper Montney. In Texas, Murphy is one of the founding members of the Eagle Ford Induced Seismicity Working Group. Murphy also supports three-way collaboration among industry, regulatory and academia participants, which furthers the understanding of potential causes and mitigation steps to manage induced seismicity.

OFFSHORE

Murphy undertakes a variety of offshore seismic surveys for phenomena such as shallow drilling hazards, archaeological surveys, pipeline route surveys and hydrocarbon exploration. These surveys are undertaken by specialist contractors, utilizing advanced technology to survey the seafloor and thousands of feet beneath it. Murphy and our contractors adhere to relevant government regulations and industry best practices wherever we operate globally. We also liaise with key stakeholders including fisheries, shipping, marine authorities and recreational vessels, for safe operations and protection of our oceans and critical habitat.

Induced Seismicity Protocol

We follow a three-part Seismicity Risk Assessment as part of our well planning and drilling management approach:

- **Area-Specific** – Risks are calculated based on historical induced seismicity compiled from public and industry sources.
- **Pre-Operations** – Risks are calculated based on 3D seismic data where available and specific geologic conditions encountered while drilling the well.
- **Frac Operations** – Risk levels are continually evaluated and updated in near-real time based on recorded induced seismicity.

During operations, we continue to address potential seismicity employing various means, such as:

- **Monitoring Plan** – Seismic monitoring provides 24/7 coverage during frac operations, and allows detection and location of anomalous induced seismicity.
- **Communication Plan** – We have a process in place to manage efficient communication between operations staff and industry, including regulators as required.
- **Completions Mitigation Plan** – This outlines potential adjustments to the completion program to manage and further reduce or eliminate induced seismicity.

WASTE MANAGEMENT

ONSHORE

All waste generated on our sites, including from our drilling, completions and production operations, is managed in accordance with the jurisdictional laws, regulations, industry best practices and local requirements, as well as Murphy's site-specific waste management plans. A core principle of our plans is the waste hierarchy where we first reuse, then recycle, then recover and finally dispose of waste, where practicable. Waste prevention and reduction at source are Murphy's preferential options and are deployed whenever possible.

During the drilling process, Murphy stores, treats, transports and/or disposes of generated waste in ways that protect the environment and are based on waste management best practices and principles. While drilling, we simultaneously separate, or "strip," fluids from the mud/drill cutting matrix to be reused in the ongoing drilling operation. The fluid can also be stored short term for use on future planned wells on the same multi-well pad. Fluid capture and reuse reduces the volume of base fluid used to drill wells that must be "made up" or added back into the process from well to well, while optimizing the overall well control process. This is commonly referred to as a "closed loop" or "pit-less" drilling system, a system that reduces the overall volume of waste generated and increases the rate of reuse through the use of tanks, screen shakers, centrifuges and vacuum trucks. An ancillary benefit of closed-loop systems is the ability to forgo the need for supporting pits or sumps, directly reducing construction costs, improving safety, reducing environmental impacts and improving overall wellbore economics. Waste streams left over from drilling operations are transported to approved oilfield waste management facilities, where they are treated and disposed of following safety and environmental protocols. We manage every load through waste characterization and classification, manifesting and tracking processes.

Oilfield waste management facilities used by Murphy undergo rigorous initial permitting requirements and adhere to continuous maintenance and reporting obligations in order to maintain their permitting approvals. This includes where they are initially sited, standards of safety, physical design and operations management and record-keeping practices. Murphy maintains an internal approved waste disposal facility list. We pre-screen and audit our preferred facility locations to verify compliance with their permitting approvals under federal, state and local regulations.

OFFSHORE

Waste generated from US Gulf of Mexico and international offshore operations is managed in accordance with multiple regulations, including the Clean Water Act (CWA), National Pollutant Discharge Elimination System (NPDES) and Resource Conservation and Recovery Act (RCRA).

Waste generated from operations is segregated based on the categorization outlined in the federal RCRA regulations. Depending on the components within this material and the process in which they are generated, we manifest and ship these items for onshore disposal as hazardous or nonhazardous. The onshore disposal facilities are audited by Murphy to ensure that correct handling measures are being taken and that disposal is compliant with state and federal regulations.

Drilling and production waste is managed in accordance with NPDES parameters, which include daily visual monitoring and periodic sampling. Compliance with this system is reported quarterly to the EPA.

We use specific synthetic-based drilling fluids that reduce environmental impacts in our offshore drilling operations. These fluids undergo regular testing and certification. In addition, the drill cuttings are processed offshore in order to reduce retention on cuttings prior to overboard discharge. Before discharging to the sea, the estimated synthetic drilling fluid retention on cuttings is verified and recorded, using the analytical method mandated by the EPA.

Food waste from the galley is macerated on the platform or vessel and discharged overboard, in compliance with international regulations under the International Protocol for the Prevention of Pollution from Ships (MARPOL) Protocol. Black water is treated using a marine sanitation device, which is inspected and certified annually in accordance with US Coast Guard regulations. The concentration of oil in discharged bilge water must meet MARPOL standards, which is achieved by using an oil/water separation system prior to discharge.

In 2022, Murphy initiated a pilot program to improve recycling across all of our offshore facilities. The recycling program has already launched on Delta House and the Noble Stanley Lafosse drilling rig and will expand to all of the remaining platforms by the end of the year.

EMBRACE NEW OPPORTUNITIES

Recycling Brine for Drilling Operations

Over the end of 2021 and early 2022, we piloted the recycling of produced brine for the Tupper Montney drilling operations as a viable drilling fluid additive. The pilot was a success, and we subsequently implemented this practice on a recent 10 well pad, resulting in the reuse of approximately 15,000 barrels of produced water rather than purchasing brine. We plan to implement this approach in future drilling operations as standard procedure, where possible.

Using Digital Innovation to Maximize Environmental and Operational Performance

Murphy utilizes predictive analysis, big data and artificial intelligence as part of a technology-based approach to preventing and managing spills, maintaining assets and conducting drilling and completions operations.

For example, we use enhanced computer models and databases to assist in risk-based asset integrity management, along with scheduling proactive maintenance and repairs when recurrent issues are identified. We also use a collection of mobile-based applications, as well as our onshore Remote Operations Center (ROC), to address real-time situations, including remote shutdowns, with operator route optimization.

These applications help us avoid potential incidents and respond more quickly to out-of-usual operating parameters. This allows us to automate field task scheduling and to optimize route scheduling by vehicle GPS tracking. The mobile applications also provide remote troubleshooting assistance and just-in-time training for technicians in the field via Augmented Reality (AR) technology. In addition to improving performance and reducing potential environmental incidents, these systems also reduce emissions and safety risks by minimizing the driving time spent manually checking equipment.

We are also applying big data and technological solutions to optimize our drilling, completions and production processes. For example, we are developing a way to share drilling performance data across multiple rigs to enable real-time optimization, rather than waiting until the wells are drilled. This further enhances our machine learning, which improves predictions and optimizes field development programs, including well targeting and spacing through fiber optics, micro seismic, seismic inversion and fully coupled 3D models. Process improvements are often driven by the need to integrate systems and improve digital maturity for gapless data. We invest significant time and effort to normalize and clean the data, so decision-makers can work with more reliable data. For example, our completions hydraulic fracturing dataset employs fuzzy logic to establish the link between the completions data and other data sources, like geology, drilling and reservoir.

Murphy also works to improve onshore and offshore rig efficiency through technologies such as managed pressure drilling and automated rig technology, which focuses on components such as safety alerts, and more efficient drilling speeds. This enables us to lower maintenance needs and conduct safer operations.

REMOTE OPERATIONS CENTER

Murphy's 24-hour Remote Operations Center (ROC) enables the automatic tracking of key performance indicators and other analytics of our onshore operated production facilities and wells. It also manages task assignments and route optimization with field operators and maintenance through an Integrated Operations Platform (IOP). The centralized location for onshore drilling, completions and well management improves our production, safety and environmental performance by bringing together key information and experts in one location.

The ROC monitors pipeline pressures 24 hours a day, which prevents spills and also improves safety and environmental performance, by reducing the time technicians spend on the roads, reducing emissions and enabling faster response times.

This center achieves real-time frac optimization, along with multidisciplinary interaction, with a focus on completions and minimizing impacts between the other wells. Technicians monitor managed-pressure drilling and casing flotation for challenging wells, along with re-fracs, pre-loads, sequencing and potential cube development to enhance well designs and continually improve execution.

Murphy's IOP is a proprietary mobile tool for onshore task management, Permit to Work and Job Safety Analysis. Through this app, the ROC technician assigns tasks to specific field operators and maintenance based on location and expertise, prioritizing responses to safety, environmental and production impacts, and monitors their progress. This improves the Company's safety culture, reduces downtime and provides valuable insights into making the business more efficient. The drive to meet corporate goals leads to high-impact digital solutions like the Global Downtime Report, which provides a global perspective on operational downtime data related to drilling, completions and production operations.

Murphy's US onshore team is also implementing a newly developed software we will pair with our ROC group to enhance visibility and efficiency of field operations. The Smart Planning Engine (SPE) is an in-house Integrated Planning Tool that allows all parts of our organization to view daily planned events and optimize worker interactions and to reduce reaction time to downtime events. With visibility on all staff locations and work tasks, we can quickly monitor and optimize work interactions where needed. We believe this greater visibility will ultimately continue to improve our safety and emissions performance by allowing for better planning, quicker reaction times and by helping us place the right people to respond to events that may impact our emissions on a daily basis.

MURPHY LABS

Murphy Labs, known internally as mLabs, is a centralized portal that uses virtual project teams to globally integrate individual expertise, particularly as it pertains to technology. This portal provides a collection of cross-discipline, cross-functional solutions for business units, through dashboards, apps, videos and tutorials created to resolve problems identified by employees and contractors. Ultimately, these creations improve operational efficiency and increase awareness of safety hazards, enabling staff to work smarter and accomplish tasks in less time. The virtual project team's expertise in keeping up with the latest infrastructure options often leads to the implementation of software that makes the business more responsive, limits the number of outdated legacy programs and further accelerates digital transformation efforts.

Key examples of mLabs' work include:

- **Gulf of Mexico production dashboard** – This tool was developed in-house collaboratively by engineers, field operators and developers to amplify production surveillance. It encompasses several dashboards that allow engineers to accurately monitor well performance across all assets in the Gulf of Mexico. Production engineers see performance trends that allow for quick decision-making and further analysis where appropriate, utilizing nodal analysis to evaluate well and integrated flowline performance for our fields. Network models are currently in place for all critical subsea assets and are expected to be in place for all assets by year-end.
- **HSE Safety Observation Program (SOP)** – Workers use this mobile platform to document safety observations real time while in the field. This data is then processed to assist in identifying hazards, predicting trends, taking corrective action and reinforcing positive behavior, while improving overall safety performance. See Protecting Our People for more information on our SOP program on page 46.
- **Digitalizing offshore facilities** – We have deployed Laser Scan technologies within our offshore installations to create 3D digital models of the assets. These digital twins are used to bring more work to a tabletop exercise in-house, replacing offshore trips and reducing our exposure and risk from a personnel aspect, while improving efficiencies. These 3D models can be used by various disciplines at Murphy, including, but not limited to, integrity management planning, brownfield project planning, hazard and risk analyses, and as an overall communication tool between field and office personnel.

PROTECTING OUR PEOPLE

“We aim to create a safe working environment in which everyone goes home safe at the end of every day.”

Culture of Safety
monitoring and enhancing

Safety Performance
2021 best in last five years

Contractor Management
continued to strengthen

Murphy is committed to conducting business in a manner that prioritizes the health, safety and security of all personnel, including employees, contractors and partners, as well as the communities in which we work. We aim to create a safe working environment in which everyone goes home safe at the end of every day.

Our comprehensive **Worldwide Health, Safety and Environmental Policy** and HSE Management System apply to all Murphy operations worldwide. Murphy's HSE Policy and management system are based on industry practices and our extensive experience. We strive to achieve top-quartile safety performance as measured against our peers.

HEALTH AND SAFETY OVERSIGHT

In 1993, the Murphy Board of Directors established a Health, Safety and Environment Committee to govern the Company's health, safety and environmental activities. Since then, the Committee has expanded its responsibilities to include corporate responsibility matters and was renamed the Health, Safety, Environment and Corporate Responsibility (HSE&CR) Committee. The HSE&CR Committee meets at least twice annually to receive relevant updates and review policies, compliance reports, goals and performance data. In addition, HSE updates are provided at each Board meeting. Further detail on the HSE&CR Committee and corporate oversight of climate change initiatives can be found on page 21 of this report.

Our President and Chief Executive Officer is responsible for the execution of our HSE Policy. That responsibility is supported by the HSE Executive Management Advisory Committee (EAC) comprised of the Executive Vice President, Operations; Vice President, Health, Safety and Environmental; and Vice President, Drilling and Completions. The EAC works to ensure that the Company has appropriate management systems in place to monitor and review compliance with applicable rules, regulations, industry standards, protocols and international conventions. The President and Chief Executive Officer and the EAC set goals for continuous improvement and receive updates on implementation and progress made on these initiatives. In addition, the HSE Steering Committee, comprised of leadership from all functional workgroups across the organization, including operations, engineering, supply chain and finance, meet on a quarterly basis to discuss current status and company goals pertaining to health, safety and the environment.

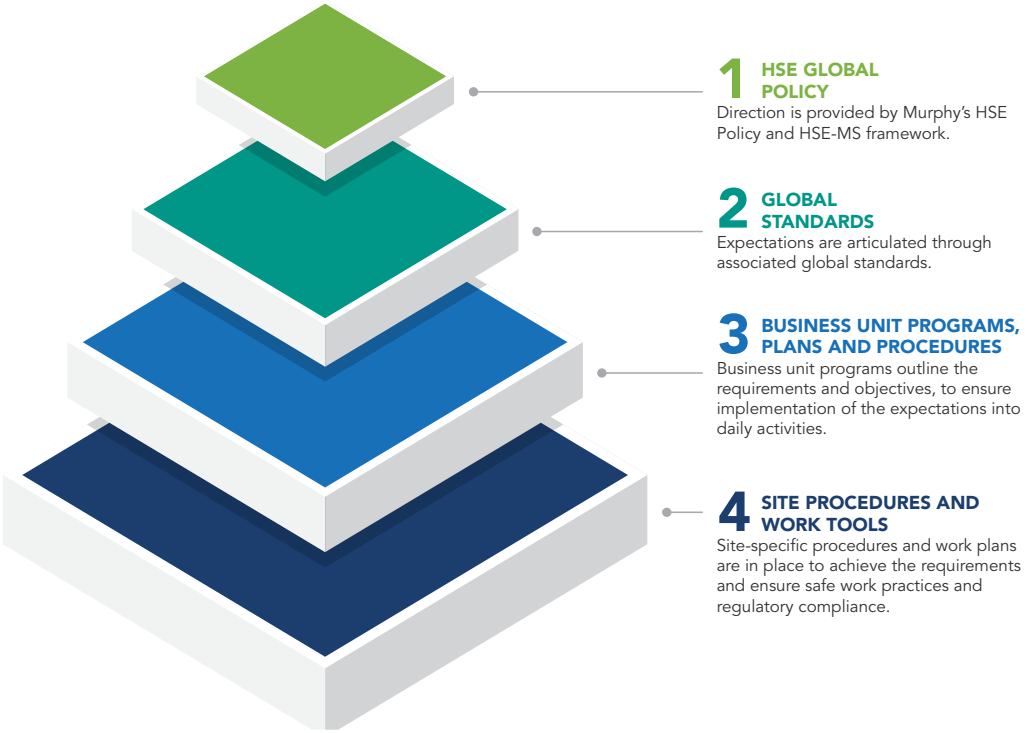
Implementation of Murphy's HSE Policy is assigned to the Vice President, Health, Safety and Environmental. This role reports to the Executive Vice President, Operations, who reports directly to the President and Chief Executive Officer. Altogether, Murphy executives receive weekly reports on HSE activities and results.

Safety has been included in our annual incentive plan since 2008; in 2021, the safety weighting was 5% for the Company's Total Recordable Incident Rate (TRIR), and the environmental weighting for both our global spill rate and greenhouse gas (GHG) emissions intensity was 5% respectively.

HEALTH AND SAFETY MANAGEMENT SYSTEM

We strive to achieve incident-free operations through continuous improvement processes managed by Murphy's HSE Management System (HSE-MS), which engages all personnel, contractors and partners associated with Murphy operations and facilities, and provides a consistent method for integrating HSE concepts into our procedures and programs.

The HSE-MS Consists of Four Levels



The HSE-MS Framework Is Organized Around 11 Elements

Within each element is a set of expectations. Many of these expectations are supported by global standards and detailed programs, plans, procedures and work tools. Elements include management and employee commitment, contractor management, training, emergency response, incident reporting and investigation, and evaluation and improvement.

HEALTH AND SAFETY CERTIFICATION AND AUDIT

Our HSE-MS and Global Standard for Evaluation and Improvement require each Murphy business unit to conduct internal HSE field audits every three years.

On-site HSE inspections are conducted frequently and, in many cases, daily. We identify opportunities for improvement during this process and create corrective action plans to ensure that all items are addressed. We identify any nonconformance and submit improvement actions to business unit leadership.

At our US offshore facilities, a third-party audit is conducted as part of the requirements for the Center for Offshore Safety's Safety and Environmental Management System (SEMS) Certification. The most recent audit was completed in March 2022, in accordance with the regulatory three-year requirement.

The US Bureau of Safety and Environmental Enforcement (BSEE) conducts regular inspections of our offshore facilities and drilling rigs to ensure safety and environmental compliance across our Gulf of Mexico operations.

Murphy contracts with independent, third-party rig quality assurance audit companies that advise on HSE risk mitigation. Specific activities undertaken by expert third parties include:

- Performing electrical and mechanical inspections of key drilling machinery and components on the rigs
- Inspecting key safety components of the control systems on the rigs
- Reviewing any current acceptance test plans and determining relevant sections for software, network and controls testing
- Ensuring that vendors' changes to software and related control systems have been documented, and that backups are available
- Ensuring compliance with software configuration processes

In 2021, Murphy's Canadian HSE Management System received a Certificate of Recognition (COR) from Energy Safety Canada. Energy Safety Canada is the certifying partner for the Canada Partnership in Injury Reduction (PIR), established through Canada's provincial Workers' Compensation Boards (WCB).

The COR program has become the national standard for safety awareness, accreditation and improvement in Canada. The program is designed to improve worker safety and reduce costs, thanks to favorable insurance rates and the potential reduction in lost productivity, replacement worker training and/or property damage. After obtaining certification, we have continuously improved our performance though audits, scoring higher year after year as a result of internal program enhancements. We will continue to perform annual internal validation audits, with an external audit cycle every three years.

BUILDING A CULTURE OF SAFETY

Safety must be a top priority of every employee, every day. We work hard to build a culture of safety across our organization. Key initiatives in addition to our regular training and exercise drills include:

Stop Work Authority
Every employee and contractor has the authority, the right and the obligation to stop unsafe work. This is a fundamental tenet of Murphy's safety culture, and it applies to everyone, including new crew members, experienced crew members, supervisors, managers and service company personnel. Elements of Stop Work Authority are: (1) You must stop the job if you see an unsafe act or condition. (2) You must stop the job if you are unsure of the plan, or you see someone else who is not sure. (3) If conditions change, you must stop the job and confirm that your initial hazard controls are still adequate. (4) In all cases, when you stop the job, if you cannot make it right yourself, discuss your concerns with you supervisor before starting work again. Murphy's executive leadership team stands firmly behind Stop Work Authority, empowering all workers to take immediate action to preserve their own safety and the safety of those around them.

Safety Observation Program (SOP)
The SOP is a smartphone-based application that allows workers to record and document safety observations in real time in the field. This repository of data provides a basis for analyzing safety trends across our field operations and allows us to focus our repairs and maintenance, training, and prevention efforts to improve overall safety performance. Data indicates that workers are engaged in the observation process and using the reporting systems effectively.

Hazard Hunts
We initiated multidiscipline, business unit-specific Hazard Hunts to identify and mitigate potential safety and environmental hazards in the workplace. For our offshore teams, we have also instituted weekly Risk-Based Inspections (RBIs), in which small crews focus on equipment or processes to ensure we are capturing any potential hazards.

Safety Leadership Training
Our North America onshore operations engaged in a third-party training program titled "Safety Excellence for Supervisors, Managers and Workers." In addition, we developed an in-house Safety Leadership program instructed by the HSE department.

Safety Stand-Downs
We continue to incorporate Safety Stand-Downs as a way to bring senior management, employees and contractors together to demonstrate a unified commitment to safety. We also utilize Safety Stand-Downs on a location-specific basis to address any immediate concerns or issues.

Contractor Engagement
Because contractors consistently make up over 80% of our work hours, we focus on contractor engagement at two levels: (1) the executive level, where Murphy's senior leadership meets with key contractors to set clear expectations of our commitment to safety in the workplace, and (2) small group contractor engagement sessions in the office and field locations to provide the same message, while also creating an opportunity to receive feedback and input on how we can collaborate and improve our safety performance. We continue to build strong partnerships with our contractors to ensure an overall, unified HSE culture for everyone working on any Murphy location.

Process Safety
Asset Integrity and Operations are at the core of our Process Safety initiative and play a key role in preventing serious incidents. The Process Safety metrics and programs cover both onshore and offshore operations, and all aspects of operations from the well to sales are within scope, which includes hundreds of miles of pipeline, thousands of pressure vessels and all associated pressure piping. We established a baseline by reporting and measuring our Tier 1, 2, 3 and 4 Process Safety Events (PSE), but we also take a proactive approach and track other leading indicators, which can help in preventing serious incidents from occurring. For additional details, please refer to Asset Integrity and Process Safety in the Environmental Protection and Conservation section (see page 35).

Using Big Data and Technology
Murphy targets safety improvements and efficiency gains throughout our operations with tactics such as data sharing and machine learning, which optimize field development programs and thereby reduce potential safety hazards and environmental impacts and waste. Technologies such as managed-pressure drilling and automated rig technology include components such as safety alerts, total on-bottom time and real-time directional drilling, to meet maintenance needs and ultimately achieve safer operations. Further detail on Murphy's technologies can be found on page 41, under Digital Innovation.

Life-Saving Rules (LSR)
In 2021, we relaunched the nine International Association of Oil and Gas Producers (IOGP) Life-Saving Rules, plus a tenth rule, Fit for Duty, as a clear training and communications platform for safety risks and mitigations. This relaunch included Murphy-developed in-house videos of employees and contractors that discuss the importance of the LSR not only at work but at home. Murphy's LSR include contractor participation. The Murphy HSE Team reviews all entries monthly for any pending corrective actions for the organization. As of March 2022, over 700 entries pertaining to our LSR campaign have been submitted. This program empowers employees and contractors to not just work safely at work but to take these ideals home to their families as well.

HSE Training
In 2021, Murphy reviewed and revised its HSE training matrix for all employees. Consequently, additional training was required for all employees, and we also established supplementary leadership training for office personnel. We have updated our learning management system to reflect the additional training and are working on a dashboard to easily monitor and track training completion. Our goal is to have 100% participation in all required training by September 2022.

Vehicle Safety
In 2021, Murphy continued to improve vehicle safety by installing a vehicle monitoring system in all company vehicles. The system helps us monitor all driving habits and identify location of vehicles in the event of an emergency. All derived data is also used to enhance training and safety communications to employees.

SAFETY PERFORMANCE MONITORING AND MEASUREMENT

As a company, we take our commitment to safety very seriously, and actively assess and measure our safety culture.

In 2021, our safety metrics continued to show improvement. The two key drivers were the lower levels of activity than in prior years, and the result of the focused safety campaigns we rolled out in 2019 to 2021. We continue to stay focused on further improving performance as we expand operations in the coming year.

Our Total Recordable Incident Rate[12] (TRIR), including employees and contractors, was 0.28 in 2021, an improvement of 46% on 2019. Our Lost Time Incident Rate[13] (LTIR), inclusive of actual contractor hours worked, improved from 0.08 in 2020 to 0.04 in 2021. Both our TRIR and LTIR were at their lowest since 2016. We have consistently outperformed the US Bureau of Labor Statistics' average for the oil and natural gas extraction industry, as illustrated in the chart below.

We did not have any work-related fatalities in 2021.

improvement of

▼46%

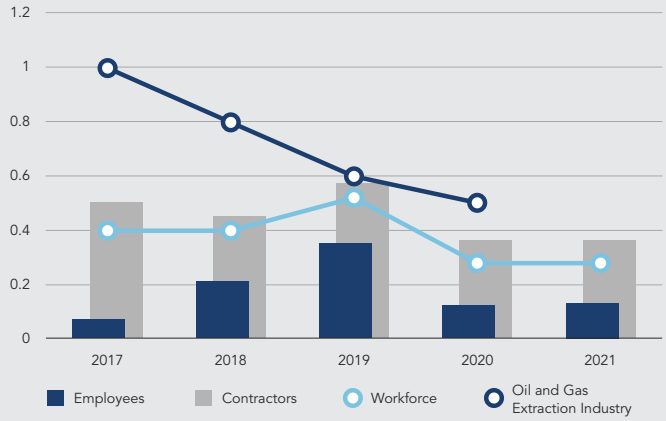
TRIR 2019 to 2021
Total Workforce

improvement of

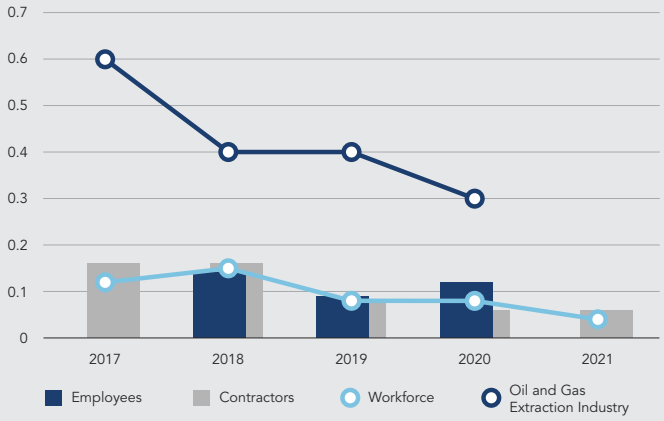
▼50%

LTIR 2019 to 2021
Total Workforce

Total Recordable Incident Rate
Per 200,000 Work Hours



Lost Time Incident Rate
Per 200,000 Work Hours



Source: Bureau of Labor Statistics, Incidence Rates of Nonfatal Occupational Injuries and Illnesses by Industry and Murphy internal

Comprehensive Safety Key Performance Indicators (KPIs)

In addition to reporting our Total Recordable Incident Rate (TRIR), Lost Time Incident Rate (LTIR) and number of fatalities, we also internally track the following safety performance indicators, to drive continual improvements in safety performance:

- First-aid incidents
- Near-miss incidents, including high potential near-misses that trigger formal incident investigations
- Non-occupational incidents
- Dropped objects
- Safety Observations
- Process Safety Events (PSE)
- Preventable Vehicle Incident Rate (PVIR)

12 Number of US Occupational Health and Safety Administration (OSHA) recordable injuries and illnesses throughout the year, per 200,000 actual hours worked.
13 Number of OSHA recordable incidents that result in time away from work throughout the year, per 200,000 actual hours worked.

CONTRACTOR MANAGEMENT

A key element of our HSE-MS is contractor management. Contractors play a significant role in our operations, and represent more than 80% of the workhours performed. Selecting and collaborating with our contractors is vital to ensure a unified commitment to maintaining a safe place to work, and ultimately improving our HSE performance. Per the HSE-MS framework, our contractors on-site are required to be registered on ISNetworld (ISN), a global leader in supplier and contract management. We have a qualified supplier list to pull from on ISN with details on contractor grade, registration information, regulatory compliance and insurance, to verify that we are using the very best contractors.

When choosing to partner with a service provider, Murphy first utilizes ISN to assist in pre-screening by assessing HSE policies, performance and internal HSE management systems. For select major contractors, Murphy goes a step further and performs a detailed bridging process, through which we evaluate all the service provider's HSE policies and procedures individually against Murphy's policies and procedures. The highest level of HSE performance standards is followed for workplace execution.

Murphy requires contractors and subcontractors entering Murphy-operated locations to have the same safety industry training certifications as employees. All personnel, including contractors and subcontractors, working at Murphy locations must have basic industry safety training certifications such as SafeLandUSA and Energy Safety Canada – common safety orientation for onshore, plus SafeGulfUSA, Rigpass, HUET, SEMS Awareness and USCG Marine Trash and Debris Water Survival for US offshore. In addition, contractors must attend Murphy's HSE Orientation before starting work at a Murphy location. Murphy maintains a Qualified Supplier List (QSL) for each business unit, to identify service providers that are permitted to work at Murphy locations.

Throughout the year, Murphy hosts contractor engagement sessions with service providers in each of our business units. These structured workshops review HSE performance, develop joint performance goals and share lessons learned. To further promote safe and environmentally compliant performance, Murphy has established KPIs with several major service providers, and the KPIs are continuously reviewed throughout the duration of their contracts. Additionally, Murphy HSE personnel and ISN regularly conduct third-party vendor audits. In 2021, Murphy developed and shared a transparent program outlining Murphy's HSE requirements, which allows contractors to verify they are meeting or exceeding our standards. This also allows Murphy and our contractors to strengthen our partnerships and improve their organizations' requirements prior to performing work on any Murphy location.

Murphy requires our third-party contractor companies to conduct random drug testing on their employees. To supplement this, in 2021, all asset groups contracted DISA Global Solutions to start the process of implementing standardized random drug testing for all contractors and vendors working at any Murphy location. DISA is linked with ISN, thus allowing us to monitor companies and individuals flying to our offshore facilities. DISA allows Murphy to effectively manage third-party screening under a comprehensive umbrella, across all registered oil and natural gas operators.

EMERGENCY RESPONSE AND PREPAREDNESS

As we work hard to minimize environmental and safety risks and hazards, it is critical that we prepare for events that have the potential to negatively impact our employees and contractors, facilities, operations, the environment or the general public and other stakeholders.

Any stakeholder can report an emergency, and emergency phone numbers are posted at every field location.

Our Emergency Response and Crisis Management Plan applies to any emergency event. As part of this plan, Murphy has a dedicated Manager of Security and Emergency Response, who is responsible for all emergency preparedness and response-related activities.

We have developed and implemented a three-tiered approach to emergency response:

1. Emergency Response Teams at the field level
2. An Incident Management Team at the mid-senior management level in the office
3. A Crisis Management Team at the executive level

Every operating office location maintains an Incident Management Team, and Well Containment Teams are established for all active wells.

The Incident Management Team structure includes a Public Information Officer, who prepares messages, communications and press releases for the team if necessary. For emergency messages, we utilize a proprietary communication system, Murphy Alert (MIR3), which allows us to use a combination of text, email and voice notifications, and allows for responses.

Because we recognize that our emergency response plans are most effective when accompanied by regular and comprehensive training, we maintain a global training and drill schedule across all business units, providing well containment and spill exercises, Incident Command System training and business continuity planning exercises. Training and drills comply with all relevant regulations and engage local emergency response groups.

In 2021, we conducted more than 12 regular training and exercise drills across our business.

For all our drills, we always invite our contractor work groups and regulatory agencies to participate and encourage knowledge sharing across all functions. This allows Murphy to build strong relationships and rapport with stakeholders, to address any future events that may occur.

We have also revamped our Business Continuity Plan. Each business unit performed a deep dive into the resources needed

to conduct business as usual following a major event, such as a hurricane. We partnered with a third-party crisis and emergency management specialist firm to streamline our process and turn Murphy into an industry leader with our newly revised plan. For all drills and exercises that Murphy conducts, an after-action review is performed to help identify and improve any gaps in our processes and procedures that we may have.

HWCG, Spill Response and Emergency Preparedness

Murphy is also an active member of HWCG, a consortium of 14 operating companies, which provides rapid access to well containment resources and mutual aid personnel. This group also shares access to source control containment equipment and resources (capping stacks and associated equipment) for the US Gulf of Mexico. In addition, HWCG provides training and practical knowledge opportunities for its members through annual well containment drills and workshops.

Murphy conducts its own annual drills and training of our internal source control and spill response teams, to demonstrate our ability to respond to any incident, both onshore and offshore. These drills comply with all relevant regulations in countries where we operate and engage local emergency response groups, such as Clean Gulf Associates (CGA), Marine Spill Response Corporation (MSRC), and Oil Spill Response Ltd. (OSRL), as well as other key third-party specialists.

INDUSTRY COLLABORATION

Murphy actively participates in industry efforts to advance safe operations. For example, for our Gulf of Mexico operations, we work closely with the Offshore Operators Committee (OOC) and the Centre of Offshore Safety. For our US onshore operations, we actively engage with the Onshore Safety Alliance (OSA) and for Canada onshore, with Energy Safety Canada. Our employees sit on various subcommittees and workgroups of these organizations. Some other industry groups Murphy participates in are HWCG, the American Petroleum Institute (API) and the Canadian Association of Petroleum Producers (CAPP).

PHYSICAL SECURITY

Murphy relies on multiple resources for access control, visitor management, site monitoring and surveillance and security assessments, along with security guards in the field and police officers in the headquarters building. We use a third-party vendor to provide and manage these services, which reports to the Murphy Security and Emergency Response Manager.

We regularly provide upgraded security training to employees and conduct security exercises and drills. Some of the training provided includes active shooter response, basic investigation, and personnel travel security training for all employees. The Security and Emergency Response Manager belongs to multiple security and law enforcement working groups and committees, and monitors security events and intelligence reports from law enforcement. We also utilize third-party service providers to obtain real-time situational awareness bulletins, and as necessary, provide emergency alerts to staff.

INVESTING IN OUR PEOPLE

“We believe in creating an inclusive culture where members of our workforce support and respect each other.”

Diversity, Equity and Inclusion
continuous focus with new programs

Benefits Package
annually reviewed and enhanced

more than
13,000 Training Courses
offered to our workforce

Our people are our most valuable resource. At Murphy, we believe in creating an inclusive culture where members of our workforce support and respect each other. We actively encourage and value everyone's perspective.

WORKFORCE DEVELOPMENT OVERSIGHT

Our Board is actively engaged on matters pertaining to our workforce. The Executive Compensation Board Committee oversees the Company's key human capital management strategies, including diversity, equity and inclusion (DE&I), annually to ensure alignment with our short- and long-term business goals. The Health, Safety, Environment and Corporate Responsibility Board Committee reviews and discusses DE&I strategy, programs and initiatives. Our Vice President, Human Resources and Administration, has overall managerial accountability for our human capital management and DE&I strategies and programs.

DIVERSITY, EQUITY AND INCLUSION

The rich experiences and backgrounds of our employees strengthen our Company, create a productive workforce and contribute to our success.

We partner with many organizations to increase the diversity of candidates in our talent pipeline. For example, we post open positions through eQuest, which distributes the roles to diversity and inclusion organizations, and through VeteranJobListings, the Society of Women Engineers and the National Society of Black Engineers. In 2022, we launched an internship program as part of enhancing our talent pipeline.

We equip managers with tools to support inclusive hiring, including an interview guide to reinforce a fair and equitable process. In addition, in 2021, we implemented blind résumé screening for select roles, which involved removing candidate names and other identifiable characteristics to reduce any unconscious biases. We will be continuing this process in 2022 for select roles. We also implemented a Rating Bias training for leaders as part of our formal performance management process to reduce bias. The training aims to help leaders build awareness of their potential biases that may emerge during the performance rating process.

A dedicated intranet portal enables employees to explore resources including articles, videos and training that are refreshed regularly to reflect current events. Additionally, we participated in events hosted by the Greater Houston Partnership, including Rise to the Top, a celebration of International Women's Day, and attended Women's Energy Network and Greater Houston Women's Chamber of Commerce events both in person and virtually. We are in the process of reviewing our Human Resources policies based on their support for our commitment to inclusiveness and equity.

Our Human Resources Director, Talent Development oversees our DE&I program.

DIVERSITY, EQUITY AND INCLUSION COMMITTEE

The Diversity, Equity and Inclusion committee, which consists of volunteer employees at various levels in the organization, acts as a change agent to promote a greater DE&I culture where employees are respected and intentionally valued through open, honest and productive discussions. The committee is responsible for reviewing and recommending initiatives and partnerships that build upon our DE&I strategy and support our Mission, Vision, Values and Behaviors. The committee is sponsored by the Vice President, Human Resources and Administration.

We have also offered a broad range of training programs on topics such as "Your Role in Workplace Diversity," "Maintaining a Cohesive Multigenerational Workforce," and "Women, Confidence and Leadership," while also sharing resources specific to practicing inclusiveness.

EMPLOYEE DEMOGRAPHICS

As part of our commitment to promote workforce DE&I, we track age, gender and race/ethnicity for all full-time employees. In compiling the data, we categorize employees according to the US Department of Labor's Equal Employment Opportunity Commission (EEOC) definitions. In response to stakeholders' request for the disclosure of EEO-1 data, we began publishing our EEO-1 filing last year. Our data as at year-end **2020** and **2021** can be found on our website. A summary of this data, as well as our global representation of women, is outlined in the tables below. Murphy does not have any part-time employees.

Representation of Women[14] US and International	**2017**	**2018**	**2019**	**2020**[15]	**2021**
Executive and Senior-Level Managers	17%	16%	14%	12%	12%
First- and Mid-Level Managers	20%	20%	22%	17%	18%
Professionals	41%	36%	34%	34%	34%
Other (Administrative Support and Field)	26%	20%	20%	7%[15]	7%
Total	**32%**	**28%**	**27%**	**21%**	**21%**

Representation of Minorities US-Based Only	**2017**	**2018**	**2019**	**2020**	**2021**
Executive and Senior-Level Managers	5%	8%	9%	12%	18%
First- and Mid-Level Managers	20%	24%	24%	23%	22%
Professionals	28%	25%	29%	33%	34%
Other (Administrative Support and Field)	30%	32%	36%	31%	31%
Total	**26%**	**27%**	**29%**	**30%**	**30%**

INDUSTRY RECOGNITION

We are gratified that outside organizations recognize our efforts. In 2021, the National Diversity Council recognized two of our senior executives, issuing them the prominent awards of "Top 100 Diversity Leaders in Energy" and "Leadership Excellence Award." Each executive was also asked to speak at various events, including the National Diversity and Leadership Conference, hosted by the National Diversity Council. We now have one of our senior executives on the board of the Energy Diversity and Inclusion Council (EDIC) and one of our senior leaders on an EDIC strategic advisory board. Additionally, one of our senior leaders was named a 2021 Forty Under 40 honoree by Hart Energy, and another was recognized with a Women Who Mean Business honoree by Houston Business Journal.

We have also received recognition from the Greater Houston Partnership in being designated as a "Best Place for Working Parents®" for our commitment to supporting working parents through our family-friendly policies and practices.

ONGOING EFFORTS

We will continue to build upon our DE&I efforts, with a focus in 2022 on developing employee resource groups, expanding university partnerships, targeted and elective training and development opportunities, and expanding partnerships with minority- and women-owned businesses.

14 2017 and 2018 data includes employees in Malaysia.
15 The reduction in the percentage of women in 2020 was primarily driven by: (i) the closure of the El Dorado, Arkansas and Calgary, Canada, offices, where we historically had a high percentage of women employees; and (ii) focused hiring efforts for field operations, which historically attract a pool filled mostly with men.

PAY EQUITY

We are committed to a fair and living wage for all employees. Murphy conducts a biannual process to evaluate base pay equity across the organization by position, with a specific focus on equity across gender and race/ethnicity diversity. Murphy quickly works toward closing gaps if any issues are identified.

LOCAL HIRING

We prioritize hiring locally, which allows us to contribute to the communities in which we operate. For our operations outside the US, the majority of our people are nationals of the local host country. When immediate talent is not available, we ensure proper training is offered so that we may work toward nationalizing positions. In 2021, the percentage of local nationals was 100% in Canada and 89% in Vietnam.

BENEFITS AND WELLNESS

Murphy provides a comprehensive benefits package designed to drive employee wellness and preparedness for their future. This includes excellent health coverage – medical, dental and vision – for employees and their family. Murphy also provides a defined-benefit pension plan and a defined contribution savings plan designed to assist employees in building savings for retirement.

In 2021, we expanded our benefits package to further support our diverse workforce, including:

- Providing infertility treatment coverage
- Expanding mental health network of providers
- Adding a Consumer Driven Health plan option

Additional Benefits Include:

- Birth and Adoption Leave for Mothers and Fathers
- Personal Paid Leave
- Defined-Benefit Pension Retirement for All Eligible Employees
- 401(k) Savings Plan with Company Match in the US
- Defined-Contribution Pension Plan with Company Match in Canada
- Employee Assistance Program
- Life and Accidental Death and Dismemberment Insurance
- Long-Term Disability Insurance
- Occupational Accidental Death Insurance
- Flexible Health Spending Account
- Employee Educational Assistance
- Service Awards
- Travel Assistance Program
- Vacation Policy – Eligible employees may roll over a week of vacation each year
- Telecommuting Policy – Eligible employees may work up to two days per week from home. Employees are able to work with their supervisor in selecting the work-from-home days.

WELLNESS

Murphy offered a host of programs in 2021 to support employees. Several employee assistance sessions focused on ways to manage stress during difficult times. In addition, a new dedicated website provides information on staying healthy, including webinars from our medical director to provide guidance on well-being and to address employees' concerns. Finally, employees were educated on and encouraged to use telemedicine resources.

Murphy's commitment to diversity, equity and inclusion has never been stronger. We are committed to creating a work environment where everyone can share and be their authentic self.

TRAINING AND DEVELOPMENT

We formally manage our employees' performance through regular development discussions and assess each individual's performance as well as behaviors that are tied to our Purpose, Mission, Vision, Values and Behaviors. Leaders and employees formally connect on a quarterly basis to reflect on developmental growth and future opportunities. In addition, in 2022, we introduced a mentoring program.

To help our employees develop and expand personal and professional skills, Murphy offers a variety of enrichment opportunities and job-related training throughout the year, including in-house, external and virtual seminars and workshops. Additionally, we sponsor employee participation in industry and professional organizations.

Leadership and professional development investments in 2021 included:

- Nautilus Training Alliance for subsurface technical training
- Online My Murphy Learning programs for all employees
- Opportunities for all employees focused on increasing productivity and improving effectiveness

Murphy employees represent the Company through several professional networks, affording them an opportunity for learning and development, sharing best practices and expertise throughout the industry and supporting sustainable development in our local communities. Examples include the American Association of Petroleum Geologists (AAPG), Greater Houston Partnership and Greater Houston Women's Chamber of Commerce.

Murphy leadership strongly believes in encouraging and supporting its people who wish to continue their education. Murphy offers an Employee Educational Assistance Program, through which the Company contributes toward the cost of tuition, textbooks and some required fees incurred at accredited colleges, universities or trade schools.

In 2021, through My Murphy Learning, our internal Learning Management System, we offered our workforce more than 13,000 professional and technical courses, with employee training time totaling 8,499 hours, for a total spend of approximately $175,000.

EMPLOYEE ENGAGEMENT

We believe that hearing from our employees leads to the best decisions. In 2021, we conducted surveys to better understand the needs of the employees and also conducted town halls throughout the year, which gave employees multiple forums to be heard.

Murphy's Ambassador Program is comprised of employees from different locations, functions, roles and shifts throughout the organization who serve as representatives for all employees. The mission of the Ambassadors is to be the voice of every employee, to live out the Purpose, Mission, Vision, Values and Behaviors of Murphy, and to empower other employees to do the same. The Ambassadors help create a sense of community and strengthen the Company culture by championing company initiatives, assisting in the dissemination of information and constructively circulating feedback from employees to the executive leadership team.

We are also developing an employee spotlight series to showcase DE&I, celebrations and successes and activities that support our mission, vision and values.

We established the Murphy Oil Corporation Disaster Relief Foundation in 2010 to aid employees who have been impacted by a natural disaster. The Foundation is funded through contributions from employees, the Board of Directors and retirees. In 2021, 16 employees affected by disasters received assistance through this resource. This fund epitomizes how our employees live out our values of supporting each other and making it better.

RETENTION AND TURNOVER

We track global voluntary employee turnover, broken down by geography. This data is shared on a regular basis with our executive leadership team, which uses it to develop our human capital strategy. In 2021, the Company's global voluntary turnover rate was 6%, which is lower than industry survey data.

We believe this low turnover rate is due in part to frequent communication between executives and employees through quarterly Town Hall meetings, the Ambassador Program, training and development opportunities, employee recognition programs, and platforms for open Q&A and benefits discussions.

Workforce Metrics[16]	2017	2018	2019	2020	2021
Employee Count (Total Company)	1,128	1,108	823	675[17]	696
Median Age	43	42	43	42	43
Employee Turnover (Voluntary)	7%	8%	10%	6%	6%

16 2017 and 2018 data includes employees in Malaysia.
17 The employee count reduction in 2020 was primarily driven by the closure of the El Dorado, Arkansas and Calgary, Canada, offices.

SUPPORT EACH OTHER and MAKE IT BETTER

The Murphy Ambassador Program

In 2021, the Ambassador Program expanded from 19 to 38 members, so that the program has companywide coverage on offshore platforms, field offices in Canada, South Texas Eagle Ford locations and the Houston office. This represents over 5% of all employees. The Program leadership representation was also expanded, creating a new field leadership role to unify all locations.

The Ambassadors meet monthly to receive feedback from their respective departments and generate solutions for improvement. This feedback helps shape and improve new and ongoing company initiatives. The Ambassadors Program is under the guidance of executive leaders' sponsorship.

AMBASSADORS
Connecting • Communicating • Empowering

Several successful initiatives were launched as a result of the Ambassador Program, including:

- The Murphy Mentoring Program was created to help foster mentoring relationships within Murphy. The Ambassadors worked with Human Resources to develop the vision for the program.
- The New Hire Buddy Program was created to enhance the new employee onboarding experience. The Ambassadors saw value in showcasing Murphy's Mission, Vision, Values and Behaviors (MVVB) early on in an employee's career in the Company with the goal of reinforcing the idea that each individual has unique strengths that are invaluable in making our Company stronger.
- The Empowered Employee Program was established to recognize employees who demonstrate our MVVB. The program allows for employees to nominate and appreciate fellow employees who live out our values. The program has been very well received by our staff.
- Monthly internal communication listing all open job postings within the Company. The intent was to create an awareness of all the growth opportunities within Murphy and encourage employees to apply for open positions, outside their own departments.

COMMUNITY ENGAGEMENT

“Being a good corporate citizen and community member goes beyond business – it’s core to who we are as a company.”

El Dorado Promise
15 years of scholarship awards

President’s Volunteer Service Award
for our efforts with the Houston Food Bank

more than
$900,000
Employee Gift Matching Program donations in 2021

Positive relationships with the local communities in which we work are critical to our operations. But being a good corporate citizen and community member goes beyond business – it's core to who we are as a company.

COMMUNITY ENGAGEMENT OVERSIGHT

The Health, Safety, Environment and Corporate Responsibility Board Committee has oversight on policies and matters pertaining to communities, human rights and Indigenous rights and engagement, while managerial oversight lies with our Senior Vice President, General Counsel and Corporate Secretary.

WORKING WITH COMMUNITIES

We seek to participate in constructive community engagement and maximize our positive impacts on local communities, while minimizing any negative impacts. Before we make an investment or commence any new operation, we apply measures to ensure we have identified local community and stakeholder concerns and are effectively mitigating any known associated risks. This includes conducting community impact assessments before settling in new areas, conducting consultations at early stages of a project and ensuring ongoing consultation mechanisms are in place, as further described on page 59 in connection with our Mexico operations.

Murphy communicates with host country and community stakeholders, including regulators, nongovernmental organizations and other policy influencers, to better understand the issues applicable to our operations and to mitigate potential risks to the Company's license to operate. This engagement is carried out in accordance with our **Code of Business Conduct and Ethics**.

When we are considering starting a business operation in a new country, our process assesses the nontechnical, aboveground risks. This includes an assessment of key demographics, geography, economic standing and outlook, political system and geopolitical relations, regulatory and fiscal regime, human rights and Indigenous rights, and political and security risks.

We seek opportunities to support local communities when negotiating and entering production-sharing contracts, for example through:

- Prioritization of local suppliers
- Investment opportunities for local content
- Specifications for local companies or workers
- Commitments to social investment programs, to address the development needs of the community and/or contribute to education improvement and work-skill development of host country populations

UNDERSTANDING AND RESPONDING TO COMMUNITY FEEDBACK

In the US, community stakeholders can raise concerns or grievances directly with our Land Department using an **owner relations website** and phone number. Murphy landowners are assigned a surface landman for any concerns, and landowners can also reach out directly to their respective landman to address any issue.

In Canada, as in the US, community stakeholders can raise concerns or grievances directly with the Land Department team members, and via an emergency contact telephone number maintained by Murphy. The Land Department is responsible for collecting, recording and assessing all community and stakeholder concerns or grievances. The surface land team maintains responsibility for response and resolution, as per the British Columbia Oil and Gas Commission (BCOGC) and Alberta Energy Regulator (AER) public consultation guidelines.

We are committed to ongoing consultation with local stakeholders throughout our operations. Our rigorous community consultation process is regulated by the AER and the BCOGC. Members of Murphy's surface land team actively participate on several community relations committees: the Canadian Association of Petroleum Landmen (CAPL) Field Acquisition Management (FAM) Committee and the Fox Creek Synergy (FCS) Partnership.

The CAPL FAM Committee's purpose is to bring together operators in British Columbia, Alberta and Saskatchewan to collectively address issues being encountered by the surface land groups of various operators, and collectively find solutions to those issues. The participating operators also discuss continuous improvement and best practices for the industry as they relate to surface land. The FCS Partnership is made up of operators in Alberta and is focused on community engagement, including community and government updates to industry activities, community events (e.g., Day of Caring) and community investment.

DO RIGHT ALWAYS

Respecting Our Landowners and Local Residents by Mitigating Noise

Prior to moving onto a new completion pad in Tupper Montney, British Columbia, we conduct a tabletop Noise Impact Study in accordance with the requirements defined by the BCOGC Noise Control Best Practice Guideline. We run multiple simulations pre-operations. For example, we model the daytime and nighttime sound pressure levels at each of the residences in proximity to the completions operations to ensure Murphy complies with applicable regulations. Once the completion equipment moves on-site, real-time decibel readings are taken at each residence to confirm the study. If the decibel readings are higher than modeled, we take steps to address sound impacts, such as adding additional sound barriers to mitigate the sound pressure levels, and readings are taken again to confirm the noise is under the defined decibel level.

As a part of the facility permitting in Alberta, noise impact studies are completed to determine impact on any nearby residences. Recommendations of the noise impact studies are followed on a case-by-case basis.

Research has been undertaken in the Eagle Ford Shale asset, Texas, to mitigate impact to the neighboring residents where gas lift compressors are within proximity of residents. To date, one location has been identified where noise reduction measures will be beneficial, and it will be constructed as per recommendations provided by third-party specialists.

In Mexico, Murphy has conducted a social impact assessment and has established responsibilities that are aligned with regulatory requirements, including regular interface with community members, and building consensus on an approach to improve the overall welfare of the communities affected by our operations.

FOLLOW THROUGH ON COMMITMENTS

Contributing to the Development of the Local Workforce in Mexico

As part of our commitment to our host country and per the scope of our license contract, in 2022, we entered into a co-operation agreement with the Tabasco state government. Through this agreement, the state helps us identify students and recent graduates from local educational institutions to participate in training opportunities offered by Murphy. These opportunities could entail courses and workshops that enable technology transfer and provide the beneficiaries with industry expertise and exposure, relevant to our activities in country.

Further, Murphy has also identified students and young professionals for internship opportunities, which grant them firsthand experience of deepwater operations, an area of limited local knowledge.

HUMAN RIGHTS

Respect and dignity for everyone is a cornerstone of the way we do business and of our success. To Murphy, respecting all people is part of our core value to "Do Right Always."

In 2021, Murphy developed a formal **Human Rights Policy**. This policy acknowledges our longstanding commitment to the dignity and rights of all people and formalized our practices to protect these rights. Our policy includes a commitment and process to identify and reasonably eliminate or minimize any negative impact our activities may have on human rights in the communities where we do business. Our policy and practices include a complete prohibition of child labor and the recognition that access to water is a fundamental human right. Our policy is further guided by the principles set forth in the **United Nations Universal Declaration of Human Rights**.

We recognize the function of government as the primary source of policy and protection for human rights and are committed to respect and comply with the laws of the countries where we do business. Our **Code of Business Conduct and Ethics** and **Supplier Code of Conduct** further sets forth the expectation that we will do what is right, safe and considerate of the well-being of our people, communities and environment.

Our Board of Directors mandates adherence to these policies, which extend to our vendors, suppliers, contractors and partners through our written polices, contracts, directives and training. We encourage feedback and constructive dialogue with all relevant stakeholders, and will provide guidance and annual training to our employees on our Human Rights Policy and the appropriate procedure to promptly address any concerns that may be raised.

We do not operate in government designated cultural or heritage sites or other protected areas where our operations would not comply with local laws intended to protect the long-term conservation of nature, associated ecosystems and cultural values. Per the Sustainability Accounting Standards Board (SASB) definitions, we do not have reserves in or near areas of conflict, in or near Indigenous land, or in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index.

PROTECTING INDIGENOUS RIGHTS

We carefully consider the impact of our business on the Indigenous people of the areas of the world where we operate.

In Canada, where Indigenous people are members of the local community, our actions are guided specifically by our **Indigenous Rights Policy**. When engaging and collaborating with Indigenous groups, Murphy will respect the spirit and intent of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and its guiding principles, within the context of existing Canadian law and the associated commitments and roles that governments in those jurisdictions have relative to Indigenous groups. This includes operations near First Nations territory in British Columbia and Alberta.

In the future, as our global operations evolve and we expand our interactions with other Indigenous communities, we will modify our policy accordingly, to address any issues that may arise.

Grievance Reporting

We take our role as a responsible corporate citizen seriously and actively engage with various stakeholders as outlined in the Stakeholder Engagement section (see page 67). Concerns raised by any community stakeholder will be reviewed, investigated and resolved through our grievance mechanism which is overseen by our Corporate Compliance Officer. General concerns can be directed to our 24/7 Compliance Hotline (+1.877.808.1601) or **www.MyComplianceReport.com** (enter Access ID: MOC), both administered through an independent third party. Specific concerns can be directed to:

Royalty Owners and Community Stakeholders

US Toll Free: +1.888.475.2015

US Email: **owner_relations@murphyoilcorp.com**

Canada Toll Free: 1.888.999.0423

Human Rights and Indigenous Rights, and Employees

Compliance Hotline (24/7, third-party administered):

- Telephone: +1.877.808.1601
- Website: **www.MyComplianceReport.com** (enter Access ID: MOC)

Compliance Officer: +1.281.675.9000

INVESTING IN OUR COMMUNITIES

Giving back to our communities is a key tenet of who we are. We believe that we can make the most impact in communities where we live and work, and we prioritize our focus and efforts accordingly. We support our communities through strategic partnerships with organizations that work on developing communities, philanthropy and employee volunteerism.

We invest in our communities to build the local workforce, expand opportunities and support specific community needs. We view these efforts as much more than philanthropy. They are strategic investments in the communities that support us and increase the critical talents and services we and our communities need.

COMMUNITY ECONOMIC DEVELOPMENT AND WORKFORCE CAPACITY BUILDING

Murphy is a founding member of the South Texas Energy & Economic Roundtable (STEER) program in the Eagle Ford Shale. STEER was created, in large part, to support positive developments that are beneficial for the local communities and to successfully integrate the oil and natural gas industry into the region. In January 2020, STEER completed its merger with the Texas Oil and Gas Association (TXOGA).

STEER focuses on several critical community issues, including availability of housing, healthcare services and infrastructure, road safety, local skills development and environmental protection. STEER also holds a seat on the City of San Antonio Climate Action & Adaptation Plan Technical Committee. The committee serves as a community stakeholder forum to develop plans to implement climate mitigation and adaptation strategies. STEER continues to partner with local communities, colleges and universities to identify partnerships that will encourage innovation and environmental stewardship.

We also work with the American Petroleum Institute (API), National Ocean Industries Association (NOIA) and local chambers of commerce and business councils to support community and workforce capacity building. Murphy executives volunteer on the boards of several industry, academic organizations and nongovernmental organizations, including the API, American Association of Petroleum Geologists (AAPG), Energy & Geoscience Institute at the University of Utah, Louisiana State University Foundation, Energy Diversity & Inclusion Council (EDIC), Greater Houston Women's Chamber of Commerce, Greater Houston Partnership's Executive Women's Partnership, National Charity League – Houston Hearts Chapter and United Way Women's Initiative of Houston.

Local Hiring

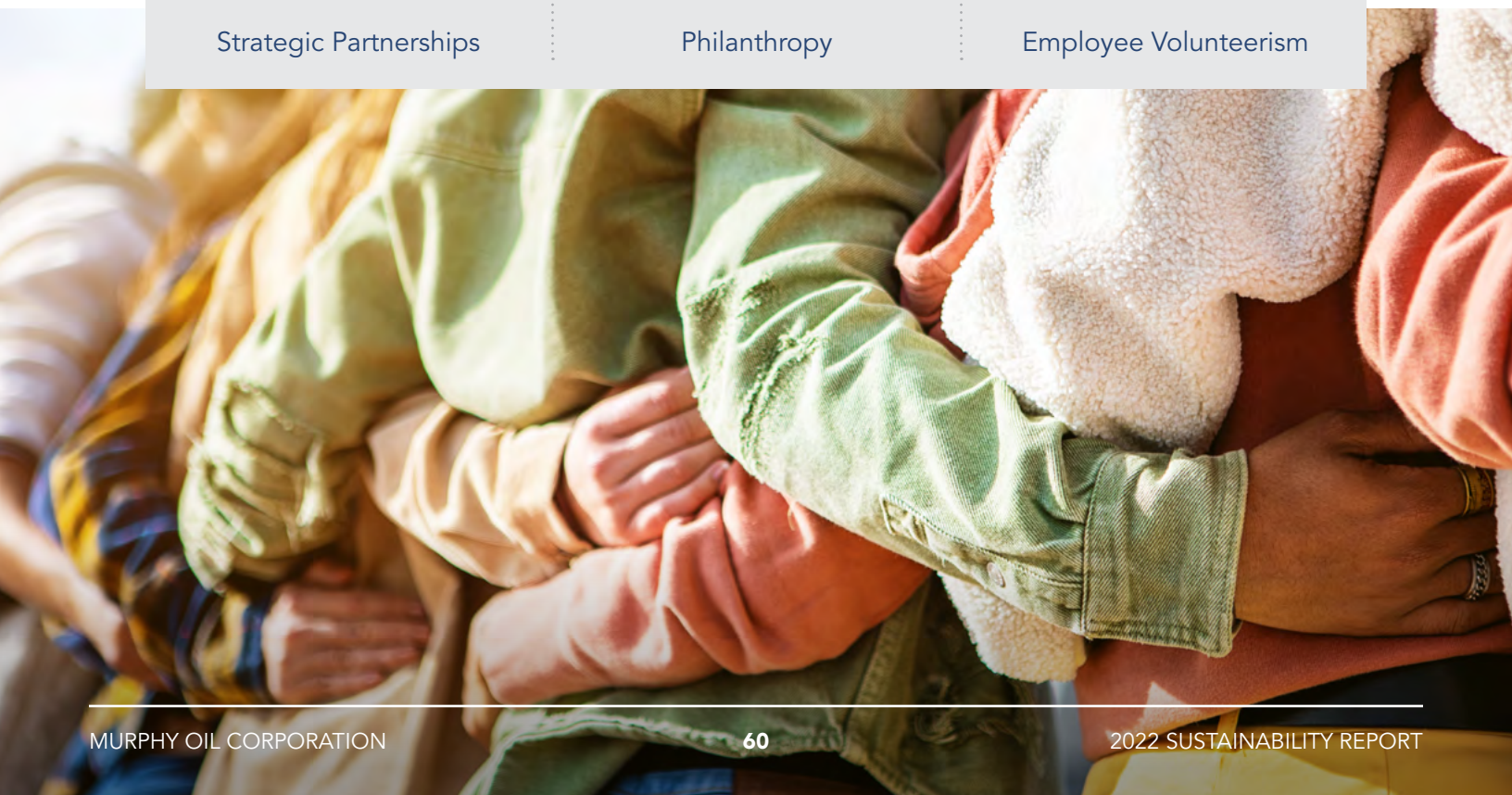
We prioritize hiring locally, which allows us to contribute to the communities in which we operate. For our operations outside the US, the majority of our people are nationals of the local host country. When immediate talent is not available, we ensure proper training is offered so that we may work toward nationalizing positions. In 2021, the percentage of local nationals was 100% in Canada and 89% in Vietnam. In addition, Murphy actively contracts with local and Indigenous suppliers across various international regions where we operate, in accordance with local law.

How We Support Our Communities

Strategic Partnerships

Philanthropy

Employee Volunteerism



The El Dorado Promise

In addition to collaborating with industry groups, we also work directly to build community and workforce capacity. Our founder's son, Charles H. Murphy, Jr., believed that with good education, people are more productive, and that to educate people is good business. Though we are no longer headquartered in El Dorado, Arkansas, where Murphy was founded, we continue our longtime commitment to offer opportunities and expand workforce capabilities in the community. We established the **El Dorado Promise Scholarship Program** ("Promise") in 2007, to encourage academic success.

Through a $50 million commitment from the Company, the Promise enables graduates of El Dorado High School who have been enrolled in the school district since at least the ninth grade to have their college tuition and mandatory fees paid at any regionally accredited university, public or private, in the US (capped at the highest annual resident tuition at an Arkansas public university).

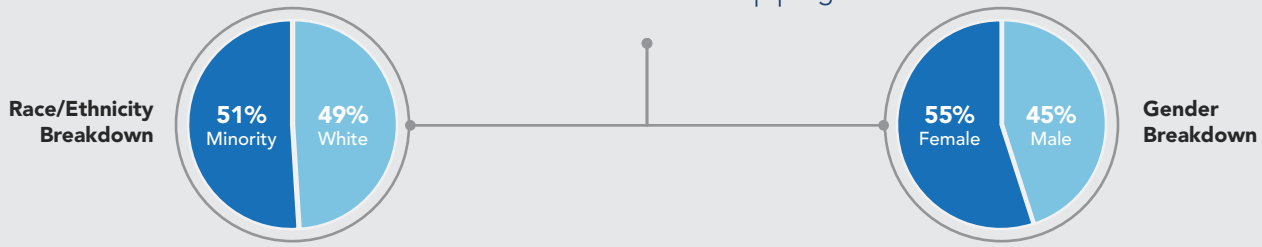
The Promise has spurred the college enrollment rate of El Dorado High School graduates to surpass state and national levels. Over the past 15 years, more than 3,000 students have received the Promise, with 51% recipients being minorities and 55% being female. They have used their scholarship at 157 different schools in 35 states.

Studies done by the Office for Education Policy at the University of Arkansas in 2018 indicate that there was a 16.5% increase in college enrollment after the announcement of the Promise, keeping El Dorado School District enrollment on the rise while enrollment in all nearby communities has declined. In addition, the Promise was associated with an overall 10.7% increase in bachelor's degree completion and a 12.7% increase in bachelor's degree completion for Promise scholars whose high school grade-point average was in the top 50% of their class.

EL DORADO PROMISE

more than **3,000**

students have been placed in the El Dorado Promise scholarship program



157

colleges and universities in 35 states have accepted the graduates of El Dorado High School

The Promise Scholar Stories

Celebrating 15 Years of The El Dorado Promise
Impacting Lives and Communities

GREGORY CREW
EL DORADO HIGH SCHOOL CLASS OF 2012

Gregory earned a Bachelor of Science in Accounting from Missouri State University and a Master of Business Administration from Southern Arkansas University.

What are you doing now?
I live in Sterling, Virginia, with my fiancé, and we are currently planning a wedding for May 2023! I work as a product consultant for a healthcare technology solutions provider.

How did receiving the El Dorado Promise scholarship impact your college years?
In college, when people hear about this scholarship that you receive simply by being a high school graduate, they are mind-blown, and you remember how blessed you really are to have this opportunity. Of all the things to worry about when it comes to college, money is the No. 1 burden/hindrance for most people, but with the Promise, that was eliminated, and I am so very thankful. So many peers in college had to work jobs to be financially stable and pay for school, but by way of the Promise, I was able to focus on academics and devote time and attention to other areas of the college life.

GABBY SMITH PITARD AND BRENNAN PITARD
EL DORADO HIGH SCHOOL CLASS OF 2008

Gabby graduated with a Bachelor of Science in Nursing (Registered Nurse) from Southern Arkansas University. Brennan earned a Bachelor of Science in Biology and a Doctorate of Veterinary Medicine from Louisiana State University School of Veterinary Medicine.

What are you doing now?
Gabby: Currently, we have returned home to plant our roots and are living and working in El Dorado, Arkansas. Brennan opened a small animal veterinary clinic in the fall of 2019, and is the owner and veterinarian of Pitard Animal Clinic. I began working locally as a registered nurse and have since transferred roles into managing the day-to-day flow and administrative duties at our family-owned clinic.

We have two children, Mia (6) and Beau (5), who are both enrolled in El Dorado School District and are future El Dorado Promise Scholars! We are thrilled to raise our children and invest in the same community that supported us for years.

What would you tell current and future Promise Scholars?
Brennan: This scholarship is rare and an invaluable benefit to you! With the current student loan crisis and government lending, it is easy to rack up insurmountable student debt quickly, but you have a better option with the gift of the Promise.

COMMUNITY GIVING AND VOLUNTEERING

For more than half a century, Murphy has been committed to giving and volunteering in our communities. In support of these efforts, we have built partnerships with educational, civic and charitable initiatives in the communities in which we operate. We focus on issues that will have the greatest impact for our local communities and employees while building on our longstanding commitment and legacy to educational endeavors. Some of our 2021 efforts include:

	Education and Training	Health and Well-Being	Civic and Community
Murphy's Efforts	• Continued commitment to the El Dorado Promise, see page 61 • Provided scholarships to Fox Creek High School graduates in Canada • Participated in the Read Across America program, where we virtually read books to classrooms in the Houston area, and shared information about where we work, what we do and why reading is important	• Volunteered at the Houston Food Bank • Held multiple clothing drives to collect winter clothing and clothes for children • Participated in Walk to End Alzheimer's, a fundraiser for Alzheimer's care, support and research	• Volunteered on a community garden rejuvenation project at the Volunteers of America Empowerment Center • Raised more than $320,000 for United Way • Pledged a total of $300,000 over 2021 to 2025 for the Louisiana Highway 1 Phase 2 Improvement Project
Aligned with These UN SDGs			

MAKE IT BETTER

Murphy Pledged $300,000 to the Louisiana Highway 1 (LA 1) Phase 2 Improvement Project

LA 1 is the only roadway supporting Port Fourchon, the United States' busiest intermodal energy port, the Louisiana Offshore Oil Port (LOOP) and Grand Isle. The project is critical to preserving safe, long-term access to the nation's energy supply, seafood production and vital coastal restoration projects. In addition, LA 1 is used for hurricane evacuation of local residents.

Source: LA1 Coalition

"Giving back to our communities is a key tenet of who we are. We believe that we can make the most impact in communities where we live and work, and we prioritize our focus and efforts accordingly."

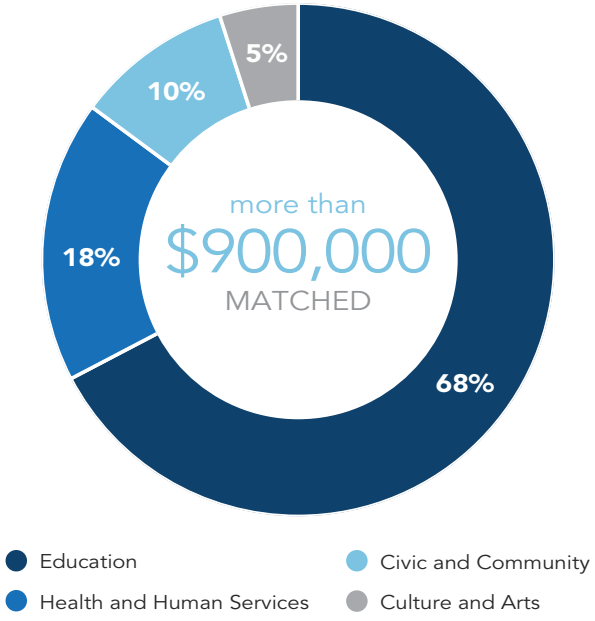
Employee Volunteerism

We recognize and support the positive impact our employees make. From volunteering as youth sports coaches to building homes and planting trees, to serving on city government commissions, school boards and chambers of commerce, Murphy employees enthusiastically give their time and talents, to strengthen their communities. In 2021, due to the pandemic, we had to significantly scale back on company-organized volunteer events. Despite this, our employees volunteered a total 545 hours through company hosted events at the Houston Food Bank, Volunteers of America Empowerment Center and Read Across America. In recognition of our 2021 voluntary efforts with the Houston Food Bank, we were awarded the President's Volunteer Service Award.

Employee Gift Matching Program

Through our Employee Gift Matching Program, offered to employees and non-employee directors in North America, we match qualified donations on a dollar-for-dollar basis. In 2021, Murphy matched over $900,000 in employee and non-employee director gifts. In particular, we have built a legacy of contributing to educational institutions and programs. Through the Employee Gift Matching Program, the Company increases its match of employee contributions 2:1 for educational institutions.

2021 Employee Gift Matching Program Donations



United Way Partnership

Murphy employees annually participate in a campaign to raise funds and volunteer time for the United Way. Murphy's long-term partnership with the United Way began over 50 years ago, and has served to increase employees' awareness of the needs of their fellow citizens. In 2021, Murphy's North America locations contributed over $320,000 to the local United Way through its employees' generosity and gift matching. Murphy is recognized as having achieved United Way of Greater Houston's 2021-2022 Community Campaign Honor Roll, President's Division. Over the last 20 years, Murphy and its employees contributed a total of more than $15 million to benefit United Way organizations, including the Salvation Army, the American Red Cross and the Boys & Girls Clubs of America.

GOVERNANCE AND RESPONSIBLE BUSINESS PRACTICES

"Our governance practices provide powerful alignment between our business and ESG goals."

GHG Intensity Goal
added to annual incentive plan

Cybersecurity
continuous enhancements

Supplier Code of Conduct
published in 2022

Our **Board of Directors and executive leadership team** are committed to sustainable business practices, which are premised on our Company's purpose, mission, vision, values and behaviors. Murphy's executive leadership team, with the guidance and support of our Board, implements, monitors and, if necessary, adjusts our sustainability efforts to serve the long-term interests of the Company and its stakeholders, including the communities in which we operate. Our governance practices provide powerful alignment between our business and ESG goals.

GOVERNANCE HIGHLIGHTS

Our Board assumes an active role in providing oversight of the management team in developing and executing on our business strategy. The Board is led by strong independent leadership in the form of an independent Chairman, and 92% of our directors are independent. Our Board has adopted governance practices that promote direct accountability to shareholders, including the annual election of each of our directors and the requirement to receive majority support.

BOARD EXPERTISE

As fiduciaries for shareholders, the Board believes it is important for directors to possess a diverse array of backgrounds, skills and achievements that are crucial to leading the Company in challenging times for the energy industry. Our directors' qualifications include experience in accounting/audit, business development and corporate strategy, corporate governance, finance/banking, government relations/public policy, law, and risk management. The Board's diversity encompasses — among other elements — race, gender, age and experience. As of March 25, 2022, 23% of the Board are female. In addition, 77% of our directors have experience in the areas of environmental protection, health and safety and human capital/compensation and 85% of our directors have expertise in the oil and natural gas industry. For more information on our Board, and to view its members' Skills, Qualifications, and Diversity Matrix, see our **2022 Proxy Statement**.

EXECUTIVE COMPENSATION

Sound compensation governance is a pillar of the corporate culture at Murphy. The Board's Executive Compensation Committee and our management team continually seek to improve the alignment of our compensation programs with the interests of our shareholders, with industry developments, and with our ESG goals. For over a decade, the Committee has included a safety metric in the Annual Incentive Plan (AIP) performance metrics, reflecting the Company's emphasis on safe operations by both employees and contractors. Each year, the Committee also includes a spill rate in the AIP ESG performance metrics, which highlights the Company's continued commitment to environmentally sound operations. In 2021, the committee modified the Company's AIP ESG performance metrics to include a greenhouse gas (GHG) emissions intensity metric, for which aggressive goals must be achieved to earn a payout, to further emphasize the Company's climate goals. Metrics are set to deliver top-quartile industry performance, and inclusion of these metrics reinforces the Company's commitment to safe and environmentally sound operations.

Expert and Independent Board

12 out of 13 directors are independent

Separate Chief Executive Officer and Chairman

Board of Directors elected with average vote of 97% over past 5 years

Long-term industry, operating and health, safety and environment expertise

SUSTAINABILITY GOVERNANCE

For details on the Board and managerial oversight of sustainability, please refer to Our Approach to ESG in the Introduction on page 11.

Board of Directors Highlights[18]

92% Independent	**85%** Oil and Natural Gas Experience	**77%** Health, Safety and Environment Experience
23% Tenure of 5 Years or Less	**23%** Diverse by Gender	**8%** Diverse by Race/Ethnicity

18 As of March 25, 2022.

STAKEHOLDER ENGAGEMENT

We view our stakeholders as important partners and actively engage with them regularly to share our strategy, goals and progress and to receive their feedback. Given the importance of stakeholder engagement to our Company, our Senior Vice President, General Counsel and Corporate Secretary and our Vice President, Investor Relations and Communications, oversee our robust engagement framework. Input from stakeholders help to guide and improve our efforts in the short and long term.

A summary of our key stakeholder categories and details is listed below.

Stakeholders	Engagement Channels	Details
Shareholders	• Annual shareholder meeting • Equity conferences, debt conferences and investor roadshows • One-on-one investor discussions, including ESG-focused meetings	Our Approach to ESG, page 8 Shareholder Engagement, see below **2022 Proxy Statement** Contact our **Investor Relations team** Contact our **Corporate Secretary**
Employees	• Quarterly town hall meetings • Employee engagement surveys • Murphy Ambassador Program • Employee resource groups • Professional development programs • Wellness programs • Safety trainings and Safety Culture surveys • Ethics trainings and hotline	Investing in Our People, page 51 Building a Culture of Safety, page 46 **Worldwide Health, Safety and Environmental Policy** **Third-Party Ethics Hotline**
Suppliers and Contractors	• Assessments and engagement meetings • Quarterly Business Reviews • Reviews and audits • Safety trainings and Safety Culture surveys, and exercise drills • Monthly safety meetings • ISNetworld (ISN)	Building a Culture of Safety, page 46 Contractor Management, page 49 **Supplier Code of Conduct** **Worldwide Health, Safety and Environmental Policy**
Landowners, Indigenous Groups and Local Communities	• Designated grievance and resolution mechanisms for different parties, including Indigenous populations • Ongoing engagement with parties • Community outreach, volunteering efforts and philanthropy	Working With Communities, page 58 Investing in Our Communities, page 60 **Owner relations number and website** **Human Rights Policy** **Indigenous Rights Policy** **The El Dorado Promise Scholarship Program**
Government and Regulatory Agencies	• Participation in select HSE meetings, inspections and events • Legislative and regulatory engagement • Industry collaboration groups and trade associations	Health and Safety Certification and Audit, page 46 Public Advocacy, page 70
Others: Peers, Universities, NGOs	• Peer engagement through working groups, seminars and trade associations • Joint research programs • Outreach and partnership with NGOs	Industry Associations, page 70 Investing in Our Communities, page 60

SHAREHOLDER ENGAGEMENT

We value the feedback and insights that we receive from our shareholders through ongoing dialogue. During 2021, we participated in 15 investor events and met with over 200 investors. In addition to regular discussions with shareholders regarding our financial results, members of our executive leadership team proactively engaged in discussions with institutional investors to solicit their input on the strengths and weaknesses of the Company's strategy, corporate governance, executive compensation and sustainability.

In 2021, we offered one-on-one discussions with our 25 largest institutional investors, who hold more than a combined 60% ownership interests in Murphy. Several significant investors, holding over 40% ownership interests in our Company, responded favorably to the opportunity to share their views and provided meaningful input. For more information on our shareholder engagement process and our responsive program changes in recent years including 2021, please see our **2022 Proxy Statement**.

RESPONSIBLE BUSINESS PRACTICES

ENTERPRISE RISK MANAGEMENT

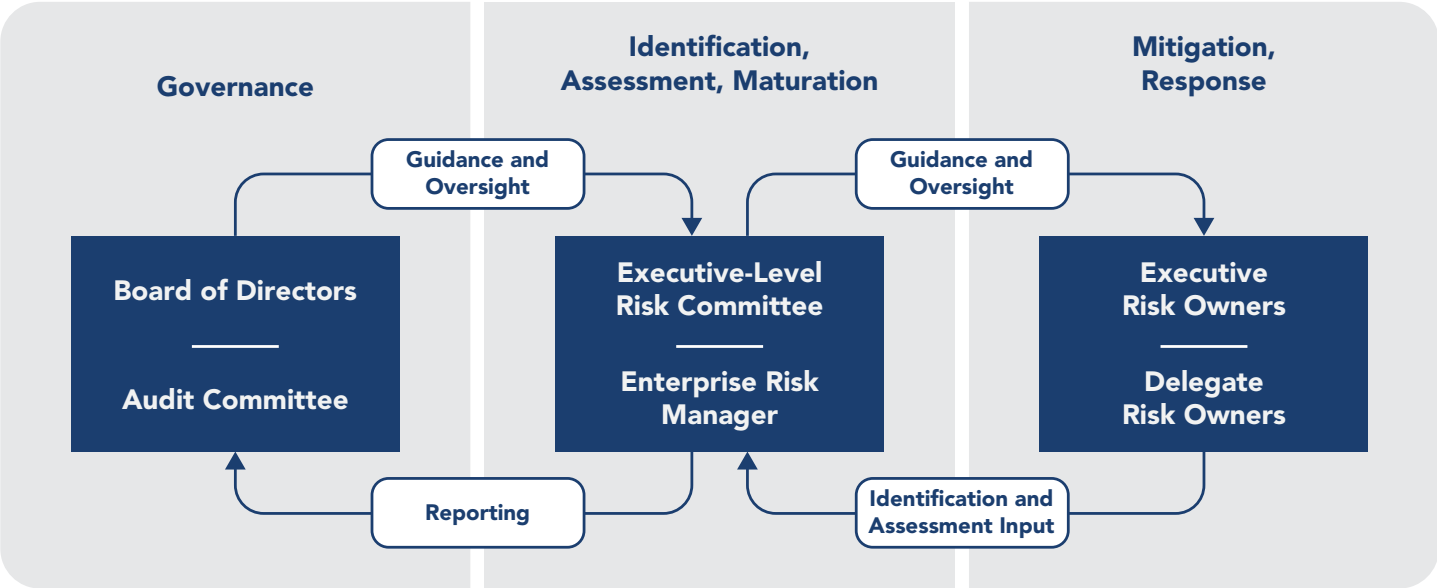
Our annual Enterprise Risk Management (ERM) process is run with the goal of integrating risk awareness and mitigation at all levels of the organization, from strategy to planning, execution, operations, partnering and financing. Our process covers major categories of uncertainty, including risks to our business model, finances, operational performance, environmental outcomes, regulatory compliance and reputation.

The Enterprise Risk Manager and the executive-level Risk Committee collaborate to identify, assess and mitigate the major risks facing the Company. They also work together on a roadmap for continually enhancing the ERM process. In addition, the Enterprise Risk Manager has specific oversight of our insurance program (insurable risks) and credit portfolio (counterparty risks).

In the process of developing and prioritizing a Risk Register, the manager and the committee work closely with executive-level and next-level managers to identify and assess the drivers of uncertainty that affect the Company's operations and results. One outcome of this process is a clear matching of risk drivers to risk owners. In turn, the manager, the committee and the risk owners collaboratively develop plans for mitigating and responding to specific risks.

The Enterprise Risk Manager and the Risk Committee report regularly on their activities to the Audit Committee of the Board of Directors and, annually, to the full Board of Directors. In return, the manager and committee receive direction on processes and priorities from the Audit Committee and the Board.

Enterprise Risk Management



CYBERSECURITY

Murphy has a dedicated Information Technology (IT) group that oversees cybersecurity, digital innovation and digital excellence, with a focus on enabling business success. From accurately capturing field sensor data in well pads to dynamically analyzing terabytes of seismic data, technology is an integral part of our daily operations. As a result, it is critical that our IT applications and systems function properly and that data is secured, regardless of natural disasters or global events.

To combat rapidly evolving cyberthreats, Murphy has invested in industry-leading security tools and is continuing to mature our processes to mitigate cybersecurity risks. Key elements of our approach include:

Cybersecurity Governance

Murphy's security culture starts at the top. Our Audit Committee of the Board of Directors, Chief Executive Officer and executive leadership team receives regular cybersecurity briefings. This enhanced visibility, in turn, allows the Board and executive leadership team to make timely, data-driven decisions ensuring that Murphy, its employees, investors and partners are adequately protected.

Murphy's cybersecurity framework is aligned with industry-recognized standards such as the NIST 800 series and ISO 27000 series. With rapidly evolving threats, our cybersecurity approach has shifted from an "incident response" mindset to a "continuous response" stance that focuses on continuous monitoring and analytics built on advanced machine learning and artificial intelligence.

Assessing our cyber readiness is an integral part of Murphy's Digital Risk Management program. We actively engage the Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA), our internal and external auditors, and managed security service providers (MSSPs) to perform regular security audits, vulnerability assessments, cyber-threat simulations and network architecture reviews. These evaluations allow us to continuously measure against industry best practices and improve our digital security posture.

Cybersecurity Risk Management
To manage cybersecurity risks, we focus on three areas:

Technology	People	Process
Murphy utilizes industry leading technologies to safeguard against sophisticated cyberattacks, such as Next-Gen Firewalls, advanced endpoint and email protection, multifactor authentication (MFA) and Managed Detection and Response (MDR).	All Murphy employees and contractors are required to complete a cybersecurity training annually and have access to an ever-evolving catalog of over 200 cybersecurity courses.	Murphy targets integration of best-in-class cyber hygiene across all key business and operational processes. Continuous engagement with our internal and external stakeholders underpins our efforts to prevent cybersecurity breaches.
In response to the increasing threat climate, Murphy further enhanced security of its devices by aligning protection of removable media, browsers, remote access protocols and admin tools in line with the hardened NIST and ISO standards.	Murphy IT employs an industry-leading security awareness and education platform to assess our users' vigilance towards social engineering attacks, such as phishing and Business Email Compromise (BEC), on an ongoing basis and auto-enrolls high-risk users in targeted awareness training campaigns.	Murphy has forged strong partnerships with top security companies and communities of interest. Our security professionals routinely engage with these industry leaders to discuss emerging cyberthreats and adversaries. These collaborations provide Murphy insights into oil and natural gas industry specific threat intelligence, enabling us to adjust our response controls.
We ensure our business-critical systems are available 24/7/365 by employing a proactive disaster avoidance strategy that focuses on resilience in addition to recovery. By building effective redundancy in our business-critical systems, we have reduced the recovery time of these systems and mitigated adverse business risks.	Our security professionals recognize the criticality of our workforce remaining up to date on emerging threats, breaches, and cyber risks. To engage our personnel, we have established communication channels to educate our users on best practices, security guidelines, and preventative measures to safeguard against cyberthreats.	With the business need for rapidly evolving skills and technologies, we understand the importance of engaging service organizations to remain competitive. Murphy holds these service providers to a high standard and routinely reviews auditor-issued reports on the design and effectiveness of these service organizations, control activities.

As of July 2022, Murphy has not experienced any material impacts to our business, operations or reputation due to cyberattacks or other security-related incidents. However, we recognize cyberthreats are constantly evolving and are committed to cultivating a culture of security, remaining vigilant and continually improving our cybersecurity environment and controls.

ETHICAL BUSINESS CONDUCT

The Murphy **Code of Business Conduct and Ethics** (Code of Business Conduct) provides clear direction to all employees and suppliers on the requirement that everyone working for and with Murphy behaves ethically and in accordance with our policies and standards.

We are committed to human rights and Indigenous rights and have published our policies on our website. Further discussion of human rights and Indigenous rights can be found in the Community Engagement section of this report (see page 59).

Ethics Training and Reporting

The Code of Business Conduct applies to all directors and employees of Murphy Oil Corporation and its subsidiaries, as well as all contractors who perform work for Murphy, work at Murphy's facilities or otherwise perform work on behalf of Murphy. Individuals either hired as an employee or engaged as a contractor are required to complete training on the Code of Business Conduct, as well as specific training regarding topics including anti-bribery and corruption, ethics and anti-harassment. In 2022, we published a comprehensive **Supplier Code of Conduct**, which is discussed on page 71.

Our executive leadership team is trained on and expected to adhere to an **enhanced standard** of compliance with the rules that impose additional expectations regarding their conduct. This additional code is designed to protect and preserve stakeholders' interests.

We take violations of our policies seriously and inform employees that it is their duty to report suspected violations, since it can damage all employees and shareholders. Employees are encouraged to report infractions of the Code of Business Conduct and Ethics and can do so anonymously through a third-party ethics hotline. Employees may contact the company's Corporate Compliance Officer or the Audit Committee directly for any matter regarding the code of conduct including those involving accounting, internal accounting or auditing matters. Our policy and process is designed to prevent retaliation against anyone that submits a inquiry or report regarding compliance with the Code of Business Conduct. We assure employees that there will be no retaliation for reporting suspected problems in good faith, and those who retaliate will face disciplinary action. Our auditors periodically conduct audits to ensure internal compliance with the Code of Business Conduct, and the results of these audits, as well as statistics regarding reports and their resolution, are reported quarterly to the Audit Committee of the Board of Directors.

A Compliance and Ethics website on the company's intranet emphasizes our commitment and facilitates access for our workforce to pertinent resources. The website includes a letter and video introduction from our CEO reiterating our commitment to our policies and values. It also includes readily accessible policies, FAQs, news and links to make reports or inquiries. Further, each month, the Corporate Compliance Officer issues a newsletter to keep employees up to speed on topics related to compliance and ethics.

Murphy's internal audit team conducts periodic reviews to ensure compliance with our Code. We regularly monitor the hotline and other reports of potential misconduct and address them consistently, promptly and thoroughly. We investigate violations of any of these standards and, when necessary, apply disciplinary or corrective action.

Committed to Ethics

The Code of Business Conduct is designed to emphasize the commitment necessary for those working for Murphy to act with integrity, including:

- Commitment to corporate citizenship requires compliance with applicable laws and regulations.
- Commitment to each other promotes Murphy as a safe place to work, including freedom from bullying, discrimination and harassment.
- Commitment to global business laws emphasizes that antitrust and other competition laws are adhered to and relationships with government officials throughout the world are properly managed.
- Commitment to shareholders ensures transparency in public disclosures and the protection of confidential information and intellectual property.
- Commitment that Murphy will not, and will not tolerate any attempt to, retaliate against anyone who makes a good faith report regarding a possible violation of the Code of Business Conduct.

The Code of Business Conduct also addresses the need to avoid conflicts of interest and prohibits competitive relationships, misuse of company assets and giving or receiving inappropriate gifts and favors. Because we take the issue so seriously, Murphy has a separate **Anti-Bribery and Corruption Policy**. A detailed definition of what is considered bribery and corruption is outlined in section II of the policy.

PUBLIC ADVOCACY

PUBLIC POLICY AND POLITICAL DISCLOSURES

International, federal, state and local policy initiatives can positively or negatively impact the success of our Company. So, it is imperative that we actively engage in public policy where appropriate. We promote laws and regulations that allow the development of resources in a safe, efficient and environmentally responsible manner.

We comply with all applicable laws and regulations pertaining to our advocacy efforts with government officials. In the US, this includes the online **disclosure of federal lobbying activities** published through compliance with the Lobbying Disclosure Act and the **disclosure of federal political contributions** through compliance with the Federal Election Campaign Act.

In Canada, we **disclose payments to the government** in compliance with the Extractive Sector Transparency Measures Act (ESTMA). ESTMA reporting contributes to global efforts to increase transparency and deter corruption in the extractive sector by requiring extractive entities to publicly disclose, on an annual basis, specific payments made to all governments in Canada and abroad.

INDUSTRY ASSOCIATIONS

Murphy shares best practices, develops industry standards and expands our public and political advocacy through membership in allied industry trade associations and related initiatives. Murphy reviews our trade association memberships on a regular basis to ensure alignment on industry and policy priorities, as well as to ensure the organizations' effectiveness and value for our Company and shareholders.

Murphy is currently a member of the following industry trade associations and initiatives: American Petroleum Institute, Canadian Association of Petroleum Producers, Center for Offshore Safety, Environmental Partnership, Greater Houston Partnership, HWCG, Ipieca, Louisiana Mid-Continent Oil and Gas Association, National Ocean Industries Association, Offshore Operators Committee, National Petroleum Council, Texas Oil & Gas Association, and US Oil & Gas Association.

Our positions on key ESG issues do not always align exactly with those of the industry associations and other groups of which we are members. Therefore, our membership does not necessarily indicate our support for all the organizations' positions.

SUPPLY CHAIN MANAGEMENT

Our suppliers are critical to the success and delivery of our operational goals. In 2021, we procured approximately $1.2 billion in commercial goods and services from over 1,800 suppliers. We seek to work with suppliers that share Murphy's core values of safety, social responsibility and continuous improvement as outlined in our Code of Business Conduct.

We strive to conduct all contracting and procurement activities in an ethical manner, in accordance with our Procurement Policy and applicable laws. The policy defines guidelines for specific sourcing requirements, conduct for the evaluation of formal tenders, contracting practices for recurrent goods and services and required segregation of duties.

As part of our procurement process for operational vendors, a supplier qualification process is conducted in collaboration with various parts of the organization to ensure vendor suitability, based on an array of considerations. These considerations could include:

- Competitiveness
- Technical
- Compliance history/record
- Past performance
- Geographic location
- Safety record
- Financial stability
- Environmental record
- Business alignment
- Local content

As part of our standard contracts, suppliers must comply with all applicable laws and regulations, including in HSE, conflicts of interest, anti-corruption/Foreign Corrupt Practices Act, and must maintain any applicable licensing or permitting requirements for their services. These contracts are required for all operational suppliers before work is begun. In addition, Murphy actively contracts with local and Indigenous suppliers across various international regions where we operate, in accordance with local law.

SUPPLIER DIVERSITY

We are working to increase the diversity of our supplier base as part of our commitment to diversity, equity and inclusion. We know that a diverse supplier base allows us to benefit from the creativity and differing perspectives that each vendor brings to our operations.

Based on questionnaires completed by approximately 750 of our qualified North American vendors in 2021, 22% of our suppliers reported having some level of diverse ownership within their organization (qualified as being minority-, women-, veteran-, LGBTQ-owned or designated as a small business owner by the US Small Business Administration).

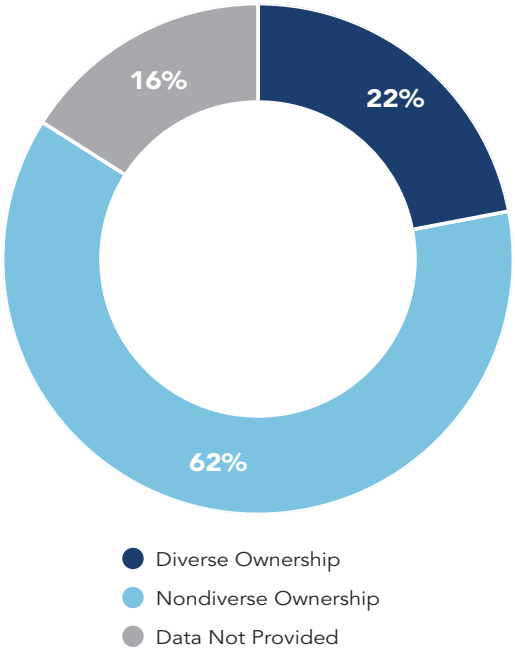
Murphy constantly assesses improvement opportunities and works with our vendor base to collaboratively advance sustainability goals. In this spirit, we have continued to expand our sustainability practices and reporting. In 2021, we have expanded the ESG data we collect from suppliers to include acknowledgment of internal supplier policies relating to a range of sustainability topics. Some highlights include:

- A majority of our qualified suppliers report having both formal human rights and diversity, equity and inclusion policies in place
- 84% of our qualified vendor base report having an internal Code of Conduct for their employees
- 87% report also having a workplace anti-discrimination policy

Additionally, to further emphasize robust ethical standards across our supply base, in 2022, Murphy published a comprehensive **Supplier Code of Conduct** to which we expect all our business partners to adhere. This Supplier Code of Conduct ensures that all our various suppliers, including security contractors, conduct themselves in accordance with the ethics and values expressed in Murphy's own internal **Code of Business Conduct and Ethics**. In addition to publicly publishing the Supplier Code of Conduct, we also require that all qualified suppliers provide an annual acknowledgment of the code via our ISNetworld portal for tracking purposes and will be expanding our compliance audits to include various ESG topics related to the code.

We believe that Murphy and our business partners holding each other mutually accountable to high ethical standards will help ensure that all parties strive to Murphy's "Do Right Always" ideal.

Diversity of Qualified Supplier Base



PERFORMANCE DATA AND ASSURANCE

Performance Data

	Units	2021	2020	2019	2018	2017
Greenhouse Gas (GHG) Emissions[1]						
Operated Scope 1 Emissions	metric ton CO_2e	925,239	1,002,338	1,219,971	2,174,224	2,086,207
Operated Scope 1 Emissions From Flared Hydrocarbons	metric ton CO_2e	238,139	308,754	484,701	1,108,320	1,067,788
Operated Scope 1 Emissions From Other Vented Emissions	metric ton CO_2e	87,100	126,961	125,188	112,065	99,719
Operated Scope 1 Emissions From Combustion	metric ton CO_2e	569,976	536,777	576,871	807,735	782,996
Operated Scope 1 Emissions From Process Emissions	metric ton CO_2e	7,146	6,980	7,965	7,617	7,893
Operated Scope 1 Emissions From Fugitive Emissions/Leaks	metric ton CO_2e	22,878	22,867	25,247	138,487	127,812
Operated Scope 1 Emissions by Source						
Flaring/Venting	%	35.2%	43.5%	50.0%	56.1%	56.0%
Fuel Combustion	%	61.6%	53.6%	47.3%	37.2%	37.5%
Other	%	3.3%	3.0%	2.7%	6.7%	6.5%
Operated Scope 1 Emissions From Methane	%	15.0%	18.0%	16.2%	16.2%	15.4%
Operated Scope 1 Emissions Covered Under a Regulatory Program	%	6.5%	7.3%	6.0%		
Operated Scope 2 Emissions[2]	metric ton CO_2e	42,028	33,974	30,349	51,499	54,346
Global Net Equity Scope 3 Emissions (Category 11: Use of Sold Products only)	metric ton CO_2e	20,600,000	21,500,000			

1 2020 emissions data has been restated to correct for the overreporting of flaring emissions for our Gulf of Mexico Delta House platform and BW Pioneer Floating Production Storage and Offloading (FPSO) facility. The overreporting was due to incorrect flaring emission factors provided by the Bureau of Ocean Energy Management (BOEM), which the US Environmental Protection Agency (EPA) Mandatory Greenhouse Gas Reporting Rule requires offshore operators to use.

2 Electrical usage emissions factor for US: Ecometrica (2011); Canada: National Inventory Report to UN IPCC (1990-2011); location-based method.

Emissions Intensities[3]						
GHG Emissions Intensity *(Total Scope 1 + Scope 2 Emissions) ÷ Gross Operated Production*	metric ton CO_2e/ MMBOE	12,950	12,809	16,234	25,912	25,124
Total Scope 1 + Scope 2 Emissions	metric ton CO_2e	967,267	1,036,312	1,250,320	2,225,724	2,140,553
Methane Intensity *Methane Released ÷ Methane Produced*	%	0.21%	0.27%	0.27%	0.32%	0.32%
Methane Intensity *Amount of Operated Global Scope 1 Methane Emissions ÷ Gross Operated Production*	metric ton CO_2e/ MMBOE	1,852	2,228	2,564	4,111	3,773
Flaring Intensity *Flaring Volume ÷ (Gross Operated Production x 10^6)*	Mcf/BOE	0.03	0.05			
Flaring Volume (Routine and Non-Routine)	Mcf	2,469,638	3,724,796			
Flaring Intensity *Amount of Operated Global Scope 1 Emissions from Flared Hydrocarbons ÷ Gross Operated Production*	metric ton CO_2e/ MMBOE	3,188	3,816	6,293	12,904	12,533

3 2020 emissions data has been restated to correct for the overreporting of flaring emissions for our Gulf of Mexico Delta House platform and BW Pioneer Floating Production Storage and Offloading (FPSO) facility. The overreporting was due to incorrect flaring emission factors provided by the Bureau of Ocean Energy Management (BOEM), which the US Environmental Protection Agency (EPA) Mandatory Greenhouse Gas Reporting Rule requires offshore operators to use.

	Units	2021	2020	2019	2018	2017
Emissions Intensities[3] (cont.)						
% of Produced Gas Flared *Flaring Volume ÷ Gross Operated Natural Gas Produced*	%	1.4%	2.0%			
Gross Operated Natural Gas Produced	Mcf	182,932,176	183,586,483			
Gross Operated Production	MMBOE	74.69	80.91	77.02	85.89	85.20

3 2020 emissions data has been restated to correct for the overreporting of flaring emissions for our Gulf of Mexico Delta House platform and Pioneer Floating Production Storage and Offloading (FPSO) facility. The overreporting was due to incorrect flaring emission factors provided by the Bureau of Ocean Energy Management (BOEM), which the US Environmental Protection Agency (EPA) Mandatory Greenhouse Gas Reporting Rule requires offshore operators to use.

Energy Use						
Total Energy Use	Gigajoules	10,728,291				
Energy Intensity	Gigajoules/ BOE	0.14				
Air Quality						
Nitrogen Oxide (NO_x) Emissions	metric tons	2,831	2,848	3,196	2,667	2,215
Sulfur Dioxide (SO_2) Emissions	metric tons	537	553	798	547	576
Volatile Organic Compounds (VOCs) Emissions	metric tons	2,080	2,236	2,368	2,638	1,536
Particulate Matter (PM_{10}) Emissions	metric tons	222	265	307	236	233
Onshore Operations Water Management						
Total Fresh Water Withdrawn	thousand cubic meters	1,284	2,396	5,268	4,923	4,554
Groundwater	thousand cubic meters	308	770	3,768	2,189	2,880
Municipal	thousand cubic meters	0	0	0	0	42
Surface Water	thousand cubic meters	975	1,626	1,500	2,733	1,632
Total Fresh Water Consumed	thousand cubic meters	1,105	1,810	5,151	4,360	4,662
Groundwater	thousand cubic meters	234	770	3,601	2,292	2,880
Municipal	thousand cubic meters	0	0	0	0	42
Surface Water	thousand cubic meters	871	1,040	1,550	2,067	1,739
Total Fresh Water Withdrawn in Regions with High or Extremely High Baseline Water Stress	%	0%	0%	0%	0%	0%
Total Fresh Water Consumed Intensity *Freshwater Consumed ÷ Number of Wells Completed in That Year*	thousand cubic meters per well completion	30	46	49	51	48

	Units	2021	2020	2019	2018	2017
Onshore Operations Water Management (cont.)						
Number of Wells Completed in that Year	#	37	39	105	86	97
Total Water Consumed for Murphy Operations (Fresh Water and Recycled Water)	thousand cubic meters	1,331	1,895	5,412	4,534	4,721
Produced Water Recycled for Murphy Operations	thousand cubic meters	226	85	261	174	59
Produced Water Recycled for Murphy Operations and Other Operators	thousand cubic meters	241	85	280	196	59
Total Recycled Water (Consumed by Murphy and Other Operators) of Total Water Consumed	%	18.1%	4.5%	5.2%	4.3%	1.2%
Volume of Produced Water and Flowback Generated	thousand cubic meters	1,592	932	1,887	1,784	2,172
Produced Water and Flowback Discharged	%	0%	0%	0%	0%	0%
Produced Water and Flowback Injected[4]	%	83.5%	84.9%	84.4%	90.3%	96.5%
Produced Water and Flowback Recycled (Including Water Shared with Other Operators)[4]	%	15.1%	9.1%	14.9%	11.0%	2.7%
Hydrocarbon Content in Discharged Water	metric tons	0	0	0	0	0
Hydraulically Fractured Wells for Which There Is Public Disclosure of All Fracturing Fluid Chemicals Used	%	100%	100%	100%	100%	100%
Hydraulic Fracturing Sites Where Ground or Surface Water Quality Deteriorated Compared to a Baseline	%	0%	0%	0%	0%	0%

4 Data does not add to 100% exactly due to: calendar year of water generation versus use, evaporation and pond bottom levels.

Offshore Operations Water Management						
Produced Water Discharged to Sea	thousand cubic meters	1,227	841	650		
Hydrocarbon Concentration[5]	mg/L	9.62	13.16	13.93		
Hydrocarbon Content in Produced Water Discharged to Sea	metric tons	11.8	11.07	9.05		

5 US EPA regulatory limit is 29 mg/L.

Waste Management						
Total Waste Generated (Solid and Semi-Solid)	metric tons	72,916	94,588			
Non-Hazardous Wastes	metric tons	71,696	94,552			
Hazardous Wastes[6]	metric tons	1,220	36			

6 Year-over-year change in hazardous waste volume attributable to classification change based on waste type in Canada.

	Units	2021	2020	2019	2018	2017
Spills,[7] Biodiversity Impact, Critical Incident Risk Management and Other Metrics						
Hydrocarbon Spills (Same as Number of Hydrocarbon Spills)	#	0	4	1	5	4
Hydrocarbon Spills (Same as Aggregate Volume of Hydrocarbon Spills)	barrels	0	81	83	380	1,475
Volume of Hydrocarbon Spills in Arctic	barrels	0	0	0	0	0
Volume of Hydrocarbon Spills Near Shorelines With ESI Rankings 8-10	barrels	0	0	0		
Volume Recovered	barrels	0	54	0		
Proved Reserves in or Near Sites With Protected Conservation Status or Endangered Species Habitat	%	1%	1%	1%		
Probable Reserves in or Near Sites With Protected Conservation Status or Endangered Species Habitat	%	N/A	N/A	N/A		
Process Safety Event (PSE) Events for Loss of Primary Containment (LOPC) of Greater Consequence (Tier 1)	#	5	3	5	9	
Process Safety Event (PSE) Rates for Loss of Primary Containment (LOPC) of Greater Consequence (Tier 1)	per 200,000 work hours	0.20	0.12	0.10	0.15	
Environmental Fines and Penalties (Operated)	$ Thousand	25	0			

7 Spill event ≥ 1 BBL and outside of containment.

Safety						
Fatality Rate, Employees + Contractors	per 200,000 work hours	0	0	0	0	0
Fatality Rate, Employees	per 200,000 work hours	0	0	0	0	0
Fatality Rate, Contractors	per 200,000 work hours	0	0	0	0	0
Total Recordable Incident Rate (TRIR), Employees + Contractors	per 200,000 work hours	0.28	0.28	0.52	0.40	0.40
Total Recordable Incident Rate (TRIR), Employees	per 200,000 work hours	0.13	0.12	0.35	0.21	0.07
Total Recordable Incident Rate (TRIR), Contractors	per 200,000 work hours	0.36	0.36	0.57	0.45	0.50
Near Miss Frequency Rate, Employees + Contractors	per 200,000 work hours	1.30	2.14	1.40	1.43	1.13
Near Miss Frequency Rate, Employees	per 200,000 work hours	1.54	2.34	1.50	1.86	1.27
Near Miss Frequency Rate, Contractors	per 200,000 work hours	1.19	2.05	1.37	1.29	1.09

	Units	2021	2020	2019	2018	2017
Safety (cont.)						
Lost Time Incident Rate (LTIR), Employees + Contractors	per 200,000 work hours	0.04	0.08	0.08	0.15	0.12
Lost Time Incident Rate (LTIR), Employees	per 200,000 work hours	0.00	0.12	0.09	0.14	0.00
Lost Time Incident Rate (LTIR), Contractors	per 200,000 work hours	0.06	0.06	0.08	0.16	0.16
Average Hours of Health, Safety and Emergency Response Training, Employees (Based on Total Employee Count as of Year-End)	per total number employees	6	15	14		
Average Hours of Health, Safety and Emergency Response Training, Contractors (US-Based Only)	per total number contractors	19	13	18		
Preventable Vehicle Incident Rate (Employee and US Onshore Only)	per million miles driven	1.72	1.24	1.43	1.78	
Employee Diversity, Equity and Inclusion[8, 9]						
Employee Workforce Metrics						
Employee Count (Total Company)	#	696	675	823	1,108	1,128
Median Age	years	43	42	43	42	43
Employee Turnover (Voluntary)	%	6%	6%	10%	8%	7%
Representation of Women (US and International)						
Executive and Senior-Level Managers	%	12%	12%	14%	16%	17%
First- and Mid-Level Managers	%	18%	17%	22%	20%	20%
Professionals	%	34%	34%	34%	36%	41%
Other (Administrative Support and Field)	%	7%	7%	20%	20%	26%
Total	%	21%	21%	27%	28%	32%
Representation of Minorities (US-Based Only)						
Executive and Senior-Level Managers	%	18%	12%	9%	8%	5%
First- and Mid-Level Managers	%	22%	23%	24%	24%	20%
Professionals	%	34%	33%	29%	25%	28%
Other (Administrative Support and Field)	%	31%	31%	36%	32%	30%
Total	%	30%	30%	29%	27%	26%

8 2017 and 2018 data includes employees in Malaysia.

9 The employee count reduction in 2020 is primarily driven by El Dorado, Arkansas, and Calgary, Canada, office closures.

	Units	2021	2020	2019	2018	2017
Security, Human Rights, Rights of Indigenous People and Community Relations						
Proved Reserves in or Near Areas of Conflict	%	0%	0%	0%		
Probable Reserves in or Near Areas of Conflict	%	N/A	N/A	N/A		
Proved Reserves in or Near Indigenous Land	%	0%	0%	0%		
Probable Reserves in or Near Indigenous Land	%	N/A	N/A	N/A		
Number of Nontechnical Delays	#	0	0	0		
Duration of Nontechnical Delays	days	0	0	0		
Reserves Valuation and Capital Expenditures						
Amount Invested in Renewable Energy	$	98,570	7,200	53,000		
Revenue Generated by Renewable Energy Sales	$	0	0	0		
Business Ethics and Transparency						
Proved Reserves in Countries That Have the 20 Lowest Rankings in Transparency International's Corruption Perception Index	%	0%	0%	0%		
Probable Reserves in Countries That Have the 20 Lowest Rankings in Transparency International's Corruption Perception Index	%	N/A	N/A	N/A		

API Template 2.0 for GHG Reporting

This voluntary Template is intended for individual company use. API will not be aggregating data reported by individual companies or compiling individual company reporting.

General

Date:	July 31, 2022
IPCC AR GWP:	AR4
Basis:	Operational Control

No.	Indicator	Units	2020	2021	Comments
1. Direct GHG Emissions (Scope 1)					
1.1	Direct GHG Emissions (Scope 1) - All GHGs	million metric tons CO_2e	1.00	0.93	
1.1.1	Upstream - All GHGs	million metric tons CO_2e	1.00	0.93	
1.1.1.1	CH4	million metric tons CO_2e	0.18	0.14	
1.1.1.2	Upstream Flaring (All GHGs; subset of Scope 1)	million metric tons CO_2e	0.31	0.24	
1.1.1.3	Volume of Flares	MMcf	3,725	2,470	
1.1.2	Midstream - All GHGs	million metric tons CO_2e	N/A	N/A	
1.1.2.1	CH4	million metric tons CO_2e	N/A	N/A	
1.1.3	Downstream - All GHGs	million metric tons CO_2e	N/A	N/A	
1.1.4	LNG - All GHGs	million metric tons CO_2e	N/A	N/A	
1.1.5	Oil and Natural Gas Field Services - All GHGs	million metric tons CO_2e	N/A	N/A	
2. Indirect GHG Emissions from Imported Energy (Scope 2)					
2.1	Indirect GHG Emissions from Imported Electricity + Heat + Steam + Cooling (Scope 2, Market-Based)	million metric tons CO_2e	0.03	0.04	Our Scope 2 utilizes location-based method
2.1.1	Upstream - All GHGs	million metric tons CO_2e	0.03	0.04	
2.1.2	Midstream - All GHGs	million metric tons CO_2e	N/A	N/A	
2.1.3	Downstream - All GHGs	million metric tons CO_2e	N/A	N/A	
2.1.4	LNG - All GHGs	million metric tons CO_2e	N/A	N/A	
2.1.5	Oil and Natural Gas Field Services - All GHGs	million metric tons CO_2e	N/A	N/A	
3. GHG Mitigation					
3.1	GHG Mitigation from CCUS, Credits, and Offsets	million metric tons CO_2e	N/A	N/A	
3.1.1	Carbon Capture Utilization or Storage (CCUS) - All GHGs	million metric tons CO_2e	N/A	N/A	
3.1.2	Renewable Energy Credits - (RECs for Indirect Emissions) - All GHGs	million metric tons CO_2e	N/A	N/A	
3.1.3	Offsets - All GHGs	million metric tons CO_2e	N/A	N/A	

No.	Indicator	Units	2020	2021	Comments
4. GHG Emissions Intensity					
4.1	Scope 1 + Scope 2 Upstream GHG Intensity	million metric tons CO_2e/MBOE	0.00001281	0.00001295	
4.2	Scope 1 Upstream Methane Intensity	million metric tons CO_2e/MBOE	0.000002227	0.00000185	
4.3	Scope 1 Upstream Flaring Intensity	million metric tons CO_2e/MBOE	0.00000382	0.00000319	
4.4	Scope 1 + Scope 2 Liquids Pipelines Transmission GHG Intensity	million metric tons CO_2e/throughput in barrel-miles	N/A	N/A	
4.5	Scope 1 Natural Gas Pipelines Transmission & Storage Methane Intensity	%	N/A	N/A	
4.6	Scope 1 + Scope 2 Downstream GHG Intensity	million metric tons CO_2e/MBOE	N/A	N/A	
4.7	Scope 1 + Scope 2 LNG GHG Intensity	million metric tons CO_2e/MMcf	N/A	N/A	
4.8	Additional Intensity Metrics, if applicable (e.g., further disaggregated by constituent GHG or by more granular business asset, and/or for additional business assets beyond these categories)	No			
5. Indirect GHG Emissions from Consumers' Use of Products (Scope 3)					
Attention: Scope 3 emissions from the use of sold products are released when the hydrocarbons produced and marketed by natural gas and oil companies are combusted by consumers. GHG emissions from the use of sold products are not within a company's control, and it should be noted that not 100% of the hydrocarbon products produced/refined/sold by the company may be combusted at the end of the product lifecycle. Scope 3 emissions lead to extensive multiple counting of GHG emissions across the economy. Therefore, it is inaccurate to add together Scope 3 emissions reported by individual companies in order to ascertain GHG emissions from consumers' use of oil and natural gas products. As noted above, API will not be aggregating Scope 3 emissions data reported by individual companies. For example, an oil and natural gas company's Scope 3 emissions represent Scope 1 and/or Scope 2 emissions for fuel consumers (e.g., electric utility combusting natural gas, individuals using gasoline, manufacturers purchasing natural gas to power their operations). Scope 3 emissions on an individual company basis are not an indicator whether global GHG emissions are being reduced and do not provide context of how GHG emissions fit within the global energy system. Scope 3 emissions are also not indicative of a company's strategy to manage potential climate risks and opportunities nor of a company's commercial strategy or viability.					
5.1	Indirect GHG Emissions from Use of Sold Products (Category 11)	million metric tons CO_2e	21.5	20.6	See page 20 for details
6. Additional Climate-Related Targets and Reporting					
6.1	GHG Reduction Target(s)	Yes			Murphy Oil Corporation 2022 Sustainability Report, page 14
6.2	TCFD-informed reporting	Yes			Murphy Oil Corporation 2022 Sustainability Report, page 15
6.3	Additional Climate Reporting Resources	Include links in the Comments Box			Murphy Oil Corporation 2022 Sustainability Report, Content Indices, page 83
7. Third-Party Verification					
7.1	Assurance Level		Limited assurance engagement	Limited assurance engagement	Murphy Oil Corporation 2022 Sustainability Report, page 81
7.2	Assurance Provider		ERM CVS	ERM CVS	

Independent Assurance Statement to Murphy Oil Corporation

ERM Certification and Verification Services Inc. ('ERM CVS') was engaged by Murphy Oil Corporation ('Murphy Oil') to provide limited assurance in relation to the information set out below and presented in Murphy Oil's 2022 Sustainability Report for the reporting year ended December 31, 2021 ('the Report').

Engagement summary	
Scope of our assurance engagement	Whether the 2021 (absolute) data for the following selected indicators are fairly presented in the Report, in all material respects, in accordance with the reporting criteria: • Total Scope 1 GHG emissions [metric tonnes CO_2e] • Total Scope 2 GHG emissions [metric tonnes CO_2e] location-based method • Total Scope 1 and 2 GHG emissions [metric tonnes CO_2e]
Reporting period	January 1, 2021 – December 31, 2021
Reporting criteria	• WRI/WBCSD's GHG Protocol • US EPA Mandatory GHG Reporting Rule • Murphy Oil's internal reporting criteria and definitions (where relevant)
Assurance standard	International Standard on Assurance Engagements ISAE 3000 (Revised).
Assurance level	Limited Assurance
Respective responsibilities	Murphy Oil is responsible for preparing the Report and for the collection and presentation of the information within it. ERM CVS' responsibility is to provide a conclusion on the agreed scope based on the assurance activities performed and exercising our professional judgement.

Our conclusion

Based on our activities, as described below, nothing has come to our attention to indicate that the 2021 (absolute) data for the selected GHG emissions in the Report are not fairly presented, in all material respects, with the reporting criteria.

Emphasis of matter

Without affecting our conclusion above, we draw attention to Murphy Oil's footnote (#2 on page 73 of the Report) explaining that the emission factors used to calculate the company's indirect Scope 2 GHG emissions from purchased electricity relate to eGRID2010 Version 1.1 factors published in a Ecometrica Technical Paper in August 2011 and Canada's 2011 National Inventory Report to UN IPCC. Murphy Oil acknowledges this limitation and is working towards improving the accuracy of this emissions calculation in future reporting years.

Our assurance activities

A multi-disciplinary team of sustainability and assurance specialists performed a range of assurance procedures which varied across the disclosures covered by our assurance engagement, as follows:

- Telephone interviews with relevant staff at Murphy Oil's Headquarters to understand and evaluate the data management systems and processes (including systems and internal review processes) used for collecting and reporting the selected data.
- Virtual field visits to Catarina, USA; Front Runner, USA; and Tupper Montney, Canada to review local reporting processes and consistency of reported annual data with selected underlying source data for each indicator. We interviewed relevant staff, reviewed site data capture and reporting methods, checked calculations and assessed the local internal quality and assurance processes.
- An analytical review of the data from all sites and an assessment of the completeness and accuracy of the corporate data consolidation.
- A review at corporate level of a sample of qualitative and quantitative evidence supporting the reported information.
- An evaluation of the conversion factors and assumptions used.
- Review of the presentation of information relevant to the scope of our work in the Report to assess consistency with our findings.

The limitations of our engagement

Due to travel restrictions relating to COVID-19, our assurance activities consisted of desktop reviews of data and related information, and virtual meetings and interviews with Murphy Oil personnel.

The reliability of the assured information is subject to inherent uncertainties, given the available methods for determining, calculating or estimating the underlying information. It is important to understand our assurance conclusion in this context.

Our independence

ERM CVS is a member of the ERM Group. The work that ERM CVS conducts for clients is solely related to independent assurance activities and auditor training. Our processes are designed and implemented to ensure that the work we undertake with clients is free from bias and conflict of interest. ERM CVS and the staff that have undertaken work on this assurance exercise provide no consultancy related services to Murphy Oil in any respect.

Beth C. B. Wyke

Beth Wyke
Head of Corporate Assurance Services, Malvern, PA

July 15, 2022

ERM Certification and Verification Services Inc.
www.ermcvs.com | Email: post@ermcvs.com

Content Indices

SUSTAINABILITY ACCOUNTABILITY STANDARDS BOARD (SASB)

Code	Metric	Location
Greenhouse Gas Emissions		
EM-EP-110a.1	Gross global Scope 1 emissions, percentage methane, percentage covered under emissions-limiting regulations	Performance Data, page 73
EM-EP-110a.2	Amount of gross global Scope 1 emissions from: (1) flared hydrocarbons, (2) other combustion, (3) process emissions, (4) other vented emissions and (5) fugitive emissions	Performance Data, page 73
EM-EP-110a.3	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Improving Our Emissions Performance, page 16
Air Quality		
EM-EP-112a.1	Air emissions of the following pollutants: (1) NO_X (excluding N_2O), (2) SO_X, (3) volatile organic compounds (VOCs), and (4) particulate matter (PM_{10})	Performance Data, page 74; Improving Our Emissions Performance: Combustion, page 18
Water Management		
EM-EP-140a.1	(1) Total fresh water withdrawn, (2) total fresh water consumed, percentage of each in regions with high or extremely high baseline water stress	Performance Data, page 74; Water Management, pages 28-32
EM-EP-140a.2	Volume of produced water and flowback generated; percentage (1) discharged, (2) injected, (3) recycled; hydrocarbon content in discharged water	Performance Data, page 75
EM-EP-140a.3	Percentage of hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used	Performance Data, page 75; Chemical Stewardship, page 38
EM-EP-140a.4	Percentage of hydraulic fracturing sites where ground or surface water quality deteriorated compared to a baseline	Performance Data, page 75; Water Management, pages 28-32; Well Integrity, page 37
Biodiversity Impacts		
EM-EP-160a.1	Description of environmental management policies and practices for active sites	Biodiversity Protection, page 33
EM-EP-160a.2	Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume impacting shorelines with ESI rankings 8-10, and volume recovered	Performance Data, page 76
EM-EP-160a.3	Percentage of (1) proved and (2) probable reserves in or near sites with protected conservation status or endangered species habitat	Performance Data, page 76

Code	Metric	Location
Human Rights and Community Relations		
EM-EP-210a.1	Percentage of (1) proved and (2) probable reserves in or near areas of conflict	Performance Data, page 78
EM-EP-210a.2	Percentage of (1) proved and (2) probable reserves in or near Indigenous land	Performance Data, page 78
EM-EP-210a.3	Discussion of engagement processes and due diligence practices with respect to human rights, Indigenous rights and operation in areas of conflict	Community Engagement, pages 57-64; **Human Rights** and **Indigenous Rights** Policies on website
EM-EP-210b.1	Discussion of process to manage risks and opportunities associated with community rights and interests	Community Engagement, pages 57-64; Stakeholder Engagement, page 67
EM-EP-210b.2	Number and duration of nontechnical delays	Performance Data, page 78
Workforce Health and Safety		
EM-EP-320a.1	(1) Total recordable incident rate (TRIR), (2) fatality rate, (3) near-miss frequency rate (NMFR), and (4) average hours of health, safety and emergency response training for (a) full-time employees, (b) contract employees and (c) short-service employees	Performance Data, page 76; Safety Performance Monitoring and Measurement, page 48
EM-EP-320a.2	Discussion of management systems used to integrate a culture of safety throughout the exploration and production lifecycle	Protecting Our People, pages 43-50
Reserves Valuation and Capital Expenditures		
EM-EP-420a.1	Sensitivity of hydrocarbon reserve levels to future price projection scenarios that account for a price on carbon emissions	Climate Strategy, pages 22-24
EM-EP-420a.2	Estimated carbon dioxide emissions embedded in proved hydrocarbon reserves	-
EM-EP-420a.3	Amount invested in renewable energy, revenue generated by renewable energy sales	Performance Data, page 78
EM-EP-420a.4	Discussion of how price and demand for hydrocarbons and/or climate regulation influence the capital expenditure strategy for exploration, acquisition and development of assets	Climate Strategy, pages 22-24
Business Ethics and Transparency		
EM-EP-510a.1	Percentage of (1) proved and (2) probable reserves in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	Performance Data, page 78
EM-EP-510a.2	Description of the management system for prevention of corruption and bribery throughout the value chain	Ethical Business Conduct, page 70; **Code of Business Conduct and Ethics**, **Anti-Bribery and Corruption Policy** and **Supplier Code of Conduct** on website

Code	Metric	Location
Management of the Legal and Regulatory Environment		
EM-EP-530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	Climate Risk Management, page 25; Working With Communities, page 58; Human Rights, page 59; Investing in Our Communities, pages 60-64
Critical Incident Risk Management		
EM-EP-540a.1	Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1)	Performance Data, page 76
EM-EP-540a.2	Description of management systems used to identify and mitigate catastrophic and tail-end risks	Asset Integrity and Process Safety, pages 35-36; Well Integrity, pages 37-38; Chemical Stewardship, page 38; Seismicity, page 39; Protecting Our People, pages 43-50; Emergency Response and Preparedness, page 49
Activity Metric		
EM-EP-000.A	Production of: (1) oil, (2) natural gas, (3) synthetic oil and (4) synthetic gas	**2021 SEC Form 10-K**
EM-EP-000.B	Number of offshore sites	**2021 SEC Form 10-K**
EM-EP-000.C	Number of terrestrial sites	**2021 SEC Form 10-K**

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)

Element	Disclosure	Location
Governance	Board's oversight of climate-related risks and opportunities	Climate Governance, page 21
	Management's role in assessing and managing climate-related risks and opportunities	Climate Governance, page 21
Strategy	Climate-related risks and opportunities the organization has identified over the short, medium and long term	Climate Strategy, pages 22-24
	Impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning	Climate Strategy, pages 22-24
	Resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	Climate Strategy, pages 22-24
Risk Management	Organization's processes for identifying and assessing climate-related risks	Focusing on What Matters Most, page 9; Climate Risk Management, pages 25-27; Enterprise Risk Management, page 68
	Organization's processes for managing climate-related risks	Climate Risk Management, pages 25-27; Enterprise Risk Management, page 68
	Processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.	Focusing on What Matters Most, page 9; Climate Risk Management, pages 25-27; Enterprise Risk Management, page 68
Metrics and Targets	Metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	Climate Metrics and Targets, page 27
	Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	Climate Change and Emissions, pages 14-20; Performance Data, page 73
	Targets used by the organization to manage climate-related risks and opportunities and performance against targets	Climate Metrics and Targets, page 27

IPIECA/API/IOGP SUSTAINABILITY REPORTING GUIDANCE, 4TH EDITION, 2020

Indicator	Disclosure	Location
Governance and Business Ethics		
GOV-1	Governance approach	About This Report, page 2; Who We Are, pages 6-7; Our Approach to ESG, pages 8-12; Governance and Responsible Business Practices, pages 65-71; **Corporate Governance** on website
GOV-2	Management systems	About This Report, page 2; Who We Are, pages 6-7; Our Approach to ESG, pages 8-12; Protecting Our People, pages 43-50; Governance and Responsible Business Practices, pages 65-71; **Corporate Governance** on website
GOV-3	Preventing corruption	Ethical Business Conduct, page 70; Supply Chain Management, page 71; **Corporate Governance** and **Supplier Code of Conduct** on website
GOV-4	Transparency of payments to host governments	Public Advocacy, page 70
GOV-5	Public advocacy and lobbying	Public Advocacy, page 70
Climate Change and Energy		
CCE-1	Climate governance and strategy	Board and Managerial Oversight of ESG topics, pages 11-12; Climate Governance, page 21; Climate Strategy, pages 22-24; **Climate Change Position** on website
CCE-2	Climate risk and opportunities	Climate Change and Emissions, pages 14-27; Climate Risk Management, pages 25-27; Climate Metrics and Targets, page 27; Enterprise Risk Management, page 68
CCE-3	Lower-carbon technology	Climate Change and Emissions, pages 14-27
CCE-4	Greenhouse gas (GHG) emissions	Climate Change and Emissions, pages 14-27; Performance Data, pages 73-74
CCE-5	Methane emissions	Improving Our Emissions Performance: Methane, page 17; Performance Data, pages 73-74
CCE-6	Energy use	Improving Our Emissions Performance: Combustion, pages 18-19; Performance Data, page 74
CCE-7	Flared gas	Improving Our Emissions Performance: Flaring, pages 19-20; Performance Data, pages 73-74
Environment		
ENV-1	Freshwater	Water Management, pages 28-32; Performance Data, pages 74-75
ENV-2	Discharges to water	Water Management, pages 28-32; Performance Data, pages 74-75
ENV-3	Biodiversity policy and strategy	Biodiversity Protection, pages 33-34
ENV-4	Protected and priority areas for biodiversity conservation	Biodiversity Protection, pages 33-34
ENV-5	Emissions to air	Improving Our Emissions Performance: Combustion, page 18; Performance Data, page 74
ENV-6	Spills to the environment	Spills Management, page 34; Asset Integrity and Process Safety, pages 35-36; Well Integrity, pages 37-38; Emergency Response and Preparedness, page 49; Performance Data, page 76
ENV-7	Materials management	Water Management, pages 28-32; Chemical Stewardship, page 38; Waste Management, page 40; Performance Data, page 74
ENV-8	Decommissioning	Well Abandonment, page 38; Biodiversity Protection, pages 33-34

Indicator	Disclosure	Location
Safety, Health and Security		
SHS-1	Safety, health and security engagement	Protecting Our People, pages 43-50
SHS-2	Workforce and community health	Building a Culture of Safety, pages 46-47; Health and Safety Management System, page 45; Benefits and Wellness, page 54
SHS-3	Occupational injury and illness incidents	Protecting Our People, pages 43-50; Performance Data, page 76
SHS-4	Transport safety	Building a Culture of Safety, page 47; Safety Performance Monitoring and Measurement, page 48; Performance Data, page 77
SHS-5	Product stewardship	As an upstream company, we ensure that we comply with local laws and regulations pertaining to communicating the risks of handling and transporting of our products. Chemical Stewardship, page 38
SHS-6	Process safety	Asset Integrity and Process Safety, pages 35-36; Performance Data, page 76
SHS-7	Security risk management	Physical Security, page 50; Emergency Response and Preparedness, page 49; Enterprise Risk Management page 68; Cybersecurity, page 68
Social		
SOC-1	Human rights due diligence	Human Rights, page 59; Ethical Business Conduct, page 70; **Human Rights Policy** on website
SOC-2	Suppliers and human rights	Human Rights, page 59; Ethical Business Conduct, page 70; Supply Chain Management, page 71; Contractor Management, page 49; **Supplier Code of Conduct** on website
SOC-3	Security and human rights	Human Rights, page 59
SOC-4	Site-based labour practices and worker accommodation	Health and Safety Management System, page 45; Human Rights, page 59; Ethical Business Conduct, page 70; Supply Chain Management, page 71; Contractor Management, page 49
SOC-5	Workforce diversity and inclusion	Diversity, Equity and Inclusion, pages 52-54; Performance Data, page 77; **EEO-1 Data** on website
SOC-6	Workforce engagement	Employee Engagement, page 55; Performance Data, page 77
SOC-7	Workforce training and development	Training and Development, page 55
SOC-8	Workforce nonretaliation and grievance mechanisms	Ethical Business Conduct, page 70; **Corporate Governance: Reporting of Concerns** on website
SOC-9	Local community impacts and engagement	Community Engagement, pages 57-64; Stakeholder Engagement, page 67
SOC-10	Indigenous peoples	Protecting Indigenous Rights, page 59
SOC-11	Land acquisition and involuntary resettlement	Not applicable
SOC-12	Community grievance mechanisms	Working With Communities, page 58; Grievance Reporting, page 59; **Corporate Governance: Reporting of Concerns** on website
SOC-13	Social investment	Investing in Our Communities, pages 60-64
SOC-14	Local procurement and supplier development	Working With Communities, page 58; Supply Chain Management, page 71
SOC-15	Local hiring practices	Local Hiring, page 54; Working With Communities, page 58

GLOBAL REPORTING INITIATIVE (GRI)

Indicator	Disclosure	Location
GRI 102: General Disclosures		
Organizational Profile		
102-1	Name of the organization	Murphy Oil Corporation
102-2	Activities, brands, products, and services	Murphy Oil Corporation is a global oil and natural gas exploration and production company, with both onshore and offshore operations and properties.
102-3	Location of headquarters	9805 Katy Fwy, Suite G-200, Houston, Texas 77024
102-4	Location of operations	United States, Canada, Brunei, Australia, Vietnam, Mexico, Brazil
102-5	Ownership and legal form	The Company is a Delaware corporation, and its common stock is listed and traded on the NYSE under the ticker symbol "MUR."
102-6	Markets served	**2021 SEC Form 10-K**
102-7	Scale of the organization	**2021 SEC Form 10-K**
102-8	Information on employees and other workers	Investing in Our People, pages 51-56; Performance Data, page 77; **EEO-1 Data** on website
102-9	Supply chain	Supply Chain Management, page 71
102-10	Significant changes to the organization and its supply chain	None
102-12	External initiatives	Climate Change and Emissions, pages 14-27; Investing in Our Communities, pages 51-56; Water Management, pages 28-32
102-13	Membership of associations	Industry Associations, page 70
Strategy		
102-14	Statement from senior decision-maker	Message to Our Stakeholders, pages 4-5
102-15	Key impacts, risks, and opportunities	2022 Sustainability Report, multiple sections; **2021 SEC Form 10-K**
Ethics and Integrity		
102-16	Values, principles, standards, and norms of behavior	Our Purpose, Mission, Vision, Values and Behaviors, page 7; Human Rights, page 59; Ethical Business Conduct, page 70
102-17	Mechanisms for advice and concerns about ethics	Ethical Business Conduct, page 70; **Corporate Governance: Reporting of Concerns** on website
Governance		
102-18	Governance structure	Board and Managerial Oversight of ESG Topics, pages 11-12; Climate Governance, page 21; **2022 Proxy Statement**
102-19	Delegating authority	Board and Managerial Oversight of ESG Topics, pages 11-12; Climate Governance, page 21
102-20	Executive-level responsibility for economic, environmental, and social topics	Board and Managerial Oversight of ESG Topics, pages 11-12; Climate Governance, page 21; individual sections of report
102-21	Consulting stakeholders on economic, environmental, and social topics	Engaging Our Stakeholders, page 10; Stakeholder Engagement, page 67; **2022 Proxy Statement**

Indicator	Disclosure	Location
GRI 102: General Disclosures (cont.)		
102-22	Composition of the highest governance body and its committees	Governance Highlights, page 66; **2022 Proxy Statement**
102-23	Chair of the highest governance body	Governance Highlights, page 66; **2022 Proxy Statement**
102-24	Nominating and selecting the highest governance body	Board and Managerial Oversight of ESG Topics, pages 11-12; **2022 Proxy Statement**
102-25	Conflicts of interest	Ethical Business Conduct, page 70; **Corporate Governance: Reporting of Concerns** on website; **2022 Proxy Statement**
102-26	Role of highest governance body in setting purpose, values, and strategy	Board and Managerial Oversight of ESG Topics, pages 11-12; Climate Governance, page 21; **2022 Proxy Statement**
102-27	Collective knowledge of highest governance body	Governance Highlights, page 66; **2022 Proxy Statement**
102-28	Evaluating the highest governance body's performance	**2022 Proxy Statement**
102-29	Identifying and managing economic, environmental, and social impacts	Focusing on What Matters Most, page 9; Engaging Our Stakeholders, page 10; Board and Managerial Oversight of ESG Topics, pages 11-12; Climate Governance, page 21; Enterprise Risk Management, page 68
102-30	Effectiveness of risk management processes	Board and Managerial Oversight of ESG Topics, pages 11-12; Climate Governance, page 21; Enterprise Risk Management, page 68
102-31	Review of economic, environmental, and social topics	Board and Managerial Oversight of ESG Topics, pages 11-12; Climate Governance, page 21; Enterprise Risk Management, page 68
102-32	Highest governance body's role in sustainability reporting	Health, Safety, Environment and Corporate Responsibility (HSE&CR) Board Committee About This Report, page 2; **HSE&CR Board Committee Charter** on website
102-33	Communicating critical concerns	Board and Managerial Oversight of ESG Topics, pages 11-12; Climate Governance, page 21; **2022 Proxy Statement**
102-35	Remuneration policies	**2022 Proxy Statement**
102-36	Process for determining remuneration	**2022 Proxy Statement**
102-37	Stakeholders' involvement in remuneration	**2022 Proxy Statement**
Stakeholder Engagement		
102-40	List of stakeholder groups	Engaging Our Stakeholders, page 10; Stakeholder Engagement, page 67; **2022 Proxy Statement**
102-41	Collective bargaining agreements	We follow all laws in regards to a worker's ability to bargain as a group instead of individually.
102-42	Identifying and selecting stakeholders	Engaging Our Stakeholders, page 10; Stakeholder Engagement, page 67; **2022 Proxy Statement**

Indicator	Disclosure	Location
Stakeholder Engagement (cont.)		
102-43	Approach to stakeholder engagement	Engaging Our Stakeholders, page 10; Stakeholder Engagement, page 67; **2022 Proxy Statement**
102-44	Key topics and concerns raised	Focusing on What Matters Most, page 9; Stakeholder Engagement, page 67; **2022 Proxy Statement**
Reporting Practice		
102-45	Entities included in the consolidated financial statements	**2021 SEC Form 10-K**
102-46	Defining report content and topic boundaries	About This Report, page 2; Focusing on What Matters Most, page 9
102-47	List of material topics	Focusing on What Matters Most, page 9
102-48	Restatements of information	About This Report, page 2
102-49	Changes in reporting	None
102-50	Reporting period	About This Report, page 2; unless otherwise stated, this report covers the period of Jan. 1 to Dec. 31, 2021.
102-51	Date of most recent report	Aug. 5, 2021
102-52	Reporting cycle	Annual
102-53	Contact point for questions regarding the report	**sustainability@murphyoilcorp.com**
102-54	Claims of reporting in accordance with the GRI Standards	About This Report, page 2
102-55	GRI content index	This index
102-56	External assurance	Independent Assurance Statement, page 81
GRI 201: Economic Performance		
201-1	Direct economic value generated and distributed	**2021 SEC Form 10-K**
201-2	Financial implications and other risks and opportunities due to climate change	**2021 SEC Form 10-K**
201-3	Defined benefit plan obligations and other retirement plans	**2021 SEC Form 10-K**
GRI 205: Anti-corruption		
205-2	Communication and training about anti-corruption policies and procedures	Ethical Business Conduct, page 70; **Corporate Governance on website**
GRI 302: Energy		
302-1	Energy consumption within the organization	Performance Data, page 74
302-3	Energy intensity	Performance Data, page 74
GRI 303: Water and Effluents		
303-1	Interactions with water as a shared resource	Water Management, pages 28-32; Performance Data, pages 74-75
303-2	Management of water discharge-related impacts	Water Management, pages 28-32; Performance Data, pages 74-75
303-3	Water withdrawal	Water Management, pages 28-32; Performance Data, pages 74-75
303-4	Water discharge	Water Management, pages 28-32; Performance Data, pages 74-75
303-5	Water consumption	Water Management, pages 28-32; Performance Data, pages 74-75

Indicator	Disclosure	Location
GRI 304: Biodiversity		
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected area	Biodiversity Protection, pages 33-34; Performance Data, page 76
304-2	Significant impacts of activities, products, and services on biodiversity	Biodiversity Protection, pages 33-34; Performance Data, page 76
304-3	Habitats protected or restored	Biodiversity Protection, pages 33-34; Performance Data, page 76
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	Biodiversity Protection, pages 33-34; Performance Data, page 76
GRI 305: Emissions		
305-1	Direct (Scope 1) GHG emissions	Climate Change and Emissions, pages 14-27; Performance Data, pages 73-74
305-2	Energy indirect (Scope 2) GHG emissions	Climate Change and Emissions, pages 14-27; Performance Data, pages 73-74
305-3	Other indirect (Scope 3) GHG emissions	Climate Change and Emissions, pages 14-27; Performance Data, pages 73-74
305-4	GHG emissions intensity	Climate Change and Emissions, pages 14-27; Performance Data, pages 73-74
305-5	Reduction of GHG emissions	Climate Change and Emissions, pages 14-27; Performance Data, pages 73-74
305-7	Nitrogen oxides (NO_X), sulfur oxides (SO_X), and other significant air emissions	Performance Data, page 74
GRI 306: Waste		
306-1	Waste generation and significant waste-related impacts	Waste Management, pages 40
306-2	Management of significant waste-related impacts	Waste Management, pages 40
306-3	Waste generated	Performance Data, page 75
GRI 307: Environmental Compliance		
307-1	Non-compliance with environmental laws and regulations	Performance Data, page 76
GRI 308: Supplier Environmental Assessment		
308-1	New suppliers that were screened using environmental criteria	Supply Chain Management, page 71
GRI 401: Employment		
401-1	New employee hires and employee turnover	Employee Engagement, page 55; Performance Data, page 77
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Benefits and Wellness, page 54
401-3	Parental leave	Benefits and Wellness, page 54; **Careers: Benefits** on website

Indicator	Disclosure	Location
GRI 403: Occupational Health and Safety		
403-1	Occupational health and safety management system	Health and Safety Management System, page 45
403-2	Hazard identification, risk assessment, and incident investigation	Asset Integrity and Process Safety, pages 35-36; Health and Safety Certification and Audit, page 46; Building a Culture of Safety, pages 46; Safety Performance Monitoring and Measurement, page 48
403-3	Occupational health services	Contractor Management, page 49
403-4	Worker participation, consultation, and communication on occupational health and safety	Building a Culture of Safety, page 46; Contractor Management, page 49; Emergency Response and Preparedness, page 49
403-5	Worker training on occupational health and safety	Building a Culture of Safety, page 46; Contractor Management, page 49; Emergency Response and Preparedness, page 49; Performance Data, page 77
403-6	Promotion of worker health	Benefits and Wellness, page 54
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Asset Integrity and Process Safety, pages 35-36; Building a Culture of Safety, page 46;Protecting Our People, page 43-50; **Worldwide Health, Safety and Environmental Policy** on website
403-8	Workers covered by an occupational health and safety management system	Health and Safety Management System, page 45
403-9	Work-related injuries	Protecting Our People, pages 43-50; Performance Data, pages 76-77
GRI 404: Training and Education		
404-1	Average hours of training per year per employee	Training and Development, page 55
404-2	Programs for upgrading employee skills and transition assistance programs	Training and Development, page 55
GRI 405: Diversity and Equal Opportunity		
405-1	Diversity of governance bodies and employees	Diversity, Equity and Inclusion, pages 52-54; Governance Highlights, page 66; Performance Data, page 77; **EEO-1 Data** on website; **2022 Proxy Statement**
GRI 412: Human Rights Assessment		
412-2	Employee training on human rights policies or procedures	Human Rights, page 59; Ethical Business Conduct, page 70
GRI 413: Local Communities		
413-1	Operations with local community engagement, impact assessments and development programs	Community Engagement, pages 57-64
GRI 414: Supplier Social Assessment		
414-1	New suppliers that were screened using social criteria	Supply Chain Management, page 71
GRI 415: Public Policy		
415-1	Political contributions	Public Advocacy, page 70

UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

Goal		Location
Goal 1	End poverty in all its forms everywhere	Community Engagement, pages 57-64
Goal 2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Community Engagement, pages 57-64
Goal 3	Ensure healthy lives and promote well-being for all at all ages	Climate Change and Emissions, pages 14-27; Protecting Our People, pages 43-50; Benefits and Wellness, page 54; Community Engagement, pages 57-64
Goal 4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Training and Development, page 55; Community Engagement, pages 57-64
Goal 5	Achieve gender equality and empower all women and girls	Diversity, Equity and Inclusion, pages 52-54; Benefits and Wellness, page 54; Community Engagement, pages 57-64
Goal 6	Ensure availability and sustainable management of water and sanitation for all	Water Management, pages 28-32; Spills Management, page 34; Asset Integrity and Process Safety, pages 35-36; Emergency Response and Preparedness, page 49; Waste Management, pages 40-42
Goal 7	Ensure access to affordable, reliable, sustainable and modern energy for all	Climate Change and Emissions, pages 14-27; **Climate Change Position** on website
Goal 8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Training and Development, page 55; Community Engagement, pages 57-64; Supply Chain Management, page 71
Goal 9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Community Engagement, pages 57-64
Goal 10	Reduce inequality within and among countries	Not applicable
Goal 11	Make cities and human settlements inclusive, safe, resilient and sustainable	Not applicable
Goal 12	Responsible consumption and production—ensure sustainable consumption and production patterns	Climate Change and Emissions, pages 14-27; Water Management, pages 28-32; Biodiversity Protection, pages 33-34; Spills Management, page 34; Asset Integrity and Process Safety, pages 35-36; Well Integrity, pages 37-38; Chemical Stewardship, page 38; Seismicity, page 39; Waste Management, pages 40-42; Supply Chain Management, page 71
Goal 13	Take urgent action to combat climate change and its impacts	Climate Change and Emissions, pages 14-27; Water Management, pages 28-32; **Climate Change Position** on website
Goal 14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Water Management, pages 28-32; Spills Management, page 34; Asset Integrity and Process Safety, pages 35-36; Emergency Response and Preparedness, page 49; Waste Management, pages 40-42
Goal 15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Water Management, pages 28-32; Biodiversity Protection, pages 33-34; Spills Management, page 34; Asset Integrity and Process Safety, pages 35-36
Goal 16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	Ethical Business Conduct, page 70; Public Advocacy, page 70; Supply Chain Management, page 71
Goal 17	Strengthen the means of implementation and revitalize the global partnership for sustainable development	2022 Sustainability Report, multiple sections on industry collaboration and partnerships

Awards and Recognition

2021

- Ranked '1' by ISS Governance QualityScore (highest percentile rank)

2022

- Recognized by the Greater Houston Partnership as a "Best Place for Working Parents"
- Received the President's Volunteer Service Award from the Houston Food Bank in recognition of 2021 voluntary efforts
- Named one of America's Most Responsible Companies for 2022 by Newsweek
- Named one of Houston's 100 Leading Companies in 2022 by the Houston Chronicle
- Achieved United Way of Greater Houston's 2021-2022 Community Campaign Honor Roll, President's Division

Reader Advisory

YOUR FEEDBACK IS WELCOME

For questions or feedback on our 2022 Sustainability Report, please contact us at **sustainability@murphyoilcorp.com**.

ADDITIONAL INFORMATION

Visit **www.murphyoilcorp.com** for additional information.

FORWARD-LOOKING STATEMENTS AND RISKS

This report contains information about the Company and certain of its operating subsidiaries and business units around the world. Statements regarding our future direction and intent represent goals and objectives only and are subject to change or withdrawal without notice. We disclaim any duty or obligation to update the statements or information contained in this report.

Any "forward-looking statement" is made only as of the date such information was originally prepared by the Company and is intended to fall within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All statements, other than statements of historical facts, may be forward-looking statements. Some of these statements can be identified by the use of terminology such as "believes," "expects," "anticipates," "may," "will," "should," "seeks," "approximately," "intends," "projects," "plans," "estimates," or the negative of these words and other comparable terminology. Readers should not place undue reliance on forward-looking statements, which speak only as of the date such statements were first made. Except to the extent required by law, the Company undertakes no obligation to update or revise its forward-looking statements. Forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those projected, anticipated, or implied. Although it is not possible to predict or identify all such risks and uncertainties, they include, but are not limited to, factors described under "Cautionary Notice About Forward-Looking Statements" and "Risks and Forward-Looking Information" in the Company's most recent Form 10-K and Form 10-Qs filed with the SEC.

Except where noted, the information covered in this report highlights the Company's performance and initiatives in fiscal year 2021. All calculations and statistics are in part dependent on the use of estimates and assumptions based on historical levels and projections and are therefore subject to change. This report has not been externally assured or verified by an independent third party. The inclusion of information or the absence of information in this report should not be construed to represent the Company's belief regarding the materiality or financial impact of that information. For a discussion of information that is material to the Company, please see the Company's filings with the SEC, including its Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q. This report may contain links to other internet sites or references to third parties. Such links or references are not incorporated by reference to this report and we can provide no assurance as to their accuracy. The use or inclusion of the information is also not intended to represent endorsements of any products or services. In addition, the report includes statistics or metrics that are estimates, makes assumptions based on developing standards that may change and provide aspirational goals that are not intended to be promises or guarantees. Due to the use of estimate and assumptions, the information in the report may not be correct and change at any time and we make no commitment to update that information as it develops.

MURPHY
OIL CORPORATION

OUR PURPOSE

We believe in providing energy that empowers people.

OUR MISSION

We challenge the norm, tap into our strong legacy and use our foresight and financial discipline to deliver inspired energy solutions.

OUR VISION

We see a future where we are an industry leader who is positively impacting lives for the next 100 years and beyond.

OUR BEHAVIORS

Do Right Always

- Respect people, safety, environment and the law
- Follow through on commitments
- Share openly and accurately
- Make it better

Stay With It

- Show resilience
- Lean into challenges
- Support each other
- Consider the implications

Think Beyond Possible

- Offer solutions
- Step up and lead
- Don't settle for "good enough"
- Embrace new opportunities

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