

# ExxonMobil Baytown Environmental Progress Report

# 2017



**A**s one of the largest refining and petrochemical complexes in the world, ExxonMobil Baytown is an industry leader in safe, reliable and environmentally responsible operations. We are continuously optimizing our processes to minimize emissions, enhance energy efficiency and maintain the highest standards for environmental care. As a community partner for more than 95 years, we remain dedicated to improving air and water quality, and making positive contributions in the Baytown Area.

Certain emissions are authorized under closely regulated state and federal programs. These programs are designed to ensure protection of human health and the environment.

Our goal is to prevent environmental incidents and we are committed to continuous efforts to improve our environmental performance.

We are proud of our environmental progress over the years and maintain our commitment to improving every day. As a Baytown area neighbor, we pledge to continue exploring new ways to reduce emissions and improve air and water quality. **Our mission is clear: Protect Tomorrow. Today.**



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# Leading-edge environmental technology on the North American Growth Project

ExxonMobil is nearing completion on the construction of a multi-billion dollar chemical expansion, our Chemical Company's largest ever investment in the United States. The U.S. Environmental Protection Agency remarked that this project shows that "economic development and environmental protection can go hand-in-hand."

ExxonMobil is committed to using leading-edge technology that minimizes our impact on the environment.



Our furnaces increase energy efficiency and reduce emissions from the expansion.

All of the technologies deployed meet or exceed the stringent control technology standards for new units set forth by the Texas Commission on Environmental Quality, known as Best Available Control Technology. Our environmental technologies and techniques are designed to minimize emissions, including Nitrogen Oxides (NOx) and Volatile Organic Compounds (VOC). By implementing these technologies in our expansion, we are helping meet regional air quality goals for ozone while growing the local and regional economy.

The expansion includes integrated emission control strategies. Control technologies are not one size fits all; therefore, we have implemented multiple types of control devices, technologies and techniques to minimize emissions over the entire range of operations.

One control technology we are utilizing is a pressure-assisted, multi-point ground flare. Benefits to the environment and the community include clean, efficient combustion operations that are designed to reduce greenhouse gas and VOC emissions. This technology also ensures less low frequency combustion noise, reduced flame visibility and smokeless combustion, which minimizes visible emissions.

The furnace design and operation also plays a major role in limiting the expansion's carbon footprint. The steam cracking furnaces are equipped with heat recovery systems to produce steam from waste heat for use throughout the plant, which maximizes thermal efficiency. By harnessing waste heat for generating steam, we boost the efficiency of our operations, helping reduce emissions. Our furnaces are designed to recover excess heat which is converted to usable energy.

A pressure-assisted, multi-point ground flare benefits the environment and the community.



# ExxonMobil completes tree planting project at Russell Park



From the onset of the North American Growth Project expansion, ExxonMobil made a commitment to replace the trees at a 2:1 ratio that needed to be cleared at the Baytown Olefins Plant (BOP) for construction. Nearly 2300 trees have been planted around our Baytown facilities, greenbelt and in local parks – a testament to our commitment to environmental excellence and the Baytown community.

Nearly 100 ExxonMobil volunteers from the North American Growth Project and BOP helped plant 320 native trees at Russell Park, in partnership with the City of Baytown.

Representatives from the City of

Baytown, as well as the namesake of the park, Gene Russell, came out to mark the occasion and also to volunteer. Baytown Mayor DonCarlos thanked the ExxonMobil employees for their commitment to the community. “We appreciate your time spent to help build up this park,” said Mayor DonCarlos. “This is the first step in turning Russell Park into the crown jewel of our Baytown park system.”

The first tree of the day was planted in honor of the Russell family who donated the 60 acres to the City of Baytown in early 2016. Planting trees is the first in a multi-year vision to develop the land and build a park.



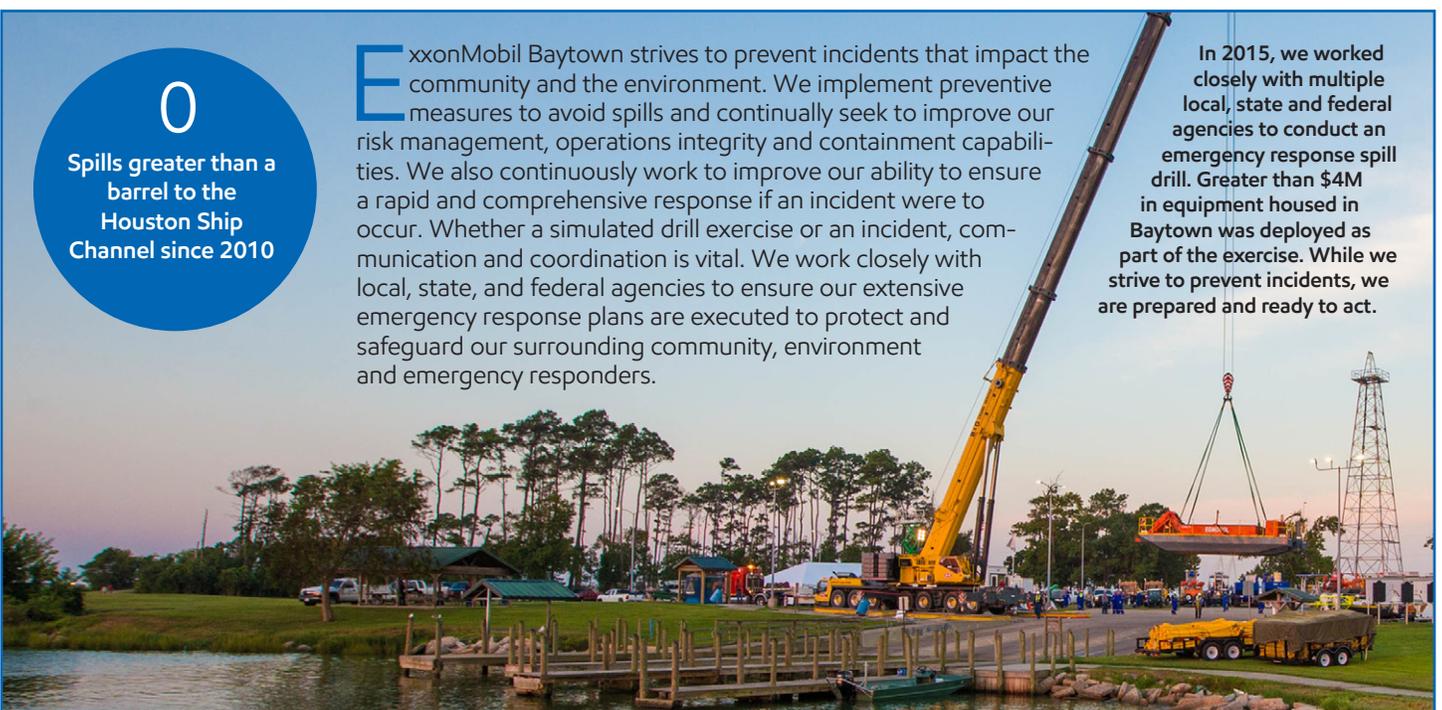
**Top photo:** Our volunteers with the first tree planted in honor of the Russell family. **Above, from left:** Baytown Parks Board Member Wayne Gray, BOP Plant Manager Woody Paul, Gene Russell and Baytown Mayor Stephen DonCarlos.

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Spills greater than a barrel to the Houston Ship Channel since 2010

ExxonMobil Baytown strives to prevent incidents that impact the community and the environment. We implement preventive measures to avoid spills and continually seek to improve our risk management, operations integrity and containment capabilities. We also continuously work to improve our ability to ensure a rapid and comprehensive response if an incident were to occur. Whether a simulated drill exercise or an incident, communication and coordination is vital. We work closely with local, state, and federal agencies to ensure our extensive emergency response plans are executed to protect and safeguard our surrounding community, environment and emergency responders.

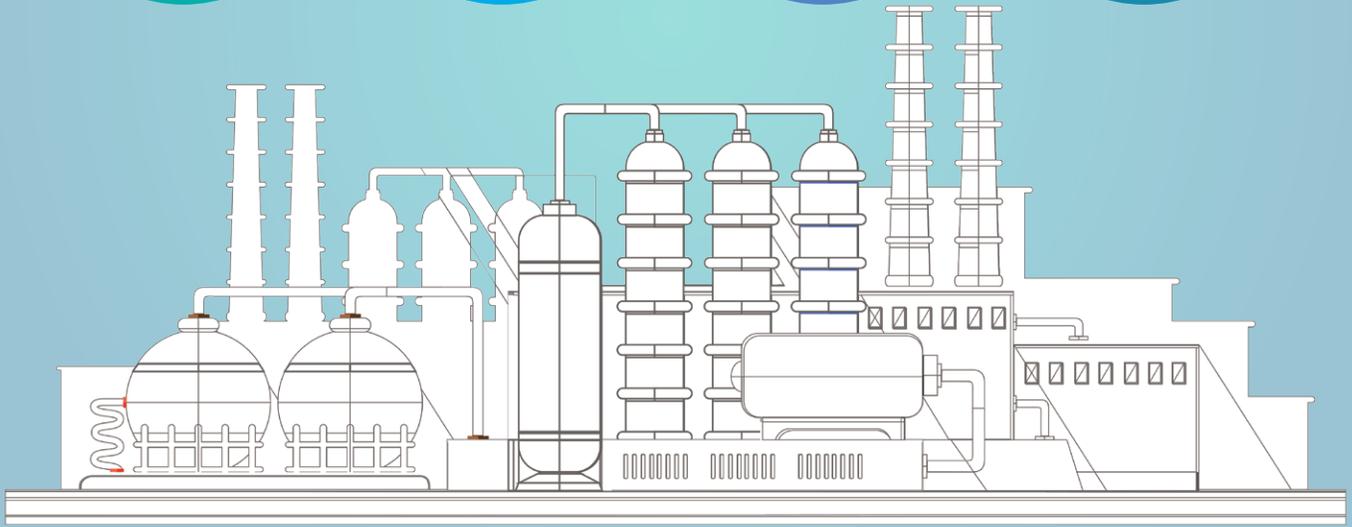
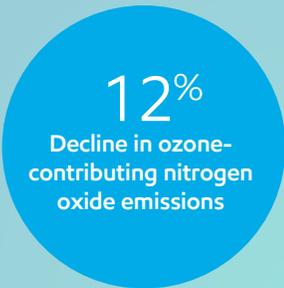
In 2015, we worked closely with multiple local, state and federal agencies to conduct an emergency response spill drill. Greater than \$4M in equipment housed in Baytown was deployed as part of the exercise. While we strive to prevent incidents, we are prepared and ready to act.



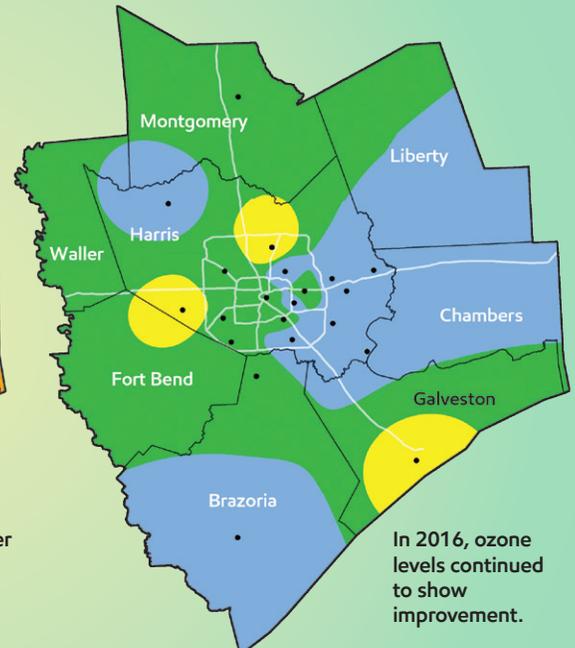
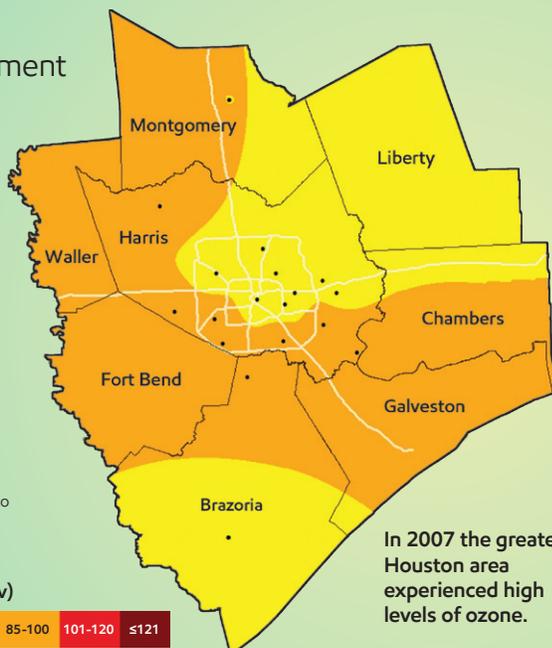
# Driving environmental excellence in the greater Houston region

## Baytown: A very efficient petrochemical complex

Solutions implemented by ExxonMobil have helped make Baytown one of the world's most efficient petrochemical manufacturing plants. Over the past ten years, there has been:



## Greater Houston Ozone Nonattainment Area



In 1997, EPA set the 8-hour ozone standard at 84 ppb and lowered it to 75 ppb in 2008. The standard was further lowered to 70 ppb in 2015.

Ozone concentration (ppb-v)



In 2007 the greater Houston area experienced high levels of ozone.

In 2016, ozone levels continued to show improvement.