



February 2019

The following information is provided in response to the 2018 *Disclosing the Facts* Questionnaire

For all responses, information may be available on Devon's website, including CDP and Sustainability reports, with additional responsive detail.

Bold text is new information, published in February 2019.

<u>Question</u>	<u>Question</u>	<u>Additional Information</u>
13	For each play, does the company state its practices for reducing use of fresh water in operations?	<p>Across each of Devon's operating areas, Devon is conscious of the amount of fresh water consumed by our operations and uses non-potable and marginal quality water where available. However, the most effective way Devon has found to avoid fresh water use in areas of high drilling and completion activity is through produced water recycling operations.</p> <p>New Mexico: Our history of leadership in water conservation includes being the first company to recycle flowback and produced water from natural gas wells in North Texas and becoming the largest user of treated produced water in New Mexico, where we led the effort to establish state rules to encourage the practice. Today, reused water accounts for more than 80 percent of the company's needs in arid southeastern New Mexico's Delaware Basin, where we have constructed eight impoundment basins – each 15-feet deep and covering four acres. They're integral to our operations and to saving water, connected by a local pipeline network without which we'd be hauling water that would fill about 500 trucks per day. We use fresh water in the Delaware only for blending, and only when reused water isn't available in sufficient quantities.</p> <p>Oklahoma: Devon takes a local approach to developing water-management plans, which consider the availability and quality of water, local ecosystems and habitats, regulations and other factors. In our home state of Oklahoma, where demand for water is growing, Devon is evaluating a water-management strategy based on the Oklahoma Comprehensive Water Plan. The goal of the state water plan is to consume no more fresh water in 2060 than was consumed in 2010. Given our strong desire to be good environmental stewards, we have actively sought alternatives to fresh water. We are exploring how to further incorporate marginal-quality, non-potable water into our STACK operations. When feasible, we use brackish water, flowback and produced water as sources for well completions. In addition, we've built local pipelines connecting well sites to central water reuse and storage facilities that have conserved millions of barrels of water.</p> <p>Wyoming: In Wyoming, our Rockies business unit is working to establish a water-recycling program as we prepare to increase our activity level there. We plan to begin recycling water in Wyoming in 2019.</p>

		<p>Texas: In Texas, Devon is conscious of its fresh water use and uses non-potable sources where available but given the smaller scale of our drilling and completion activities currently in Texas, it has not yet made economic sense to invest in large scale recycling or reuse facilities in the area.</p> <p>Canada: In our oil sands operations in Alberta, Devon Canada's Jackfish project was the first commercial steam-assisted gravity drainage (SAGD) facility to use no fresh water in its operations. Instead, we use only saline water to create the steam required to produce heavy oil, and more than 85 percent of this water is recycled.</p>
15	Does the company state the methods it uses for all plays to store produced water (i.e. tanks, open impoundments)?	The majority of produced water from Devon's onshore production facilities is stored in tanks at either the surface location, a central tank battery, or a disposal facility. For produced water recycling operations, water is stored temporarily in lined pits, where it undergoes treatment as designed for the hydraulic fracturing operations for which it will be used. Additionally, some produced water in Wyoming is stored in pits for disposal. Produced water at our Jackfish project in Canada is stored temporarily in lined pits and then recycled through the water treatment plant.
16	For each storage method in the question above, does the company state the measures it takes to reduce spills, leaks, volatile emissions, and/or hazards to wildlife?	<p>In keeping with the pollution prevention principle in our EHS Philosophy, we employ the appropriate tools and techniques to minimize discharges of oil, produced water and other materials from equipment and facilities. For our facilities which store water in tanks, preventative measures include secondary containment, nearly full tank alarms and offsite equipment monitoring with the ability to shut in facilities remotely.</p> <p>For our produced water recycling facilities, any pits are designed to maintain a level that leaves at least 3 feet of freeboard, which virtually eliminates the risk of overflow from rain. Additionally, our pits are designed to be double-lined and sloped to direct any water that penetrates the first liner to a sump pump. In between the two liners is a mesh with a leak detection device, which would alarm our operators when a liner leaks. Similarly, our disposal pits are lined as well.</p>
20	If the waste products from the company's operations are reused for purposes other than hydraulic fracturing operations, does the company disclose how such waste products are used (e.g. wastewater for dust suppression or agricultural irrigation, or road de-icing) and methods for assuring such measures do not cause human or environmental harm?	<p>An example of a waste stream being recycled is found at our Jackfish complex, which includes an on-site waste landfill. We collect leachate fluid from the landfill and divert it to the Jackfish central processing facility, where it is processed and incorporated into the steam-generation process required for oil production.</p> <p>In Wyoming, some produced water is used under Subpart E of the Oil and Gas Extraction Point Source Category under the beneficial use subcategory. Otherwise, outside of water recycled in hydraulic fracturing operations, all produced water and production waste is disposed of according to EPA and applicable state requirements.</p>

22	Does the company state a practice to use dry hydraulic fracturing chemicals instead of liquid ones, and in what circumstances?	Devon does not state a practice of using dry chemicals. Instead, Devon's preferred practice is to use liquid chemicals. In Devon's opinion, there is less chance for inhalation of hydraulic fracturing chemicals when they are in a liquid form, and Devon has not found dry chemicals to pose a lesser risk of environmental harm in a release scenario given the way chemicals are typically handled on site.
24	If a company excludes reporting of chemicals due to claims of Confidential Business Information, does the company clearly state on its website that FracFocus and/or its reporting may exclude chemicals protected by claims of CBI?	A full registry of wells and chemical additives, along with much more information about hydraulic fracturing, is available at fracfocus.org . Devon played a leading role in the creation of FracFocus in 2011, and continues to be a leading contributor of information to the site. Since that time, Devon has made a practice of reporting its well completions to the fracfocus.org database. In these reports, Devon follows state rules and regulations to determine the required information that must be disclosed, where they exist, but in all disclosures, Devon relies upon the data supplied by our chemical and service providers in Safety Data Sheets for individual components. In certain situations, the Occupational Safety and Health Administration allows a manufacturer to withhold certain information about a chemical compound or substance as confidential business information (CBI), also known as a trade secret. This allowance provides our chemical providers with the flexibility to investigate the efficacy of more environmentally friendly additives in situations where those additives would not be protectible under patent. Therefore, a small percentage of chemicals disclosed in some of Devon's disclosures may include a chemical that falls under this CBI provision, and in those cases, a specific Chemical Abstract Service (CAS) number is not provided.
25	Does the company state measures it and/or its third-party contractors take to reduce CBI claims for chemicals used in its hydraulic fracturing operations?	Devon does not currently claim any chemical used in hydraulic fracturing as trade secret, however, some of our contracted service providers do. Recognizing that trade secret protection sometimes allows for greater innovation (e.g., greener alternatives), Devon believes the ability to protect certain information by trade secret can be important. However, that potential environmental and competitive benefit is also weighed against the public benefit of disclosure of those chemicals where possible. For this reason, many states required that trade secret owners provide emergency contact information and chemical family information so that effective incident response could be made and research could be performed. Additionally, after analysis of the FracFocus database performed by the EPA in 2015, the Groundwater Protection Council, with input from Devon and several other operators, environmental advocacy organizations and academia, worked to upgrade the reporting system to allow for what is referred to as a "systems-style" disclosure. In this type of disclosure, hydraulic fracturing chemicals are not broken out by their trade name and purpose, but instead have each of their components combined into a single disclosure for the well. The use of this systems-style disclosure, where possible, has allowed for a significant reduction in CBI claims on FracFocus since the time of its implementation.

The responses contained in this document are made as of the date of this document. Devon does not undertake any obligation to update the responses as a result of new information, future events or otherwise.