

# Product

**M**inimizing engines' impact on water, land and air — recognizing the need for an unspoiled environment in which to live and enjoy Mercury products.



## Overall Goal:

Manufacture — in an environmentally responsible manner — marine-propulsion products whose fuel efficiency, low emissions, and noise-dampening properties make them environmentally friendly.

## Ongoing Strategies

- ▶ Integrate a product-impact scorecard that outlines areas of customer value that enhance the overall boating experience, including lower emissions and greater fuel efficiency.
- ▶ Develop customer-focused product training that encourages appropriate use and maintenance procedures for each engine.
- ▶ Continue cooperation with the California Air Resources Board (CARB), the Environmental Protection Agency (EPA) and international agencies promoting responsible and progressive emissions technology and standards.

## New initiatives in 2018

- ▶ Production of more environmentally friendly outboard engines: Mercury's new V6 and V8 four-stroke outboard engines are leaders in sustainability with a combination of fuel-efficiency, conservation of manufacturing materials, low emissions and reduction of noise.
- ▶ Expansion of joystick-piloting functionality to a broader range of Mercury outboards: Mercury introduced joystick piloting for a broader range of outboard engines, giving more boaters a tool that makes maneuvering easy and, by minimizing repeated attempts at maneuvers, saves fuel.

## Ongoing initiatives

Mercury Marine continues to develop and refine technologies that provide clean and efficient boat propulsion (see box, page 7) and that allow boaters to maneuver their vessels more efficiently, effectively, and safely. Technologies such as Active Trim and Advanced Range Optimization continue to deliver significant improvements in fuel efficiency. Digital controls such as Joystick Piloting, Skyhook, Drifthook, Bowhook and Heading Adjust help boaters control their craft efficiently and dock more easily, on the first attempt, saving fuel





## Mercury's new V6 and V8 engines set new standards in sustainable design

**I**n 2018, Mercury Marine unveiled new V6 and V8 fourstroke outboard engines targeting the 175 to 300 horsepower ranges. The 3.4-liter V6 and 4.6-liter V8 platforms share common engineering and technologies, enabling them to fulfill the dual mandate of exceptional performance combined with sustainability.

**Validation-testing results confirmed that these new outboard marine engines set high sustainability standards with regard to the reduced amount of raw materials required for their manufacture as well as their light weight, fuel efficiency, low emissions and noise abatement.**

These engines are able to produce among the industry's best torque and acceleration measurements even though they are significantly lighter — as much as 100 pounds lighter — than their predecessors and current competitors in their respective horsepower categories.

Mercury accomplished this using innovative and patented aluminum alloys that weigh less and allow for less material to be used without sacrificing durability.

With their significantly lighter weight and exclusive closed-loop fuel-control system using a wide-band oxygen sensor, these engines have extraordinary fuel-efficiency. In extensive side-by-side lake trials, Mercury's V6 models were 12-16 percent more fuel-efficient at cruising speeds than the corresponding models of their chief competitor, and the V8s were 8-10 percent more fuel-efficient.

The new Mercury engines include Mercury's Advanced Range Optimization, which automates fuel mixture for even greater efficiency. Furthermore, when paired with Mercury Active Trim

technology, the engines' positioning is automatically adjusted to optimize performance and get the most mileage out of every drop of fuel.

Mercury's new V6 and V8 engines received a three-star rating, "Ultra Low Emissions," from California's Air Resources Board (CARB).

Understanding that the reduction of noise pollution is also an important factor in keeping natural environments pristine, Mercury's engineers developed the world's quietest outboard engines in these horsepower categories. For example, Mercury's 200hp V6 engine demonstrated noise reductions of 17 percent at idle, 22 percent at cruise, and 31 percent at wide-open throttle in comparison to its closest competitor.

