Advance ENVIRONMENTAL STEWARDSHIP

We are committed to reducing our carbon footprint and implementing practices that conserve natural resources and reduce environmental impacts.

LOWERING OUR CARBON FOOTPRINT

We have made demonstrable progress reducing the carbon footprint of our operations through energy-efficiency improvements that enhance the performance and resiliency of our assets. We work to optimize the operations of our assets, make select investments in renewables and lower-carbon products, and continue to expand our natural gas business.

Scope 1 and 2 GHG Emissions

In 2020, we adopted a companywide Scope 1 and 2 GHG emissions intensity reduction target to reduce our intensity 30% below 2014 levels by 2030. As we are on track to achieve our Scope 1 and 2 goal prior to 2030, we extended and strengthened our commitment by setting a new target of a 38% reduction of Scope 1 and 2 GHG emissions intensity from 2014 levels by 2035.

The metric is computed by aggregating the Scope 1 GHG emissions (direct emissions from our operations) and Scope 2 GHG emissions (indirect emissions from the electricity and steam we purchase to support our business activities across all our organizations) and dividing that figure by the total manufacturing inputs.

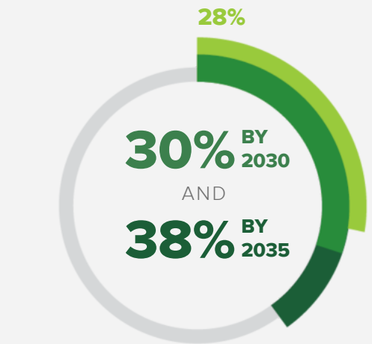
Because our manufacturing sites entail a wide range of inputs, including but not limited to, crude oil, natural gas, natural gas liquids and renewable feedstocks, we normalize these manufacturing inputs on a common energy unit known as barrel of oil equivalent (boe).

We are focused on reducing our GHG emissions through multiple initiatives, including driving efficiency through our Focus on Energy program, the expansion of our MPLX Natural Gas and NGL Services business, and the optimization of our renewable fuels production.

Some notable progress related to our Scope 1 and 2 GHG emissions:

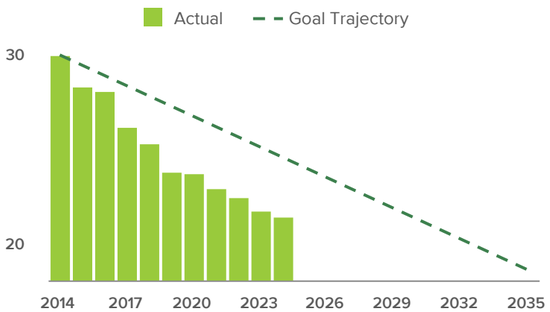
- We have achieved a 28% reduction in Scope 1 and 2 GHG emissions intensity compared to our 2014 baseline, representing 10 consecutive years of progress.
- Since 2019, our companywide Scope 1 and 2 GHG emissions have decreased by over 10% on an absolute basis.

Scope 1 and 2 GHG Emissions Intensity
(tonnes CO_2e/thousand boe input)



TARGET: 30% REDUCTION of Scope 1 and 2 GHG emissions intensity by 2030 and 38% REDUCTION by 2035 from 2014 levels

Companywide Scope 1 and 2 GHG Emissions Intensity
(tonnes CO_2e/thousand boe input)

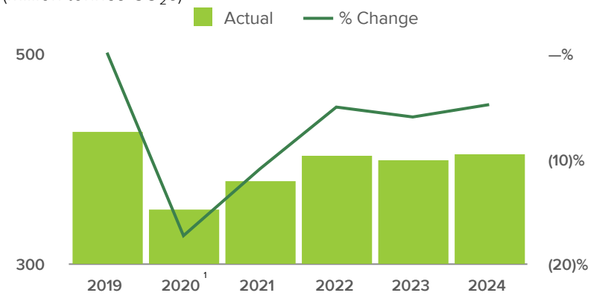


Refining Scope 3 GHG Emissions

As a petroleum refiner, MPC's Scope 3 - Category 11 GHG emissions (use of sold products) are primarily related to production volumes from our refineries. Since 2020, we have indefinitely idled one petroleum refinery and repurposed two other refineries to produce renewable diesel, a product that reduces GHG emissions in hard-to-abate transportation sectors. Those measures have collectively reduced our absolute Scope 3 - Category 11 GHG emissions by 5% from a 2019 baseline. Going forward, we will continue to provide transparency around our Scope 3 - Category 11 GHG emissions, while transitioning from an absolute emissions reduction target.

↗ Please see Page 30 of our annual Perspectives on Climate-Related Scenarios report for detailed information on our reduction efforts, factors impacting the pace and magnitude of reductions, and our recalibrated approach.

Absolute Scope 3 - Category 11 GHG Emissions
(million tonnes CO_2e)



[1] 2020 was not representative of a normal year because production was impacted by COVID-19 lockdowns.

[2] Does not include MPLX capital allocation.

Capital Allocation

At MPC and MPLX, we invest to strengthen the competitive position of our assets and increase our resilience as we allocate growth capital between traditional and low-carbon investments. Today, we are focused on optimizing our core refining and logistics portfolio and expanding our natural gas and NGL business.

Our risk-based capital allocation strategy is designed to ensure strict capital discipline and long-term competitive returns for our shareholders. We require higher return-on-investment (ROI) thresholds for projects with greater financial and regulatory uncertainty than those with more stable cash flow and lower regulatory risk.

MPC's capital allocation can be broken down into sustaining capital and growth capital. Sustaining capital underpins our commitment to safety, reliability and environmental performance across our assets and represents approximately 30% of MPC's anticipated 2025 capital spend.[2] The remainder is growth capital, which we invest in a disciplined fashion in areas that we believe will enhance our competitiveness. Of MPC's anticipated 2025 growth capital, approximately 12% is allocated to lower-carbon projects which, for example, can help lower GHG emissions at our refineries or represent investments in renewables and emerging technologies. The remainder of growth capital is aimed at projects that will primarily occur at our large, competitively advantaged facilities to help position MPC well into the future.

Focus on Energy

We have achieved energy-efficiency improvements, GHG reductions and costs savings through our Focus on Energy program, including avoiding the equivalent of over 1.3 billion Btu/hour of energy use, resulting in savings over $28 million in 2024. This is roughly the same amount of energy used by over 80,000 homes or 140,000 gasoline-powered passenger vehicles in one year.

With Focus on Energy programs in place at all 13 of our refineries, we've expanded these efforts to include our renewable diesel facilities. In 2024, key performance indicators were developed for the Dickinson Renewable Fuels facility and initial implementation began at the Martinez Renewable Fuels facility.

As a part of our Focus on Energy program, we have dedicated energy coordinators at our facilities who:

- Conduct deep-dive studies to benchmark our refineries against peers
- Identify and track energy-operating parameters
- Develop and implement energy-conservation road maps
- Evaluate more efficient technologies
- Consider energy efficiency in new project scopes

U.S. EPA ENERGY STAR® Partner of the Year - Sustained Excellence Award for the fifth year in a row

Improving Energy Efficiency

Through the success of our Focus on Energy program, MPC has been recognized by the U.S. EPA for our leadership in industrial energy efficiency by winning the 2024 ENERGY STAR Partner of the Year – Sustained Excellence Award. ENERGY STAR is a voluntary industrial energy management program managed by the U.S. EPA that aims to assist industry in improving energy efficiency and reducing environmental impact.

The Partner of the Year – Sustained Excellence Award is the highest level of recognition in the EPA's ENERGY STAR program. To earn the award, companies must go above and beyond the criteria for Partner of the Year recognition by showing continuous improvement over time in organizationwide energy savings and environmental performance, demonstrating best practices and actively promoting the ENERGY STAR program.

As a five-time EPA ENERGY STAR Partner of the Year – Sustained Excellence Award recipient, we are an active participant in the program, sharing our strategies and successes with other industrial companies.

MPC ENERGY STAR 2024 Certified Refineries:

- ★ Anacortes, Washington
- ★ Canton, Ohio
- ★ Garyville, Louisiana
- ★ Robinson, Illinois
- ★ St. Paul Park, Minnesota

Garyville refinery's steam challenge was recognized as one of

U.S. EPA's Top Projects

in the U.S. industrial sector during the 2024 ENERGY STAR® Industrial Partner Meeting.

SPOTLIGHT ON

Garyville Refinery

Steam is used for many applications throughout a refinery, and optimizing its use is an important factor in the management of energy costs. The Garyville refinery challenged itself to reduce fired steam generation by 100,000 pounds-per-hour in 2024. The Garyville team exceeded that goal by recovering 129,000 pounds-per-hour of steam in 2024. This amounts to more than $5 million in annual cost savings and over 45,000 metric tons of carbon dioxide-equivalent emissions per year.

The success of this initiative was driven by the refinery's strategic focus on the education and active engagement of employees to create a collaborative environment where all contributions are valued. Some examples of initiatives that led to the success include:

- Implemented optimization strategies for process unit operating temperatures and equipment sizing.
- Maximized waste-heat steam generation by cleaning a unit heater convection system and repaired steam leaks.
- Adjusted process unit valves to recover excess purge steam.

By promoting best practices and encouraging new ideas, the Garyville refinery continues building upon efforts that have helped the site remain ENERGY STAR® certified for 19 consecutive years.

Energy Efficiency Across Midstream

To build upon the success of our refinery-specific Focus on Energy program, MPC expanded Focus on Energy to various MPLX facilities.

The ENERGY STAR Challenge for Industry is a national call to action to improve the energy efficiency of America's manufacturers by 10% or more. By taking the ENERGY STAR Challenge, manufacturing sites set a goal to reduce their energy intensity by 10% within five years. MPLX marked an industry first by entering the ENERGY STAR Challenge for Industry in December 2022, and since, 12 terminals and one natural gas plant achieved the challenge.

Bluestone Gas Processing Facility

The Bluestone natural gas plant in Pennsylvania has become the first and only facility in the U.S. natural gas processing sector to achieve the EPA's ENERGY STAR Challenge for Industry. Bluestone surpassed the requirement of lowering its energy intensity by 10% within a five-year period. A 12-month rolling average of data showed that Bluestone's energy intensity decreased almost 15% from its established baseline. Recognizing this significant accomplishment, Bluestone was provided the opportunity to host an ENERGY STAR Industrial Showcase in October 2024 to highlight its progress for stakeholders, legislators and members of other industries.

To build on the success of Bluestone, additional MPLX gas processing facilities have been recently entered into the ENERGY STAR Challenge, namely the Houston, Pennsylvania, facility, which is the largest gas processing facility in Pennsylvania, and the Sherwood, West Virginia, facility, which is the largest gas processing facility in the United States.

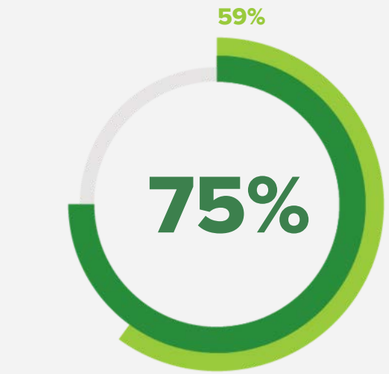
Our intention is to expand our industrial energy-efficiency initiatives to additional facilities, which will further reduce company energy use and strengthen the position of our assets.

Methane Emissions

In 2022, we expanded our methane emissions intensity reduction target for MPLX to 75% below 2016 levels by 2030. The reduction target applies to MPLX Natural Gas and NGL Services operations. Through 2024, we have achieved a 59% reduction in our methane emissions intensity from 2016 levels.

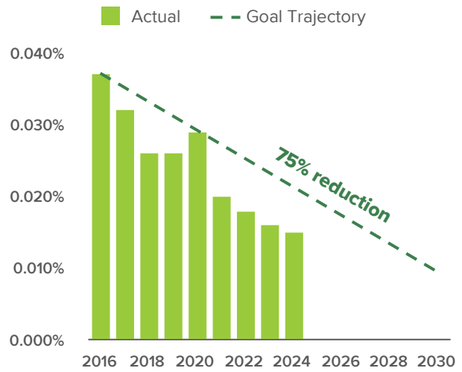
Since the extension of our target, the U.S. EPA has issued updates to its GHG reporting rules, which are effective for 2025 emissions (to be reported in 2026). These updates included significantly higher emission factors for select equipment, such as compressor engines due to methane slip. Methane slip refers to methane released into the atmosphere due to incomplete combustion in flares, heaters, and, most commonly, reciprocating engine and turbine exhaust. Extensive testing conducted by MPLX indicates that our actual engine performance generally resulted in lower emissions than these revised EPA factors, but at rates higher than the factors used in the current rule. The data from our compressor engine study, as well as the updated EPA emission factors, indicate an impact to our intensity baseline and current annual reported methane emissions. Accordingly, we plan to adjust our affected targets when the new reporting and emission factors are implemented.

Methane Emissions Intensity
(methane-scf/natural gas input-scf)



TARGET: 75% REDUCTION of MPLX methane emissions intensity by 2030 from 2016 levels

MPLX Methane Emissions Intensity
(methane-scf/natural gas input-scf)



Addressing Methane Slip

We are actively implementing and expanding the following equipment performance optimizations to reduce methane slip:

- Engine Upgrade Kits: An engine supplier has introduced cost-effective, low-emission upgrade kits that can be installed during overhauls, significantly reducing methane slip while also lowering other co-pollutants.
- Fuel Optimization: Through our Equipment, Compression Health & Optimization (ECHO) program, we are enhancing efficiency and reducing emissions by optimizing fuel use. Our goal is to deploy ECHO throughout the MPLX Natural Gas and NGL Services operational footprint by the end of 2026.
- Data-Driven Maintenance: We are prioritizing engine maintenance and overhauls based on insights from aerial detection data, facilitating targeted emission reduction efforts.

Focus on Methane

Through MPLX's Focus on Methane program, we have implemented measures that have achieved approximately 13,000 tonnes per year of methane emissions reductions and enhanced system efficiency relative to a 2016 baseline.

In 2024, advanced technologies were deployed to enhance measurement-informed emission inventories, improving accuracy and transparency. Investments in these initiatives, coupled with expanded advocacy and industry engagement, have strengthened data-driven decision-making and reinforced MPLX's commitment to lowering our methane intensity.

MPLX FOCUS AREAS FOR METHANE REDUCTIONS	Reductions achieved since 2016 (tonnes per year)
Maintenance Venting and Other Controls We are optimizing maintenance venting to reduce emissions going to the atmosphere, including using vapor recovery units and portable flares. Additionally, newly constructed systems are designed with lower potential for methane emissions.	~5,000
Pneumatic Devices We are phasing out high-bleed pneumatic controllers at our compressor stations.	~3,000
Leak Detection and Repair (LDAR) We adopted an enhanced LDAR program at our gas processing and fractionation plants to reduce fugitive methane emissions intensity.	~3,000
Pipeline Launchers and Receivers We designed pipeline launcher and receiver stations to reduce methane and volatile organic compound emissions by as much as 85% each time they are opened as part of required operation. More information can be found at: https://www.mplx.com/Pipeline-LauncherReceiver-Emissions-Reduction-Systems/.	~1,000
Reciprocating Compressors[1] We are installing low-emissions packing material and measurement ports on reciprocating compressors. Rod packing replacements will occur proactively when warranted.	~1,000
Flaring Improvements[1] We are implementing process improvements to reduce flaring and achieve enhanced control efficiency.	-
Advancing Measurement and Quantification Technology[1] We are analyzing data from Fourier transform infrared spectroscopy testing and employing advanced monitoring technologies, such as satellite imagery, flyovers and drones, to identify leaks and inform calculations.	-
TOTAL	~13,000

[1] Ongoing and/or future development opportunities. Currently available estimates are based on EPA's upcoming revised GHG reporting rule.

INDUSTRY ENGAGEMENT

Frequent and effective communication with our peers and academic institutions is a key element to achieving our methane intensity reduction aspirations. Sharing best practices with our peers and research partners allows MPLX to identify and execute on the highest-priority opportunities for emission detection and reduction technologies. A few of these industry groups include:

- **Appalachian Methane Initiative (AMI):** Led by the Energy Emissions Modeling and Data Lab — an initiative of the University of Texas, Colorado State University, and the Colorado School of Mines — AMI is a proactive, first-of-its-kind basinwide initiative designed to further enhance methane emissions monitoring and facilitate methane emissions reductions in the Appalachian Basin. AMI aims to establish operator and basinwide metrics that will drive long-term reductions.
- **Colorado State University Methane Emissions Technology Evaluation Center (CSU METEC):** Operated by the Energy Institute at CSU, METEC is a leading research facility for developing, testing, and demonstrating emissions leak detection and quantification technologies.
- **The Environmental Partnership (TEP):** TEP is comprised of a number of American oil and gas members that share reliability, emission and operations metrics to progress efficiency and improved environmental outcomes.

Renewables and Emerging Technologies

KEY OBJECTIVES:

- **Identify and pursue renewable opportunities that offer attractive returns, lower costs, increase reliability and reduce emissions.**
- **Deploy emerging technologies that reduce environmental impact while enhancing business performance.**

We have a long history of innovation that continues today. We seek to optimize our core fuels manufacturing and logistics businesses and expand our natural gas business while making strategic, measured investments in renewable and low-carbon energy solutions, emerging technologies and early-stage developments.

We believe energy supply and technologies will continue to evolve, and we are excited to be engaged in providing energy solutions for a changing world.

Hydrocarbon fuels are critical to today's economy and are likely to continue to be for the foreseeable future. Optimizing how they are produced and delivered is important to energy markets, strategic to our business and foundational to our environmental stewardship commitment. Our investments in renewable fuels serve our customers and contribute to reducing the carbon intensity of our products.

In 2024, we were one of the largest suppliers of renewable fuels in the U.S., delivering approximately 2.8 billion gallons of renewable fuel to customers. Our investments have positioned us to be able to offer our customers lower-carbon intensity products, and this volume of renewable fuel avoided approximately 15.8 million tonnes of CO_2 transportation emissions.[1]

~600 million

gallons of renewable fuels produced in 2024[2] — a company record

[1] MPC estimated avoided emissions using fuel carbon intensity values generated per the California Air Resources Board Low Carbon Fuel Standard life-cycle analysis models and documentation (i.e., CA-GREET3.0).

[2] This figure includes production by joint venture entities accounted for as equity method investments.

RENEWABLE FUELS PORTFOLIO

Renewable Diesel

Martinez Renewables, a joint venture that we co-own with Neste Corporation, has a renewable diesel production capacity of 730 million gallons per year and includes pretreatment capabilities. The facility, which had previously been a petroleum refinery, reached full capacity in late 2024, placing it among the largest renewable diesel facilities in the world.

Our renewable diesel facility in Dickinson, North Dakota, was operated as a petroleum refinery until its conversion to renewables in 2020. This facility has the capacity to produce 184 million gallons per year of renewable fuels.

These facilities exemplify how MPC has transitioned certain facilities to enable access to customers in lower-carbon markets while seeking to utilize existing assets and workforce.

Green Bison Soy Processing, a joint venture with ADM, includes a processing plant in Spiritwood, North Dakota, which has the capacity to produce approximately 600 million pounds of refined soybean oil annually, enough feedstock for approximately 75 million gallons of renewable diesel per year.

Renewable Natural Gas

MPC expanded its portfolio in 2023 to include renewable natural gas (RNG) through acquisition of a 49.9% interest in LF Bioenergy, a renewable energy developer that builds, owns and operates facilities that turn organic waste on dairy farms into RNG. Since then, LF Bioenergy has initiated commercial operations at five facilities and has two additional sites under construction across the U.S.

Renewable Feedstock Responsible Sourcing

We implement a risk-based approach to responsibly source feedstocks for our renewable diesel facilities. We evaluate current and prospective suppliers, countries of origin and new feedstock varieties.

Reviews of suppliers are conducted to evaluate their alignment with our Supplier Code of Conduct. This may include an interview to obtain supplier-specific information or to address questions regarding a commodity or its origins.

Before new renewable feedstocks are processed at our facilities, we evaluate a variety of information, including information on environmental, regulatory and human rights topics. We continue to monitor the sustainability of our renewables sourcing practices.

EXAMPLES OF EMERGING TECHNOLOGY INVESTMENTS

Blue Planet

MPC is collaborating with Blue Planet Systems Corporation to advance the commercialization of Blue Planet's patented Geomimetic® technology, which uses mineralization to sequester and permanently store CO_2 in the built environment. Blue Planet's process captures and stores CO_2 in synthetic limestone aggregate used to make concrete and other building products.

Bioleum

MPC invested in Bioleum Corporation (formerly Comstock Fuels), and the two companies are developing a commercial framework to advance Bioleum's process. Bioleum's technology can convert biomass feedstock into drop-in hydrocarbon fuels compatible with existing petroleum-based infrastructure.

ElectraLith Sustainable Lithium

MPC invested in ElectraLith Sustainable Lithium, whose Direct Lithium Extraction and Refining processes technology extracts and produces battery-grade lithium hydroxide in a single, scalable and modular step that requires no water or chemicals. ElectraLith has been recognized by the World Economic Forum as a top innovator in the Sustainable Mining: Mining the Unmined Challenge.

Flyscan

MPC became a strategic investor and development partner in Flyscan. Flyscan's technology enables early detection of threats and hydrocarbon leaks along pipeline rights of way using its patented aerial inspection system.

Sapphire Technologies

MPC invested in Sapphire Technologies, a developer and manufacturer of energy recovery systems for natural gas applications. Sapphire Technologies' systems are designed to convert energy that would otherwise be wasted in pressure reduction processes into electric power without interrupting operations.

STAX Engineering

MPC invested in STAX Engineering, which is developing emissions-capturing technology on marine vessels in port.

ENERGY VENTURE DAY

During San Francisco Climate Week, MPC cosponsored and employees participated with Pegasus Tech Ventures in a Startup Pitch Contest, where approximately 60 energy ventures competed for the opportunity to participate in Pegasus' Startup World Cup Finale in October of 2025. The event focused on emerging energy solutions, allowing innovative startups to present their transformative technologies in areas such as energy industry modernization, energy supply chain optimization, artificial intelligence and machine learning, and climate technologies. Employees participated in pitch previews, one-on-one sessions with startup ventures and as a judge for the final pitch competition.

Carbon Capture, Utilization and Sequestration

Carbon capture, utilization and sequestration (CCUS) is a proven technology for many industrial applications. The CO_2 generated in an industrial process is captured, compressed and transported to permanent, safe storage deep underground (typically more than a mile below the surface). CCUS could be used to decarbonize "hard-to-abate" sectors, such as petroleum refining, the manufacture of chemicals, steel and cement, and heavy-duty transportation and shipping. However, to date, CCUS technology has been adopted in limited applications.

MPC and MPLX support the continued development and use of CCUS technology as a strategy to reduce emissions of CO_2 and the carbon intensity of the products we supply. MPC and MPLX work with industry coalitions, trade associations and other entities to promote policies and regulations that preserve the optionality for broad CCUS deployment.

~390,000 tonnes

of CO_2 captured from MPC and MPLX operations and their respective joint ventures in 2024 for use in

industrial applications

AND

food and beverage industry

CONSERVING NATURAL RESOURCES

To meet society's current and future energy needs, we must do our part as responsible stewards of the environment we all share. We recognize our business activities can affect ecosystems and communities, and we must manage and mitigate these impacts. Our Core Values guide the way we conduct our business. Safety and Environmental Stewardship is one of our Core Values. We are committed to minimizing our environmental impact through advanced technologies, practices and investments that conserve natural resources.

$1.9 billion+ invested in 2024 to improve the environmental performance of our assets

Environmental Management

100% of our operations are in scope of our Operational Excellence Management System (OEMS), which is third-party reviewed for alignment with the intent of the RC14001® standard. This standard incorporates our environmental stewardship policies, which include responsibilities to assess and minimize our environmental impact, train our employees on environmental management best practices and communicate with stakeholders about the environmental impacts of our products and operations.

Learn more in the OEMS section.

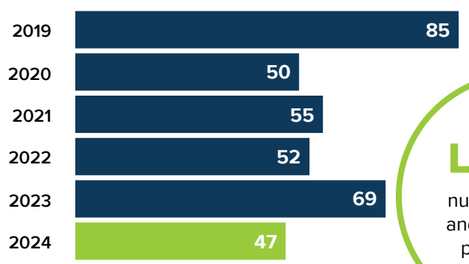
31,000+ hours of environmental training for MPC employees in 2024

Accountability

We use the Designated Environmental Incident (DEI) metric to track three categories of environmental incidents: unplanned releases to air, land and water; environmental permit exceedances; and agency enforcement actions. We use a four-tiered system to measure DEI severity, with Tiers 1 and 2 being the least severe and Tiers 3 and 4 being more severe.

Our main goal is to prevent incidents. We also invest in our response capabilities and preparedness training to provide our teams the knowledge and resources to help mitigate and manage impacts to people and the environment should an incident occur. In these instances, we devote ourselves to thoroughly examining and learning from the occurrence to strengthen our processes and practices. We are using findings from our investigations of 2024 DEIs to inform process improvements and other measures designed to address root causes and reduce the number of incidents.

Tier 3 and 4 DEIs
(count)



Lowest
number of Tier 3 and 4 DEIs in the past six years

PRIORITY AREAS TO CONSERVE NATURAL RESOURCES

- Reducing, reusing, and recycling waste
- Protecting biodiversity
- Reducing freshwater withdrawal
- Improving air quality
- Preventing spills
- Maintaining emergency preparedness

Biodiversity

We use proactive measures to protect diverse plant and animal species and to preserve their natural habitats in areas where we operate. Our OEMS provides the procedural framework to account for the potential effects of our activities on ecosystems and establishes necessary mitigation procedures.

Our formal Commitment to Biodiversity outlines our approach and practices. Governed by executive leadership and adopted companywide, it emphasizes that we seek first to avoid, then minimize or offset, impacts to biodiversity. We are mindful that operating within communities is a privilege, and we collaborate with tribal and local communities, business partners, and applicable state and federal regulatory agencies, including but not limited to the U.S. EPA, U.S. Fish and Wildlife Service, U.S. Bureau of Land Management and U.S. Army Corps of Engineers.

↗ To view our formal Commitment to Biodiversity, please visit our website.

800+ acres of Wildlife Habitat Council-certified habitat across 14 habitats on land owned and maintained by MPC and MPLX

Wildlife Habitat Council Certification®, powered by Tandem Global, is the only voluntary sustainability standard designed to recognize and promote biodiversity enhancement and conservation education on corporate landholdings.

↗ Click here to learn more about our contributions in Detroit, Michigan.

Protecting Biodiversity throughout the Asset Life Cycle

Our policies and practices for siting, constructing, operating, maintaining and decommissioning assets are designed to protect the environmental quality of the habitats in and adjacent to our operational areas. These policies are aligned with the International Finance Corporation's Performance Standards on Environmental and Social Sustainability.[1]

Throughout the asset life cycle, we seek first to avoid ecologically sensitive areas. When land disturbance is unavoidable, we use a variety of recognized best management practices and techniques to mitigate our impacts during the asset's life cycle. In situations where complete restoration presents challenges, we offset impacts to sensitive areas in several ways, including purchasing through the funding of approved conservation mitigation banks or using other mechanisms to provide ongoing protection to similar ecologically sensitive properties.

At each stage of the asset life cycle, we:

- Identify and engage impacted stakeholders to solicit feedback, which becomes part of our decision-making process.
- Conduct location-specific risk assessments, as appropriate, including desk and field studies, to evaluate nature dependencies and impact to biodiversity, natural resources and land use.
- Determine mitigation and enhancement initiatives within the project by working with stakeholders, local biologists and other environmental specialists.
- Implement biodiversity management and mitigation plans and assess potential outcomes to drive toward achievement of the intended objectives.

[1] International Finance Corporation's Performance Standards on Environmental and Social Sustainability include: Performance Standard 1 – Assessment and Management of Environmental and Social Risks and Impacts; Performance Standard 3 – Resource Efficiency and Pollution Prevention; Performance Standard 4 – Community Health, Safety, and Security and Performance; Performance Standard 6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources.

Pipeline Nature Impact Mitigation

Our recent work focuses on identifying and understanding location-specific risks and dependencies of our pipeline operations located within areas of threatened or endangered species habitat. Risks identified include habitat impacts, species movement and nature dependency-related risks, including regulation of water quality and soil stabilization. To mitigate these risks, we apply best management practices and techniques throughout the pipeline life cycle.

BEST MANAGEMENT PRACTICES AND TECHNIQUES APPLIED TO MITIGATE IMPACTS TO NATURE

Conservation Mowing
Adjusting mowing schedules and mower height throughout the year helps protect ground-nesting birds and avoid disturbing wildlife during important migration periods.

Selective Herbicide
Applying U.S. EPA-approved products to target invasive or incompatible plant species mitigates impacts to native vegetation. Weed management plans keep treated areas free of invasive and non-native weeds.

Enhanced Planting
Planting seeds that attract pollinators or provide food to boost biodiversity helps crowd out incompatible or invasive plants.

Hand Clearing
Clearing woody plants by hand and using targeted treatments help minimize disruption in the area.

Assessments and Education
- Conducting post-construction surveys and research to verify sensitive areas have been appropriately restored.
- Monitoring wetland and waterway crossing sites on pipeline rights of way to confirm they are fully restored and functioning.
- Training employees and contractors about biodiversity and maintaining assets in sensitive areas.
- Using signage to identify sensitive areas.

ASSESSING OUR IMPACT

In 2024, we engaged a certified wildlife biologist to monitor a more than 420-mile stretch of pipeline in Pinedale, Wyoming, to assess conditions related to weeds, erosion and vegetation. They used a qualitative scoring system to identify areas needing improvement and to evaluate what successful restoration would look like. The project yielded the following actions and observations:

Avoid
Focus on monitoring and preserving areas with intact native vegetation and avoid any unnecessary disturbance.

Reduce
Manually dig up and remove musk thistle in the area to reduce the need for chemical treatments.

Regenerate
Regenerate areas dominated by halogeton, a noxious and invasive weed, by reseeding with native species such as Rocky Mountain bee plant and annual sunflower to outcompete the halogeton weed through rapid biomass production and shading.

Restore
Implement erosion control processes, including reshaping terrain, applying seed mixes and enforcing stabilization practices based on severity and soil type to restore area to a more natural state.

Areas deemed to be higher risk received treatments based on assessment recommendations and are currently being monitored to determine progress toward recovery.

Areas with little to no risk will continue to be monitored demonstrating our commitment to environmental stewardship.

A TEXAS-SIZED COLLABORATION FOR CONSERVATION

In 2024, MPC was recognized by Texan by Nature (TxN) as one of only two businesses from the energy sector on its TxN 20 list. This list represents the top 20 companies operating in Texas based on their leadership in advancing conservation and sustainability.

MPC investments and conservation efforts in the state of Texas that earned TxN's recognition involved MPC's El Paso and Galveston Bay refineries as well as Natural Gas and NGL Services assets of MPLX.

Conservation Projects Examples

A pilot program was developed with TxN to assess environmental strategies, such as recycling water and restoring native vegetation, that could be integrated into construction of natural gas gathering pipelines in the Permian and Haynesville Basins.

An additional air quality monitoring station was purchased for Juarez, Mexico, El Paso's sister city across the border, to strengthen data collection in the Paso del Norte Air Basin. The El Paso refinery also replaced hydrostatic tank testing with an alternate method, saving millions of gallons of water.

MPC awarded grants to the Galveston Bay Foundation in support of habitat restoration, water protection and land conservation.

We promoted environmental awareness through community projects, including tree plantings, managed by the Galveston Bay refinery's Wildlife Habitat Team of employee volunteers.

Conservation Agriculture

Conservation Agriculture is an innovative approach to integrating pipeline safety with land stewardship, offering farmers an opportunity to enhance crops and support healthy ecosystems.

Through this program, we collaborate with farmers to transform areas of shallow cover into sustainable habitats. By opting for conservation approaches where factors like erosion create greater risk of pipeline exposure, farmers play a crucial role in maintaining pipeline safety and cultivating native habitat that can support cross-pollination.

Sustainable Landscapes

MPL, a wholly owned subsidiary of MPLX, is working toward its target to apply sustainable landscapes to approximately 10,000 acres (50%) of compatible rights of way by the end of 2025. Through 2024, 8,825 acres of sustainable landscapes have been applied to pipeline rights of way.

As work continues to achieve this goal, MPL is harnessing the power of nature-based solutions — Integrated Vegetation Management (IVM)[1] and Integrated Habitat Management (IHM)[2] plans — through partnerships and technology. Together, these practices help MPL to operate its pipelines safely while enhancing habitat for pollinators and wildlife, reducing impact to operations and promoting long-term environmental health.

Biodiversity — Sustainable Landscapes
(acres)

TARGET: Apply sustainable landscapes to ~10,000 ACRES (~50%) of compatible MPL rights of way by the end of 2025

[1] Integrated Vegetation Management (IVM): A flexible, adaptive process of managing plant communities using a variety of methods to promote and protect compatible vegetation while aligning with the intended purpose of the land.

[2] Integrated Habitat Management (IHM): A process that adheres to IVM principles with the added intention to improve habitat by promoting biodiversity, connecting wildlife corridors to address habitat fragmentation, and providing habitat for migratory insects, birds and various wildlife species.

TANGIBLE PATHWAY TO SUSTAINABLE LANDSCAPES

Creating sustainable landscapes to pipeline rights of way is a multiyear, multistep process.

Evaluating existing vegetation and setting site-specific goals
Landowners and partners are engaged in the evaluation process to set goals specific to location, land use, habitats, species and other criteria.

Developing implementation plans
Plans consider site-specific goals to promote native species, increase pollinator plants, promote water quality and soil stabilization, and connect fragmented habitats. Plans prioritize pollinator and grassland habitats that provide critical habitats for threatened and endangered species.

Executing the plan
Plans are executed in conjunction with contractors and partners and documented using robust mapping technology to track progress and achieve desired outcomes.

Monitoring the plan
Plans are monitored to confirm execution is achieving planned objectives.

Evaluating success
Success is evaluated by verifying all criteria have been met within our executed plan.

5,500+
vegetation assessments completed by MPL since 2022

EXPERT COLLABORATION

As efforts progress toward achieving our sustainable landscapes target, MPL engages the following partner organizations:

- The Ohio State University School of Environment and Natural Resources (SENR) to conduct research on pipeline rights of way with a focus on ecology, soil carbon and landowner relations.
- Pheasants Forever/Quail Forever to support site evaluations, plan development and execution, and monitor outcomes.
- Mule Deer Foundation to evaluate habitat impacts in western states near our assets.
- Nutrien Solutions to provide technical expertise for the application of select herbicide.
- Corteva Agriscience to create innovative agricultural solutions and utilize resources to educate landowners.

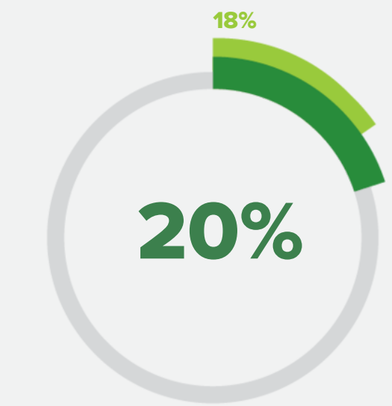
Nationwide Conservation Agreement for the Monarch Butterfly

MPLX proudly signed the Nationwide Candidate Conservation Agreement with Assurances (CCAA) for Monarch Butterflies on Energy and Transportation Lands, a unique collaboration between academia, regulators and industry. This agreement underscores our commitment to enhancing biodiversity and supporting monarch butterfly populations. We achieve this by enhancing our rights of way to promote the growth of milkweed and nectar resources.

Water

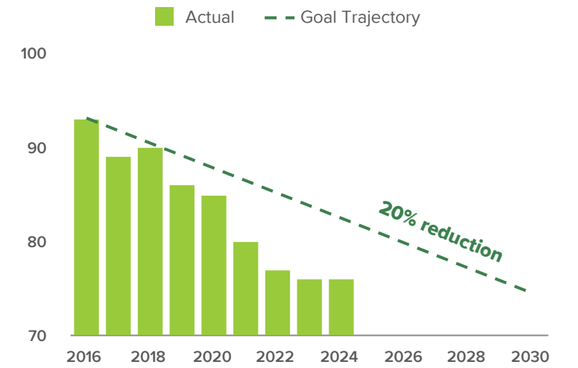
We actively monitor water utilization throughout all operations, continually looking for ways to reduce our reliance on this shared resource and manage it more efficiently. To further our commitment to water conservation, in 2020 we set a companywide target to reduce freshwater withdrawal intensity 20% by 2030 from 2016 levels. Through 2024, we have achieved an 18% reduction in our freshwater withdrawal intensity from 2016 levels, which equates to almost 2 billion gallons of fresh water saved per year.

Freshwater Withdrawal Intensity
(megaliters/million boe input)



TARGET: 20% REDUCTION of freshwater withdrawal intensity by 2030 from 2016 levels

Freshwater Withdrawal Intensity
(megaliters/million boe input)



WATER USE IN OPERATIONS

Water is essential to our operations. Depending on the location, we may source water from rivers, lakes, wells and municipal water plants and also purchase some recycled water for use in our operations. Most of our companywide water demand comes from refining operations. In contrast, MPLX gas processing plants are designed to use little or no water in their routine operations. Nearly all gas processing plants have air-cooling units that circulate hot product through air-cooled radiators, minimizing the need for water.

Uses in Refining

- Add heat to refining process (as steam)
- Clean equipment during maintenance activities
- Control emissions
- Generate hydrogen
- Protect equipment from corrosion
- Purify products (as stripping steam)
- Remove heat from the process (as cooling water)
- Remove salts and impurities from crude oil

Uses in MPLX

- Clean equipment during maintenance activities
- Create emulsions (asphalt blending)
- Install pipelines (horizontal directional drilling)
- Heat asphalt tanks (as steam)
- Remove impurities from natural gas
- Test pipeline and tank integrity (hydrostatic testing)

Managing Wastewater

We operate 11 biological treatment plants and four primary treatment facilities across our refineries and renewable fuels facilities. Water not reused or consumed is collected at these on-site facilities to be treated and recycled back into manufacturing activities, treated and discharged, or treated and sent to a publicly owned treatment works. Water is treated to meet or exceed required permit effluent limits, which ultimately allows it to be discharged to a surface body of water such as a lake, river or bay, so that the quality of these bodies of water is maintained. To manage water discharges within permit effluent limits, extensive monitoring, sampling, operator rounds and equipment monitoring is performed.

Enhancements at our Detroit, Michigan, refinery's wastewater treatment plant have allowed nearly one-third of its wastewater treatment plant effluent to be used as boiler feed water by utilizing a reverse osmosis system. Plans are underway to implement a second system with the potential to achieve a twofold increase in freshwater savings by increasing total reverse osmosis capacity and directing the extra recovered water to cooling tower makeup to supplement water that evaporates or is otherwise lost during a cooling cycle.

Local Water Conservation

Water availability is a concern throughout much of the world, including parts of the U.S. Currently, three of MPC's operating refineries — El Paso, Texas; Salt Lake City, Utah; and Los Angeles, California — plus one renewable fuels facility — Martinez, California — are located in water-stressed regions as defined by the Global Reporting Initiative (GRI) and World Resources Institute assessment tools. To help conserve water in these regions and across MPC refineries, our refining teams create site-specific plans that use aspects of a nine-element guidance framework.

The guidance framework is designed to assess water use, understand and mitigate water risks, and identify opportunities to reduce water use. Every refinery has designated engineers who serve as water coordinators, have established baselines for assessing water use, and maintain robust transparency with site leadership on how water is used through standardized water monitoring and reporting.

To help mitigate local water risks, we engage community members, government agencies and key water supply organizations. This engagement includes tracking and monitoring the local water supply and planning for future changes in water quality, availability, pricing and regulation. We support water supply organizations through membership, board leadership and committee participation.

Water Supply Organizations We Support:

- American Petroleum Institute's Clean Water Issues Group
- Brazos River Authority (Texas)
- California Council for Environmental and Economic Balance
- Far West Texas Water Planning Group
- Gulf Coast Water Authority (Texas)
- New Mexico Produced Water Research Consortium
- Utah Petroleum Association Water Work Group
- West Basin Water Association (California)

74%

of fresh water withdrawn from nonwater-stressed areas[1]

WATER FRAMEWORK

1. **Water Limits**
   Actual water usage and discharges are tracked against known limits.
2. **Accounting**
   Water monitoring programs integrate contractual water volume and cost.
3. **Value Chain and Community Engagement**
   Mutually beneficial opportunities are sought to reduce water demands and costs and reliance on single-water sources.
4. **Impacts**
   Water-related business and compliance issues are tracked, investigated and mitigated.
5. **Risks**
   Water-related risks are identified and assessed based on impact to the company and community.
6. **Targets and Goals**
   Water targets and goals are set.
7. **Opportunities**
   Opportunities are identified and applied to meet water targets and goals and improve performance relative to benchmarking.
8. **Monitoring and Performance**
   Water withdrawals are measured to benchmark water demands and understand consumption.
9. **Commitment and Engagement**
   Expectations of water targets and goals are clearly communicated, and resources for successful implementation are assigned.

[1] World Resources Institute Aqueduct Water Risk Atlas

Water Conservation Results

Through a variety of innovations, we have reduced our freshwater withdrawal intensity by 18% since 2016. In 2024, we continued our companywide Focus on Water program to further assess water use, understand and mitigate water risks, and identify opportunities to reduce water use. As a result, projects from this program at our MPC refineries and renewable facilities have potential fresh water savings estimated at more than 500 million gallons annually. Across the company, we continued to further align water management practices to make significant progress toward our 2030 target.

2024 MPLX Water Savings

Hydrostatic tests are used throughout our operations to test storage tank and pipeline integrity. Though effective at identifying defects, these tests require high volumes of water. We have had success reusing fresh water after completed hydrostatic tests, and we are avoiding water use by leveraging alternative technologies and processes in place of hydrostatic tests.

Natural Gas and NGL Services saved 2.7 million gallons of fresh water by using and returning uncontaminated hydrostatic test water to local water depots or returning it to the environment.

Crude Oil and Products Logistics saved over 29 million gallons of fresh water by replacing hydrostatic tests on storage tanks with the use of phased-array ultrasonic testing, X-ray inspections, magnetic particle examination and volumetric weld testing.

The Los Angeles refinery was awarded a 2024 Solenis Sustainability Award for cooling-water modifications projected to save 357 million gallons of fresh water per year.

↗ Read more about the award here.

2024 PROJECTS TO REDUCE FRESHWATER WITHDRAWAL[2]

Anacortes, Washington, refinery
~15 million gallons saved annually by rerouting a large stream of wastewater from a waste-heat boiler/flash drum system to another process unit.

Catlettsburg, Kentucky, refinery
~100 million gallons saved annually by identifying and repairing eight steam leaks in the main steam header drip leg lines across the refinery.

Detroit, Michigan, refinery
~140 million gallons saved annually by utilizing a reverse osmosis system to redirect about one-third of its wastewater treatment plant effluent for reuse as boiler feed water.

El Paso, Texas, refinery
~20 million gallons saved annually by optimizing steam management to recover additional condensate streams.

Galveston Bay, Texas, refinery
~133 million gallons saved annually by optimizing makeup water usage in the wet gas scrubber unit.

Martinez Renewable Fuels
~70 million gallons saved annually by reducing water used in the pretreatment facility to remove contaminants from feedstocks.

Los Angeles, California, refinery
~20 million gallons saved annually by replacing a steam turbine with a more energy efficient electric motor.

[2] Freshwater volumes are projected annualized savings.

Spill Prevention

Zero is always our goal.

Our commitment to safely and responsibly operating our assets is critical to our business and to protecting communities and the environment. We support this commitment through operational practices and advanced technology, focused on a goal of zero spills.

Pipeline Integrity Management

Our extensive Integrity Management program seeks to identify and respond to integrity threats to our pipeline systems. This program's aim is to protect all areas from spills. We prioritize areas where a spill from a pipeline could affect a densely populated area, drinking water, ecologically sensitive zones or a commercially navigable waterway. Through annual risk modeling, we systematically identify potential hazards to each pipeline and assess their relative significance, allowing us to develop effective mitigation measures. These risks may include damage by third parties, corrosion, cracks, dents, operator error, manufacturing defects, equipment failure, geohazards or weather events.

$15.3 million+ invested to modernize pipeline assets, including adding permanent means of launching and receiving in-line inspection tools on select pipelines in 2024

$132 million

invested in pipeline preventive maintenance in 2024

PIPELINE INTEGRITY MANAGEMENT

Design and Construction
We use inspection and quality-control procedures to safely build and operate our pipeline assets. Our pipeline construction process involves a series of rigorously controlled steps, including but not limited to route and material selection, welding, testing and site restoration.

Preventive Maintenance
We complete recurring inspection, testing and preventive maintenance on our pipelines and associated equipment to confirm they are of sound integrity and functioning properly. When necessary, we make repairs and implement additional risk mitigation strategies to maintain safe operations.

Corrosion Control
Coating is applied to the outer surface of our pipelines, and we install cathodic protection systems along our pipeline routes to help prevent external corrosion. Full cathodic protection inspections are conducted annually to verify that our systems are functioning properly. Maintenance tools, along with anticorrosive chemical injections, help to protect our pipelines against internal corrosion.

Inspections[1]
We use multiple inspection methods to assess the integrity and safety of our pipelines, including but not limited to in-line, above-ground and waterway crossing inspections.

- In-line inspection tools travel through pipelines, scanning and measuring a pipe's walls for signs of dents, corrosion or cracking. These inspections are conducted at least once every five years for liquid transmission pipelines and at least once every seven years for gas transmission pipelines.
- Above-ground inspections involve visually inspecting pipeline routes with air and/or ground patrols to detect third-party activity near the pipeline, land disturbances and pipeline spills. We conduct these at least once every three weeks for liquid pipelines and at least once each calendar year for gas transmission pipelines.
- Navigable waterway crossing inspections use high-resolution sonar equipment to inspect underwater pipelines to determine whether erosion and water channel changes could impact the integrity of the pipe. These are conducted at least once every five years for both liquid and gas transmission pipelines.

Pipeline Safety Management
We educate landowners, first responders and community partners located near our pipelines about safe digging practices and emergency response.

Geohazard Management
Our robust geohazard management program is designed to monitor, assess, inspect and remediate potential hazards associated with earth movement from both landslides and subsidence in unstable terrain and varied geological conditions. The program encompasses employee training on identifying geohazard risks, periodic assessments to detect land movement and pipeline impact, and targeted remediation efforts grounded in industry best practices.

In 2024, we shared advancements in new in-line inspection technology at several industry conferences, highlighting our ongoing efforts to validate the new tool's capabilities. Additionally, we piloted innovative magnetic, drone-based technology for pipeline locating at waterway crossings and for assessing strain based on pipe deflection.

Our efforts also improve the environment, as we apply sustainable landscapes along pipeline rights of way to reduce soil erosion and enhance subsurface stability.

↗ Learn more about our work applying sustainable landscapes to pipeline rights of way in our Sustainable Landscapes section.

Monitoring and Detection
Pipeline pressure, flow and volume are monitored 24/7 by highly trained personnel. Sensors and meters on our pipelines detect drops in pressure or changes in flow rate and alert personnel.

[1] MPC and MPLX conform to inspection frequency requirements contained in 49 CFR 195 and 192. Listed inspection frequencies apply to regulated pipelines only.

Innovating with New Technologies

By evolving our spill prevention and preparedness strategies, we are better equipped to rigorously assess the integrity of our assets, prevent incidents and address releases if they occur. Across MPC and MPLX, we continue to make investments and adopt new technologies that enhance our robust pipeline in-line inspection and assessment technology programs.

In 2024, we expanded the use of Flyscan, artificial intelligence (AI)-driven right-of-way threat and leak detection technology. From a patrol plane, the technology scans the right of way and surrounding area for hydrocarbon leaks and mechanical equipment threats, performing with greater sensitivity and accuracy than human observers. Our collaboration with Flyscan Systems Inc. continues to enhance the capabilities of the technology, transforming right-of-way inspection for the entire industry.

Cameras equipped with AI technology are now used at 172 of our remote pipeline facilities. We've also begun leveraging the advanced functionality of these AI cameras, with expanded leak and threat detection capabilities at 78 of these locations. These cameras have the ability to identify potential hydrocarbon spills and other threats, like fire and smoke, and notify our personnel.

We collaborated with an in-line inspection (ILI) tool vendor to develop a 22-inch diameter ILI, previously unavailable in the industry. In 2024, the ILI tool successfully inspected two pipelines, totaling 225 miles. It is now commercially available, helping other pipeline operators enhance the safety and integrity management of their assets.

MARINE INTEGRITY MANAGEMENT

Our marine operations consist of Global Marine and Inland Marine environments, each presenting a unique set of challenges. To meet these challenges, we deploy a comprehensive vetting and inspection program to minimize impacts to the public, wildlife and the environment.

Inspections

As a member of the Oil Companies International Marine Forum (OCIMF) and with a seat on its executive board, we actively promote the safe and environmentally responsible marine transportation of oil and gas. We lead and engage in OCIMF committees to develop industry best practices that influence International Maritime Organization (IMO) regulations and global Port State Control organizations like the U.S. Coast Guard. Our commitment to safety is demonstrated through rigorous vetting and inspection programs. Vessels[1] are vetted against 43 different sources for regulatory and sanction compliance, including the U.S. Office of Foreign Assets Control (OFAC) sanction lists and regulatory watch lists such as the Paris Memorandum of Understanding black list. Additionally, vessels are inspected using OCIMF's Ship Inspection Report (SIRE) and Barge Inspection Report (BIRE) programs, as well as Port State Control. Vessels with poor inspection history, poor flag state history or those under sanction are ineligible to conduct business with MPC.

Inspection Report Programs

Every vessel we own, operate or charter that calls upon our terminals, or third-party terminals where we hold tankage, are vetted using either OCIMF's SIRE or BIRE as a starting baseline.

- Accredited third parties conduct inspections of each vessel using questionnaires and onboard inspections that address issues associated with safety and pollution prevention measures.
- Inspection results contribute to risk assessments that determine suitability for use. Results also are uploaded to a database that is accessible by companies that charter vessels or operate terminals and governmental organizations that supervise safety and pollution prevention from oil vessels.

Port State Control

Every vessel we own, operate or charter that calls upon our terminals, or third-party terminals where we hold tankage, are inspected to verify that their condition, equipment, staffing and operations comply with regulatory requirements.

[1] Includes tankers, bulk carriers, gas tankers, tugs, barges and articulated tug and barges.

Emergency Preparedness

Meticulous planning and strategic preparedness are critical to effectively respond in the event of an emergency. Through continuous improvement and investment in our response capabilities, we can effectively minimize and mitigate impacts on people and the environment in the event of an incident.

Each of our operating locations have emergency response teams and site-specific emergency preparedness and response plans in place, tailored to the unique risks of each location. Regular drills and exercises are conducted to ensure that our teams can respond with precision and confidence, should an incident occur.

Our response plans are regularly reviewed and approved by several agencies, including the U.S. EPA, the U.S. Coast Guard, the Pipeline and Hazardous Materials Safety Administration (PHMSA) and appropriate state agencies.

MPC's Emergency Preparedness Group (EPG) oversees our response program, which includes companywide guidelines and procedures on how to prepare for and respond to emergencies. The group's continued focus is to strengthen our capability to respond swiftly and effectively to any emergency incident at any of our facilities. The EPG staff coordinates with business components to share best practices and resources across the company.

For incidents that are larger in scope and complexity, requiring resources beyond those available at a local facility, the EPG maintains a Corporate Emergency Response Team (CERT). This team of more than 250 employees has response expertise and advanced training in the Incident Command System, a globally recognized organizational structure designed to integrate resources across multiple agencies and organizations.

TIERED RESPONSE SYSTEM:	
TIER 1	Incident responses are directed by a local response team
TIER 2	Incident responses are directed by a district/ regional response team
TIER 3	Incident responses are larger in scope and complexity and directed by the CERT

EMERGENCY PREPAREDNESS EXERCISES

Our CERT members and other emergency response personnel actively engage in a variety of training exercises to maintain our readiness at all times. They collaborate with federal, state, local and tribal responders, such as the U.S. EPA, the U.S. Coast Guard, state environmental protection or wildlife agencies, tribal government representatives and local emergency responders, such as law enforcement and firefighters. MPC and MPLX maintain a response simulation program designed to test and continuously enhance our response capabilities:

- Our exercises follow the guidelines of the federal government's National Preparedness for Response Exercise Program (PREP), which meets the requirements of the Oil Pollution Act of 1990 and all federal, state and local requirements.
- Exercises help prepare for emergency situations and are used to review, critique and improve our emergency response plans.
- We take a collaborative approach to emergency preparedness. In addition to training our own employees and contractors, we engage federal, state, local and tribal agencies, local fire departments and other first responders, and community leaders who have an interest in the design and development of our plans and exercises.

CERT Resources and Support

- **Emergency Strike Team**: A stand-alone response management team capable of supplementing, relieving or taking command in a major emergency.
- **Emergency Support Group**: Provides key support functions, such as IT, communications and geographic information system mapping during an incident.
- **Crisis Management Team**: A group of executive-level advisors prepared to respond to MPC's and MPLX's needs during significant incidents.
- **Business Recovery Team**: Works to meet MPC's, MPLX's and customer needs during supply disruptions.
- **Threat Assessment Group**: Tasked with determining the potential impact of a threat to MPC or MPLX, informing impacted stakeholders and recommending steps to protect people and assets.
- **International Team:** Determines the potential impact, recommends response strategies and responds to incidents related to the shipment of crude oil and refined products outside the United States.

Preparedness in Action

In fall 2024, our Florida terminals were threatened by two major hurricanes — Milton (Category 3), and Helene (Category 4). MPC's emergency response team deployed 170 employees to the surrounding areas and engaged over 140 employees remotely to execute hurricane plans and prepare the terminals for the storms' paths.

Through collaboration and quick action from the local Tier 2 team and CERT, both responses were completed with zero injuries, no environmental or product quality impact and terminal operations resumed quickly.

Strength through Collaboration

In addition to working to strengthen our response capabilities, we are sharpening our business continuity and business resiliency plans across our operations to best prepare ourselves to continue to deliver on supply commitments during and following an emergency response. Business continuity coordinators are in place across the business to maintain alignment and help keep our energy products supplied to markets during challenging times.

Reducing, Reusing and Recycling Waste

Managing waste is a key part of conserving natural resources. We have systems and processes in place designed to reduce waste generation and to recycle or reuse materials whenever possible.

Waste Management

The volume of waste we generate in any given year varies significantly depending on scheduled maintenance and remediation activities. Waste management and minimization plans are in place across MPC and MPLX operating locations and help manage volumetric cycles. Plans are specific to each operating component and location and include elements to legally and responsibly manage waste.

Waste management and minimization plan elements include:

- Assessments
- Characterization
- Emergency preparedness
- Employee training
- Handling
- Labeling
- Manifesting
- Measuring
- Proper disposal
- Record-keeping
- Storage
- Tracking
- Transporting

Waste Audits

Waste audits are conducted throughout our operations using a combination of record examinations and facility walk-throughs. Audits identify the amount and type of waste being generated and opportunities to minimize waste.

Waste Management Vendor Approval Program

In addition to our contractor selection requirements and supplier selection process, we maintain a thorough Waste Management Vendor Approval program. This program assesses the health, environment, safety and security (HES&S) performance of waste disposal and recycling vendors before we will conduct business with them. All potential vendors must disclose facility information, including types of waste managed, HES&S practices and compliance with state and federal waste regulations. Based on this information, MPC may conduct vetting activities that include background checks, legal reviews, CHWMEG®[1] reviews and site audits. Facilities that are approved and actively utilized are re-vetted on a recurring basis.

ELECTRONICS RECYCLING

Reducing our electronic waste (e-waste) saves energy, and proper disposal keeps toxins from entering landfills. In 2024, MPC and MPLX recycled over 220,000 pounds of e-waste including mobile devices, computers, monitors and other miscellaneous electronic devices.

[1] A nonprofit organization that conducts comprehensive, independent HES&S reviews of commercial vendor sites/facilities that treat, store, dispose of, recycle or transport waste.

Methods and Technologies to Minimize Waste

Reducing the amount of waste we generate carries significant environmental benefits. As such, we continue to invest in and deploy methods and technologies aimed at reducing, reusing and recycling waste generated throughout our operations.

$23 million+ invested in methods and technologies to reduce, reuse and recycle waste throughout the refining process in 2024

Waste is managed on- and off-site to recover hydrocarbons for reuse in the refining process and minimize the total amount of waste requiring other treatment or disposal. These waste management operations include a combination of:

- Centrifuging to separate water, oil and solids to reduce the volume of material prior to disposal.
- Thermal separation to recapture oil vapors so that they can be condensed back to the liquid phase.
- Thermal desorption to recover and return hydrocarbons to the refining process as feedstocks, remove hazardous characteristics of waste and reduce the total volume of waste.
- Coker injection to recover and recycle oil waste as feedstock and solid waste to become petroleum coke.

250,000+ barrels of oil reintroduced into the refining process to be turned into fuels or other products in 2024

ALTERNATIVE METHODS OF DISPOSAL

We deploy alternative methods to recapture waste as a resource to manufacture new materials. Three examples of this are using waste to fuel cement production, reusing spent caustic to manufacture paper and recycling spent catalyst for use in steel production.

Cement Kiln Disposal

Since 2013, more than 126,000 tonnes of refinery waste have served as an alternative fuel source for the cement industry, reducing CO_2e emissions compared to coal use for cement manufacturing operations.

Spent Caustic Reuse

In 2024, about 19,000 tonnes of spent caustic from our refineries was reused by the paper goods industry, reducing the need for newly manufactured chemical inputs, and the associated emissions, to the paper manufacturing process.

Spent Catalyst Reuse and Recycling

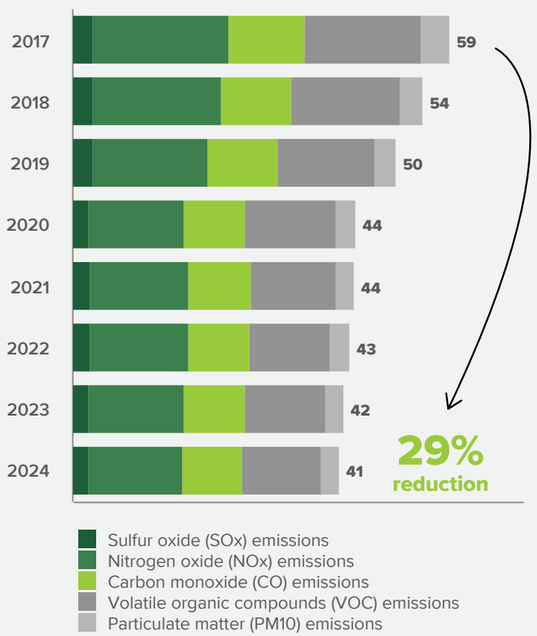
We aim to recycle all spent catalyst discarded from MPC refining hydroprocessing units. If we cannot reuse spent catalyst within our operations, it is sent to a third party for use by others in the oil and gas industry. When reuse is not possible, spent catalyst is delivered to a business partner that extracts the vanadium, molybdenum and other valuable metals to produce ferrovanadium and metal alloys, which are then used in steel production. In 2024, over 13,000 tonnes, or nearly all, spent catalyst from MPC refining hydroprocessing units were reused or reclaimed.

Air Quality and Emissions

Air quality is important to MPC and MPLX, our stakeholders and the communities where we operate. We are committed to maintaining open and ongoing dialogue with stakeholders near our operations on important topics, including air quality. We are dedicated to continuously enhancing our programs and strategies that address air quality and implementing them throughout our operations.

From 2017 through 2024, this approach helped us reduce criteria pollutant emissions by 29%.

Companywide Criteria Pollutant Emissions
(thousand tonnes)



Reducing Gas Flaring

Our refineries have flare-reduction programs that help minimize flaring and enable efficient combustion. In addition, many refineries have flare gas recovery systems that return gas to the refining process instead of flaring, reducing criteria pollutant and GHG emissions.

Minimizing Fugitive Emissions

Across MPC and MPLX operations, we utilize acoustic imaging cameras, also known as FLUKE® Imagers, to quickly and accurately detect air, gas and vacuum leaks in compressed air systems and confirm that leak repairs are effective. These devices use highly sensitive microphones to identify the distinctive sounds of leaks, even in noisy environments. Additionally, advanced monitoring technologies, such as satellite imagery, flyovers and drones, also are employed to identify leaks.

Lowering VOCs

Through MPLX's Focus on Methane program, we have implemented measures that have achieved significant methane emissions reductions. An additional benefit of this program is the reduction of volatile organic compound (VOC) emissions. Since 2016, we estimate that our Focus on Methane program has reduced MPLX methane emissions by 13,000 tonnes per year, while also reducing VOC emissions by an estimated 600 tonnes per year.

↗ Learn more about MPLX's Focus on Methane program in our Methane Emissions section.

Transparent Community Air Monitoring

We've implemented detailed, near real-time, public-facing air monitoring systems for our Detroit, Michigan, and Los Angeles, California, refineries, and Martinez, California, Renewable Fuels facility. These systems, accessible via the facilities' websites, offer easy-to-read, color-coded classifications that provide comprehensive information on air quality, emission levels, wind direction, wind speed and temperature at a glance. Community members also can opt in to a system to receive air-quality alerts.

THE ROAD TO REDUCING NITROGEN OXIDE EMISSIONS

Investing in the Los Angeles Refinery

Our Los Angeles, California, refinery made further progress in 2024 toward completing a multiyear transformation of the facility that is expected to lower site-wide emissions of nitrogen oxides by 20%, striving for a total reduction of ~49% from 2017 levels. Work moved forward on replacing six existing boilers with two new, high-pressure boilers that have selective catalytic reduction technology. The technology uses a catalyst to create a chemical reaction that reduces the amount of nitrogen oxide in the boiler exhaust.

Additionally, we advanced an effort to install overhead electric transmission lines that will connect the refinery's Carson and Wilmington operations and enable the retirement of two 40-year-old cogeneration (combined heat and power generation) units, creating more reliable and efficient operations.

The refinery's overall transformation is scheduled to be finished by the end of 2025. Along with lowering air emissions, the improvements are expected to reduce energy consumption and lower water use by approximately 375 million gallons a year.