



# water

responsible management of a critical natural resource



## water statement

Chevron recognizes the value of water as a fundamental societal, environmental and economic resource. As a global company, we know that access to water is essential for the communities where we operate and for our business. To produce energy around the world, we rely on access to sufficient sources of water, including both freshwater and water of lower quality.\* We have management systems, processes and standards to manage this critical natural resource in alignment with [The Chevron Way](#) and our [Human Rights Policy](#).

To promote responsible management of water resources, we:

- Integrate water conservation and efficiency drivers into our decision-making processes.
- Strive to conserve, reuse and recycle water in water-constrained areas.
- Account for the use of water with appropriate metrics.
- Engage with governments, partners, local communities and other stakeholders on significant water resource issues in areas where we operate.
- Build partnerships and participate in industry water resource initiatives to share and promote best practices, assist with the development of industry standards, and shape relevant policy.

# water management

## management systems, processes and standards

The expectations in our updated Operational Excellence Management System (OEMS) call for our organizations to conserve and protect water resources using a risk-based approach that addresses potential acute and cumulative impacts across the life of our assets. Organizations monitor and analyze performance to verify that the safeguards designed to conserve and protect water in water-constrained areas are in place.

Our Environmental Stewardship (ES) process, our Environmental, Social and Health Impact Assessment (ESHIA) process, and our Upstream-specific Natural Resources Environmental Performance Standard (EPS) are three examples of how the water-related expectations of our OEMS are executed.

The ES process directs our businesses to create an inventory of how their activities interact with the environment. These environmental aspects, including use of water, and their related potential impacts are then used to identify, assess and prioritize environmental risk and improvement opportunities.

The ESHIA process is used by local project teams early in the life of the project to assess the potential impacts and benefits of our activities on natural resources, including water. An important part of this process is assessing existing environmental and social conditions, such as how local communities are using water. This information is used during project planning to help us consider and address potentially significant water use by our operations in relation to local water availability.

Our Natural Resources EPS is applied across our onshore Upstream business and capital projects and calls for a water resources screening assessment. Together with our ESHIA process, these tools help to identify potentially significant environmental and social impacts associated with our water use. The water resources screening assessment evaluates and helps us manage the following risks that may be associated with our water use:

- Water availability
- Competition for water resources
- Impact of water withdrawal on source water quality or quantity
- Sociopolitical risks
- Regulatory restrictions

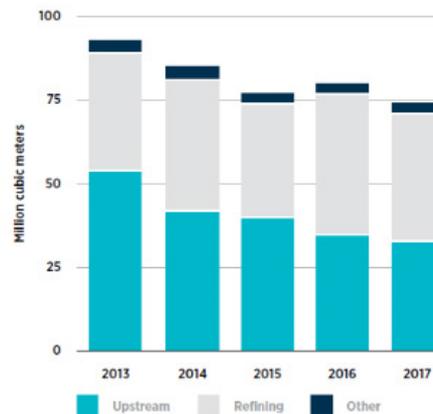
Where there is potential for significant impacts, a water resources management plan (WRMP) is developed. The WRMP helps our operations identify and implement measures that reduce water withdrawals when possible.

# reporting our performance

We collect data on the amounts of fresh and nonfresh water we withdraw from the environment and the amount of fresh water returned to freshwater sources, which enables us to make informed business decisions around water management. In addition, we are committed to annually reporting performance data on the common reporting elements specified in the 2015 IPIECA/API/IOGP *Oil and gas industry guidance on voluntary sustainability reporting*.

[Track our performance against a number of these metrics >](#)

## fresh water withdrawn



## success stories

### managing water use in hydraulic fracturing

Chevron strives to reduce the amount of fresh water used in our hydraulic fracturing operations.

#### Using alternate sources of water in the Permian

In the Permian and Delaware Basin, we use brackish and recycled produced water in lieu of fresh water when possible. More than 96 percent of the water used in our well completions is from brackish or recycled water sources.

Since 2017, our Permian and Delaware Basin operations started to treat and reuse the produced water generated, which is typically managed as a waste stream. In 2018 we treated and recycled over 2 million cubic meters of produced water for our hydraulic fracturing well completions.

#### Reusing produced water in the Appalachian region

Our operations in the Appalachian region strive to maximize the reuse of its produced water. **In 2018, we recycled or reused 98 percent** of our produced water. This is part of an overall strategy to reduce both our freshwater consumption and the need for water transportation, transfer and disposal.

In addition, Chevron Appalachia has created partnerships with select local operators to engage in water-sharing agreements. These agreements facilitate reuse of our produced water by other operators for their drilling and hydraulic fracturing activities. This practice has multifaceted benefits, including: maximizing water recycling to offset freshwater demands and limiting disposal to injection wells. Since the execution of agreements in March 2017, Chevron Appalachia has shared approximately **35 million** gallons of water.

## water recycling at our refineries

### Jurong Island, Singapore

In 2017, Singapore's national water agency awarded the Singapore Refining Company (SRC)\*\* the inaugural Water Efficiency Award in the Refining category for its efforts in water recycling. The SRC built a recycling plant that further manages treated wastewater that would otherwise be discharged to the sea. The plant uses ceramic microfiltration and reverse osmosis, removing suspended solids, oil, grease and other contaminants from the used water. Water from the new plant meets both industrial and potable water specifications and is recycled back to the refinery's boiler feed water. The plant currently meets approximately 20 percent of the SRC's water demand.

### Richmond, California

Our refinery in Richmond, California, is the largest user of reclaimed water in the San Francisco Bay Area. Approximately one third of water withdrawn by the refinery is water that has already been used. One of the projects that contributed to this achievement was the Richmond Advanced Recycled Expansion (RARE), a joint effort with the East Bay Municipal Water District. The RARE Water Project facility doubled the daily allowable capacity for use of certain reclaimed water at the refinery, from 3 million gallons to more than 6 million gallons. Use of reclaimed water from the RARE Water Project facility frees up enough fresh water to supply up to 16,000 homes (46,000 people) on a daily basis.

### El Segundo, California

At our El Segundo, California refinery, approximately 70 percent of the water used in refinery processes and landscaping is recycled or reclaimed water. The El Segundo refinery is the largest industrial user of reclaimed water in the Los Angeles Basin. Using reclaimed water helps our environment by significantly reducing the treated wastewater discharged to the Santa Monica Bay.

\* Water of lower quality could include: seawater; brackish groundwater or surface water; reclaimed wastewater from another municipal or industrial facility; desalinated water; remediated groundwater used for industrial purposes.

\*\* Water that is brought to the surface when extracting oil and gas.

\*\*\* A 50 percent-owned joint venture.

#### downloads



> 2018 Annual Report



> 2018 Corporate Responsibility Report



> The Chevron Way - English

#### resources

- > Request a printed copy of our reports
- > Learn more about our Corporate Responsibility activities and results

#### more information

- > Learn more about our water management practices
- > Protecting the environment
- > Environmental, social and governance reporting