Entergy Corporation

Water Management Overview

2022

I. A History of Performance and Disclosure

Protecting the environment is one of many ways Entergy powers life and creates sustainable value for our stakeholders — customers, employees, communities and owners – and this has been true for many years. As long ago as 1972 (the same year in which the federal Clean Water Act was signed into law), our Louisiana operating company, then called Louisiana Power & Light Company, issued its 1971 Annual Report titled *A Better World Tomorrow Is Our Concern Today*, which highlighted the company's environmental responsibility, including our pledge of "continued cooperation with private and public agencies in responsible efforts to preserve our natural resources and to protect and improve man's total environment." In the more modern era of environmental stewardship, our Board of Directors adopted Entergy's Environmental Vision Statement in 2002. The statement outlined our objectives in what would today be called environmental sustainability. These objectives include leading by example and demonstrating responsible environmental behavior everywhere we serve.

For 20 consecutive years, the Dow Jones Sustainability Index, a global measurement for environmental, social and governance responsibility, has recognized our environmental and other sustainability actions by including Entergy on either its World or North America index or both. Listing on the North America index generally represents a ranking in the top twenty percent of a global industry sector. No other U.S. company in the electric utility sector has this record of performance on the DJSI. Since 2014 Entergy has scored a perfect 100 in the water-related risks category of the DJSI each year.

As part of our transparency on environmental issues, over the past 17 years, Entergy has developed and disclosed a substantial amount of information related to water risk management, scarcity, use and flooding, while taking into consideration changes that may occur due to climate change such as increased flooding and storms.

The company currently discloses various water metrics annually through numerous channels, including the company's SEC Form 10K and 10Q filings, its annual Integrated Report, publication of the Edison Electric Institute ESG Template and publication of Entergy's own performance data table. Our disclosures are guided by the framework of the Sustainability Accounting Standards Board. Links to these disclosures and summaries of this information are provided below:

- Water-related 2021 Form 10K pages v, 34, 235, 262, 268, 272-275, 294-299, 319, 345, 367, 390, 413, 437, 470
- Water-related Integrated Report, p 62
- Entergy's EEI ESG Template – Quantitative Information
- Entergy's EEI ESG Template – Qualitative Water Information
- Entergy's Performance Data Table
- Entergy's Statistical Report and Investor Guide
- Entergy's alignment with SASB

While information for the DJSI is submitted directly to the analyst, we are providing substantially the same information here, along with information from other sources.

II. Water Management Governance and Oversight

Governance of water-related risks at Entergy begins with the Board of Directors and extends through management to unit operational subject matter experts. Water-related risks are incorporated into the company's corporate risk management processes and are included in the company's discussion of material issues in the Form 10-K, in the ESG section of the annual Integrated Report, and in the Material Issues Determination on the sustainability page of entergy.com.

In 2014, Entergy adopted a companywide Water Management Standard, which is part of the broader Entergy safety, health, and environmental management system (EMS). Entergy's EMS establishes the requirement that business units identify and assess risks, including water supply and water quality risks, that could impact their operations. In 2019, Entergy determined a more collaborative environmental, health, and safety management system should be utilized. This process, developed in late 2019 and continuing into 2022, will establish the overall framework for the proactive management of environmental and safety risks using ISO 14001 and 45001 as guides.

The EMS, including the Water Management Standard, forms one basis of Entergy's annual safety, health and environmental audit program. The audit program uses third-party expertise to conduct audits of compliance, risks and management systems throughout the Entergy system. Audit reports are provided to company management and aggregated audit results are reported to the Audit Committee of the Board of Directors at least annually. Additionally, water-related issues are included in Entergy's broader sustainability reporting and performance initiatives, and sustainability governance is included in the charter of the Board's Governance Committee.

Entergy manages operational water-related risk compliance and planning issues primarily through the work of a cross-functional Water Peer Group. The Water Peer Group is comprised of water subject matter experts from each of the business units. The group examines water supply and discharge issues that impact Entergy's operations, provides a forum for subject matter experts to discuss these issues, and provides coordination for path-forward strategies to influence these water issues and risks. The peer group uses the World Resources Institute Aqueduct tool to review geographic water stress assessments.

Entergy continually assesses its water use and identifies risks associated with water through several risk management programs. As stated, the company tracks compliance issues at its facilities through its voluntary environmental management system compliance audit process and through permit compliance and reporting processes described below. On a corporate level and for significant capital projects and transactions, risk management includes identifying water impacts for permitting requirements, storm water impacts, wetlands and other water-related

risks. The Office of the Corporate Risk Officer's corporate risk committee capital expenditure review process includes an assessment of water-related and other environmental risks. Water issues are included in a scenario analysis Entergy conducts as part of its overall due diligence review and analysis of any expansion, acquisition, new project or investment. Depending on the project, scenario analysis may include water availability issues, quality issues, intake concerns, wetlands issues and water-related biodiversity impacts. Desktop evaluations are conducted using ArcGIS to determine water impacts of transmission construction projects in preliminary planning phases. Impacts and associated mitigation costs are included in project documents that provide a basis for corporate risk assessment.

Entergy tracks water use at the local level and reports to local agencies as required by permits or regulations that apply to surface water or ground water use. Entergy often engages with regulatory agencies and conservation groups at regional, state and local levels (see specific discussions in section III). Engagement with these groups helps Entergy track potential local water availability issues. If a water scarcity issue occurs, Entergy is committed to working with these groups to address availability, quality and regulatory issues. Entergy also participates in various industry groups that monitor water quantity and quality issues at the national, regional and state levels.

III. Specific Water Risk Management Practices and Tools

Virtually all of Entergy's discharges to water are controlled either by state-issued, federally enforceable permits issued under the National Pollution Discharge Elimination System of the federal Clean Water Act or by similar state programs. Entergy facilities operate under approximately 40,000 specific water pollution control permit requirements. Across our operations, Entergy protects water resources by maintaining a compliance rate with state and federal water pollution control permit requirements of at least 99 percent from year to year.

Entergy's withdrawal and use of water also is controlled by a system of federal, state and local requirements. For example, cooling water withdrawals are regulated by section 316(b) of the CWA, regulations promulgated thereunder at 40 C.F.R. Part 122 and permits that apply these requirements specifically to the operations of covered units. Often, groundwater and surface water withdrawal also are regulated by state withdrawal or diversion permits, limits, and reporting requirements. An example of this type of program is the Mississippi water resources regulation and control provisions of Miss. Code Ann. section 51-3-1 *et seq*., especially the requirement of a state permit for any non-exempted use of surface or ground water found in section 51-3-5.

The Lewis Creek Power Plant and Montgomery County Power Station in Montgomery County, Texas, are the only Entergy power plants that operate in a water-constrained area. Even this area is not classified as water-stressed as defined by sustainability analyst RobecoSAM and the DJSI; however, the facility is located in Montgomery County, Texas, in the Lone Star Groundwater Conservation District, an area identified as water-constrained due to a current water use exceeding the local aquifer's sustainable yield by ~20% (25 billion gallons use vs. 21 billion gallons

yield). The World Resource's Aqueduct water risk atlas also notes that this area is categorized as medium to high risk based on physical quantity, quality, regulatory and reputational risk categories. Entergy undertook a long-term strategic study of water availability for its Lewis Creek Plant. The study included analysis of the groundwater wells and water plant system. In conjunction with the LSGCD, the facility developed and executed a plan to reduce water withdrawal by 30% through process design changes. By working with the district to optimize water use and leveraging best practices, Lewis Creek continues to utilize at least 30% less water than originally permitted. Existing Lewis Creek units use a large non-public reservoir for cooling water and heat dissipation. This system is closed-cycle except for necessary make up due to evaporation, which is taken from surface water, not the stressed ground water resource. The Montgomery County Power Station began commercial operation in 2020. However, MCPS utilizes the existing Lewis Creek reservoir for cooling water and heat dissipation and does not use ground water resources.

Entergy also participates in the Louisiana Water Synergy Project, a collaborative effort led by the U.S. Business Council for Sustainable Development. The WSP started in 2012 and brings together industry, non-profits and government agencies to work on water issues important to the state. Projects include a water simulation module, development of a nutrient trading program for the state and coastal zone resiliency. For additional information see https://usbcsd.org/water. The simulation model evaluates stakeholder water conflicts using a watershed scenario analysis. A computer-based simulation model also has been constructed regarding water usage in the Mississippi River basin. The project employs a front-end user interface to allow participants to make decisions that feed into an overall predictive model, which together form a prototype participatory simulation for the Louisiana Gulf Coast. This predictive model is being tested by several groups and is a useful tool for forecasting future impacts based on an analysis of historical trends in land use, land cover and environmental impacts. The resulting simulation model is being used to forecast future trends, educate stakeholders and predict changes under various scenarios.

The US BCSD Water Synergy Project inventory of nutrient releases by point sources within the Mississippi River Industrial Corridor (MRIC) in Louisiana indicates that nutrient releases from industrial and municipal point sources to the MRIC continue to have minimal to no impact on nutrient levels in the river. Entergy also is working with the state of Louisiana, non-governmental organizations and businesses to build a Louisiana Freshwater Assessment baseline in our service territory so that we can make informed decisions regarding freshwater in the future.

We engage our regulators at the state and local levels to minimize potential risks from regulatory changes. For example, in 2018, during due diligence for a pending acquisition, we engaged the Southeast Texas Groundwater Conservation District to ensure the Gulf Coast Aquifer had sufficient sustainable yield for the facility's continued operation. Similarly, in 2018, we conducted thermal modeling and worked with the Louisiana Department of Environmental Quality to develop a revised minimum standard instream flow (7Q10) for the Houston River and the West Fork of the Calcasieu River for a facility under construction in Westlake, Louisiana.

Entergy has experience in responding to specific water supply risks. For example, Entergy has worked with the U.S. Corps of Engineers to identify risks, challenges and contingency plans should a saltwater wedge move far enough upstream to impact water intakes near New Orleans. Intrusion of saltwater upstream into the Mississippi River is a naturally occurring periodic condition. Significant saltwater intrusion occurred in the 1930s, 1988 and 1999. When flow drops below 288,000 cubic feet per second, saltwater intrudes to Head of Passes at the mouth of the river. Risks identified were the potential for chlorides to corrode stainless steel condensers and for saltwater to adversely impact ion exchange water purification systems relied upon for maintaining boiler feedwater supply.

Also, in Louisiana, the Columbia Lock and Dam system on the Ouachita River suffered damage and the United States Corps of Engineers lowered the water level to conduct required repairs. The water level fell below the pump suction for our Perryville Plant, which then installed portable water pumps and hoses to obtain cooling water.

Occasionally surface water temperature rises to a point where a facility will need to power down. In 2018, the Pilgrim Nuclear Station (since sold by Entergy) reduced power several times due to seawater approaching the 75-degree standard set by the Nuclear Regulatory Commission. In several instances, down powers to 40% were necessary. The estimated losses exceeded $8 million. In 2017, Pilgrim reduced power to 70% when water intake temperatures were too high. Additionally, in 2018, the Lake Catherine facility located in Arkansas had to de-rate by approximately 50 MW for less than an hour due to increased water temperatures. Entergy monitors and responds to these situations as it would a physical interruption in water supply. As we build our more modern facilities, water thermal intake issues are a factor in design considerations such as the use of cooling towers, recirculation cooling ponds, and condenser sizing, each of which can mitigate this risk in appropriate circumstances. In 2019, Entergy also purchased its first air-cooled gas-fired generating unit at the Choctaw plant in Mississippi. The company continues to evaluate the operation of that unit.

The information provided above pertains primarily to Entergy utility service territory in Arkansas, Louisiana, Mississippi and Texas. Entergy has, until recently, operated merchant nuclear facilities in Vermont, Massachusetts, New York, and Michigan. Most of Entergy's generating units must comply with section 316(a) and (b) of the federal Clean Water Act. Subsection (a) applies limitations to the discharge of heated water into most water bodies and subsection (b) requires protective measures for aquatic species that could be impacted by the withdrawal of cooling water from most water bodies. Compliance with 316(a) and (b) often requires the development of extensive data sets regarding the temperature and aquatic ecosystem around a unit, operational modifications, permitting processes and reporting. For Entergy, this was particularly required of the Pilgrim nuclear unit in Massachusetts, the Vermont Yankee nuclear unit in Vermont, and the Indian Point nuclear units in New York. All of these units have ceased operations and no longer are owned by Entergy, but the extensive experience in thermal modelling, aquatic management and section 316 permitting and compliance at these units has developed expertise within the company that now benefits the entire Entergy fleet. For example, in 2018, we worked with the Louisiana Department of Environmental Quality and approximately

19 other facilities to establish Mississippi River baseline data for Clean Water Act Section 316(b) implementation.

In 2019, Entergy donated to the Stony Brook University School of Marine and Atmospheric Sciences an extraordinary scientific collection of archived fish and water data amassed over five decades as part of Entergy's commitment to protect the environment of the Hudson River. The collection provides scientists a unique retrospective on the ecological health of the estuary. Entergy accompanied the donation with seed capital to advance Stony Brook's goal of groundbreaking scientific study of the collection.

IV. Flood Risks and Mitigation Measures

A. Non-Nuclear Generation Portfolio Assessment and Protection

As Entergy designs and builds new generation, the site selection process involves reviewing the site for access, transmission interconnection and flood potential. For Entergy's natural gas-fired new generation, additional considerations in the site selection process include fuel and water supplies. To address flooding, the site is reviewed against 100-year floodplain data and specific data associated with the site. All the current natural gas-fired new generation builds are located at existing Entergy sites where there is an understanding of how the site is impacted by flooding. The determination of the site elevation takes into account the flooding data to provide reasonable assurance that the major power block equipment is not impacted by flood waters. The major power block equipment includes the gas turbines, steam turbines, transformers and electrical switch gear rooms. Also, the site elevation considers construction impact and costs. In some cases, the site elevation is above the ground water level, which eases the installation of underground components. For solar new generation builds, the solar panels are designed and constructed at an elevation protective of flooding. Flooding data is also considered for the design elevation of inverters, transformers and energy storage containers.

During the design phase, wind loading on structures is in accordance with the International Building Code and the American Society of Civil Engineering — Minimum Design Loads for Buildings and other structures standards. ASCE 7 provides users with site-specific wind speeds used in the determination of the design of wind loads for the buildings and structures. ASCE 7 also addresses design loads for seismic, rain and ice impacts. The IBC addresses the design and installation of building systems and provides regulations that safeguard the public health and safety in all communities, large and small.

B. Nuclear Flood Hazard Evaluation

Flooding hazards have been re-evaluated systematically at each of Entergy's nuclear plants using the latest methodology and information beyond original design requirements set by the Nuclear Energy Institute's 12-06 Diverse and Flexible Coping Strategies Implementation Guide. Sources and standards of methodology and information are from national laboratories, the National Weather Service, U.S. Army Corps of Engineers, Federal Emergency Management Agency, Federal

Energy Regulatory Commission, Department of Energy, cutting edge researchers and scientists and other federal and international agencies and institutions. Flooding hazard mechanisms assessed include extreme hurricanes, tsunamis, intense rainfall, flooding rivers, dam failures, ice jams, seiches and combinations of these.

Entergy's nuclear fleet generally was found to have margins beyond design basis re-evaluation providing protection of important plant structures, systems and components. One plant required a strategy to prepare for an extreme hurricane surge during the advance warning time from the National Hurricane Center. Plant staff is prepared and able to execute the strategy.

The U.S. Nuclear Regulatory Commission requires all safety-significant structures, systems and components to be designed for the most severe natural phenomena. The NRC includes an added safety margin to ensure that the standards account for the risk that a flood could be more severe than any recorded historical event. All nuclear power plant sites, including those at Entergy, performed assessments and analyzed the potential consequences of floods. Our safety equipment is located in areas where even extremely rare floods cannot reach. We have completed walk-downs at our plants, looking for opportunities to prevent flooding. By focusing on our Prevention, Detection and Correction Model, we have installed prevention modes such as having storage of pumps and generators in separate buildings to ensure availability, installing physical barriers and training employees. Entergy team members are experienced, highly trained and prepared to respond to a variety of off-normal situations including severe weather events such as floods, tornadoes, hurricanes and lighting. Through our emergency response plans, we regularly train and perform exercises to protect our employees and communities.

The industry has developed a diverse, flexible approach called FLEX to mitigate the potential impacts of unforeseen events. Building on existing installed backup safety systems, this strategy provides another layer of backup equipment at facility sites and national rapid response centers in Phoenix and Memphis. Collectively, these industry actions represent an investment of more than $4 billion.

Plants are hardened against potential flooding. Emergency core cooling systems are watertight—they are sealed, with submarine doors for access. Electrical switchgear for emergency operations at the plants is protected from flooding by elevating it above potential flood levels. Dry fuel storage facilities meet federal regulatory design requirements including that casks are designed to withstand the effects of natural phenomena such as floods, tornadoes, lightning and hurricanes. All operating Entergy interim spent fuel storage facilities have been evaluated against the worst-case postulated flood; canisters remain sealed during flood conditions.

V. Publicly Available Statistics and Risk Statements

The links provided in section I, above, provide extensive public disclosure of water management-related statistics and risks. For the reader's convenience, selected information is reproduced below.

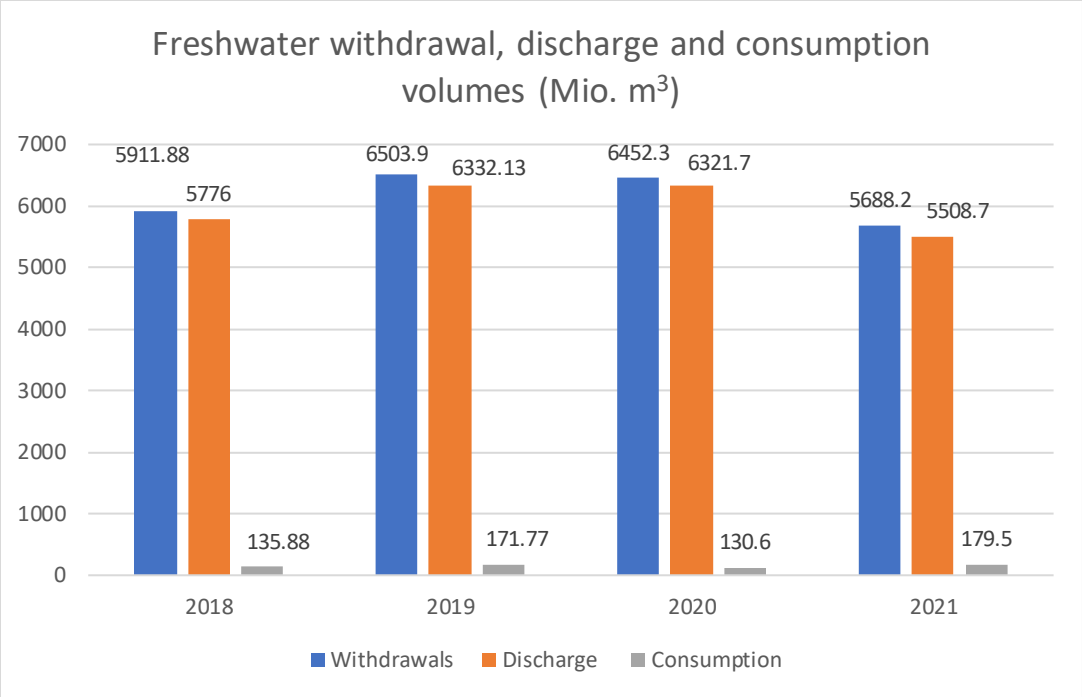
The total water consumption data provided below includes cooling water withdrawn at Entergy's generation plants in 2021. Updated data is provided at least annually at the sources linked above. Entergy calculates the water data included here based on operational data submitted to U.S. regulatory authorities. Entergy obtains cooling water and other process water from various groundwater and surface water sources at our generating plants.

Depending on its quality, some of this water must be conditioned by various water treatment technologies to allow its use in our ultra-pure systems. Entergy implements a controlled losses program to conserve this ultra-pure process water and minimize the waste of high-quality boiler condensate. These conservation efforts reduce the amount of wastewater being treated and released back to the environment. In the normal course of business and as permitted and authorized by various local and state regulatory agencies, Entergy discharges cooling water and other waste waters to natural and man-made receiving water bodies. Under these permits, Entergy monitors and reports various water quality parameters at the discharge points or at internal control points. In 2021, Entergy experienced 9 permit exceedances out of more than 40,000 samples/measurements. This represents a compliance rate of 99.98 percent.

Entergy Water Management Table

	2018	2019	2020	2021
Total municipal water supplies (or from other water utilities)	0	0	0	0
Fresh surface water (lakes, rivers, etc.) (MCM)	5,884	6,454	6,426	5,625
Fresh ground water (MCM)	27	49	27[1]	63
Withdrawals (MCM)	5,911	6,503	6,452	5,688
Discharge (MCM)	5,776	6,332	6,322	5,509
Consumption (MCM)	136	172	131	179
% reduction in consumption from 2015	-32%	-4%	-34%	-10%
% of facilities covered in the data	100%	100%	100%	100%

[1] This value has been updated to correct an error in which the groundwater withdrawals at one generation facility were significantly over-estimated.



As shown in the table and graphs above, Entergy's net water *consumption* is relatively small compared to its withdrawals because most of the water is returned to the water body. The main uses of water include:

- Cooling water that passes through facilities before returning to the same or a nearby water source.
- Process water consumed in the steam cycle.

Entergy's primary use of water is for cooling in either once-through or closed-cycle systems. In 2021, consumptive water use increased due primarily from bringing on-line one new large power plant with cooling towers, along with increased economic dispatch of coal-fired generation units which are equipped with cooling towers. Most of the water withdrawn is returned to the water body source; some water is "consumed" via evaporation, although this water still is returned to the natural water cycle in the form of water vapor. Closed-cycle cooling reduces the amount of water withdrawal needed since the water is re-used several times.