INTRODUCTION

This is Shell Canada’s seventh consecutive report on performance in our oil sands operations.

We publish this update annually to share detail on our efforts and progress in developing Alberta’s oil sands in an economically, socially and environmentally responsible way. This report is intended for those who have interest in our performance and a desire to better understand oil sands development and its significant importance to Shell and to Canada.

Further information about our oil sands operations is available at www.shell.ca/oilsands

ABOUT THE DATA

The data presented here covers the areas of safety, environment, reclamation and community and provides information on Shell’s operating performance for 2015 for:

- Muskeg River and Jackpine Mines;
- Scotford Upgrader;
- Quest Carbon Capture and Storage Facility; and
- Peace River and Cliffdale In Situ operations

Unless otherwise noted, all data presented for the Muskeg River Mine, Jackpine Mine, Scotford Upgrader and Quest Facility is in reference to total Athabasca Oil Sands Project (AOSP) performance before division amongst joint venture owners. The AOSP is a joint venture operated by Shell, and owned among Shell Canada Energy (60%), Chevron Canada Limited (20%), and Marathon Oil Canada Corporation (20%). Data presented for In Situ operations is 100% Shell share. All monetary amounts referred to in the data are in Canadian dollars unless otherwise noted.
SAFETY

Safety is a core value we work hard to instill in our people — both employees and contractors. Companies often say “safety is our number one priority”, but with us it is more than that. We care about the wellbeing of each and every employee and contractor and we internalize safety as a deeply-held value.

“Goal Zero” means we strive for no harm to people and no leaks; and it is our primary consideration for the health and safety of people and the environment in all aspects of our operation.

We believe it is possible to operate safely and incident-free despite the often difficult conditions in which we work. We continuously work to strengthen our safety culture with company-wide initiatives as well as programs at the site level that focus on training, coaching, leadership and celebrating exemplary safety behaviours and achievements.

Visible Safety Leadership

The Visible Safety Leadership initiative has grown to be one of the key safety programs implemented at our sites. The program focuses on continuous safety improvement by building the right behaviours and helping leaders develop their safety engagement skills.

Leaders at all levels choose to spend increased time in the field and on the floor not only observing, but connecting with front-line staff to identify areas of risk and opportunity and listening to their concerns and ideas for improvement. Strengthening the confidence and competence of our leadership positively influences the rest of the organization and remains a fundamental part of our safety journey.

Our 2015 Safety Performance

Two key measures of safety performance are total recordable case frequency (TRCF) and lost-time injury frequency (LTIF). TRCF shows the rate of recordable injuries that required medical attention per one million hours worked by employees and contractors. In 2015, our oil sands operations had 37 recordable injuries for a TRCF of 2.21. This represents a decline in safety performance when compared to 2014 and still not the Goal Zero performance we strive for. Though safety is always our top priority, it is receiving even greater focus and attention in 2016.

We continued our process safety improvement in 2015 extending a positive trend of process safety performance over the past four years. As a whole, AOSP saw an approximate 20% reduction in high potential events and a 30% reduction in Loss of Primary Containment Events.

SAFETY DATA

<table>
<thead>
<tr>
<th>SAFETY</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure hours (millions)</td>
<td>23.5</td>
<td>20.1</td>
<td>19.5</td>
<td>19.2</td>
<td>16.7</td>
</tr>
<tr>
<td>Total recordable cases</td>
<td>42</td>
<td>60</td>
<td>49</td>
<td>36</td>
<td>37</td>
</tr>
<tr>
<td>Total recordable case frequency</td>
<td>1.80</td>
<td>3.00</td>
<td>2.51</td>
<td>1.87</td>
<td>2.21</td>
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<tr>
<td>Lost-time injuries</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Lost-time injury frequency</td>
<td>0.2</td>
<td>0.2</td>
<td>0.3</td>
<td>0.16</td>
<td>0.3</td>
</tr>
</tbody>
</table>
Our abundant oil sands resource lies in a country with a stable government, robust infrastructure and high environmental standards. We provide direct and indirect employment across Canada and contribute funding for many critical public services. Our success as a business will help ensure the value of our natural resources is realized and provides benefits to Canadians for generations to come.

The long-term development of oil sands to help meet the world’s energy needs means we must strive to be competitive both economically and environmentally. With this comes the responsibility for continuous improvement in both areas.

We faced a challenging year in 2015 with falling oil prices applying cost pressures to our business and industry. At Shell, we always have a strong focus on driving competitiveness. We took the economic downturn as an opportunity to further strengthen the heavy oil business by improving capital plans, operating models, productivity, environmental performance and finding ways to reduce costs.

**Variable Costs and Mine Fleet Optimization**

Oil sands production requires natural gas, diesel and other fuels such as gasoline. These consumables are variable costs, so when oil prices are low some of these costs go down. For example, in 2015 the price of diesel decreased by almost 40%.

We optimized our fleet of mine vehicles and parked 31 pieces of non-critical equipment which resulted in less diesel consumed and subsequent cost savings. Improved management of our mine fleet also helps to reduce our overall emissions while maintaining consistent levels of production.

**Carmon Creek**

In 2015, we made the difficult decision to halt our Carmon Creek project. The two key considerations in the decision included the ranking of Carmon Creek in Shell’s evolving global portfolio and the uncertainty created by the lack of infrastructure to move Canadian crude to global commodity markets.

Read more about the decision at [www.shell.ca](http://www.shell.ca)
We strive to develop oil sands resources to meet the world’s growing energy demands while reducing the GHG footprint of our operations. On a well-to-wheels basis, GHG emissions from oil sands crudes are 4-23% greater than the average emissions of crudes refined in the United States according to research by Cambridge Energy Research Associates (CERA).

Through operational excellence, we have improved 1-2% each year over the past five years for a total 10% decline in GHG intensity. The successful operation of Quest — the oil sands first carbon capture and storage project which started up in 2015 — is expected to improve Shell’s performance even further (see Quest below).

We are continuously working to reduce the GHG intensity of oil sands production over the long-term through research, collaboration, innovation and technology development. These efforts have helped industry achieve improvements in energy efficiency while oil sands development has progressed. Between 1990 and 2012, industry-wide GHG emissions per barrel have decreased by 30% (Source: www.canadasoilsands.ca/en/explore-topics/ghg-emissions).

Leveraging technical expertise globally within Shell and taking part in collaborative industry associations like Canada’s Oil Sands Innovation Alliance (COSIA) help us identify and act on promising opportunities and conduct research both cost-effectively and efficiently. Shell is a founding member of COSIA, a first-of-its-kind collaboration among oil sands producers that have agreed to share environmental technology in order to accelerate improvements in oil sands environmental performance.

In 2015, the Government of Alberta announced its Climate Leadership Plan; a policy that includes a carbon pricing regime, an emissions limit for the oil sands and emissions performance standards. At the time it was announced, Shell came together with three of Canada’s largest oil sands producers to publicly support the plan. We believe the policy provides the certainty to help producers responsibly develop the oil sands while also addressing global concerns about climate change. In addition to robust regulatory standards, this policy will help drive decarbonisation through a transparent, economy-wide carbon pricing regime.

Our Goals

Areas of focus

- Improve energy efficiency of existing assets through operational excellence and strategic capital investment.
- Future projects with improved performance through innovation and optimization across the value chain.
- Leverage research, development and demonstration to improve energy efficiency and reduce carbon capture storage costs.
- Where we need offsets to meet local compliance obligations, we make a concerted effort via our purchases to support renewable power.

Aspirational goal

To have lifecycle GHG intensity no greater than the average crude oil refined in the U.S.

Quest

Our Quest carbon capture and storage project in Alberta was launched in November 2015, and is designed to capture over one million tonnes of CO₂ per year from the Scotford Upgrader for storage deep underground. Quest includes a rigorous monitoring program to ensure the CO₂ remains safely and securely in place. This includes continuous pipeline monitoring and early warning systems, groundwater sampling and 3-D seismic surveying.

Quest serves as a model for advancing and deploying more carbon capture and storage (CCS) facilities in other industrial settings. The experience from Quest will be crucial to reducing the time and cost of advancing new CCS projects worldwide.

We expect Quest to decrease GHG intensity bringing our oil sands products more in line with the average emissions of North American crude oil.

Learn more about Quest at www.shell.ca/quest
Carbon XPRIZE

In September 2015 the Carbon XPRIZE competition was launched by XPRIZE along with funding from members of Canada’s Oil Sands Innovation Alliance (COSIA) and power company NRG. The $20 million global competition challenges the world to reimagine what can be done with CO2 emissions by incentivizing and accelerating the development of technologies that convert CO2 into valuable products.

COSIA member funding of the competition is through a joint industry project with eight of COSIA’s member companies including Shell.

Learn more about the Carbon XPRIZE at www.cosia.ca/carbon-xprize

GHG DATA

<table>
<thead>
<tr>
<th>CO₂ Oil Sands Operations</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total direct emissions (Mt CO₂e)</td>
<td>4.9</td>
<td>5.3</td>
<td>5.3</td>
<td>5.4</td>
<td>4.8</td>
</tr>
<tr>
<td>Energy Indirect Total GHG* (Mt CO₂e)</td>
<td>1.9</td>
<td>1.7</td>
<td>1.9</td>
<td>1.6</td>
<td>1.6</td>
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<tr>
<td>Total emissions (Mt CO₂e)</td>
<td>6.7</td>
<td>7.0</td>
<td>7.2</td>
<td>7.1</td>
<td>6.4</td>
</tr>
<tr>
<td>Total CO₂ Intensity (kg CO₂e/bbl)</td>
<td>86.2</td>
<td>82.2</td>
<td>80.9</td>
<td>78.4</td>
<td>73.6</td>
</tr>
<tr>
<td>Total direct emissions (Mt CO₂e) In Situ</td>
<td>0.58</td>
<td>0.56</td>
<td>0.57</td>
<td>0.50</td>
<td>0.40</td>
</tr>
<tr>
<td>Energy Indirect Total GHG (Mt CO₂e) In Situ</td>
<td>0.15</td>
<td>0.15</td>
<td>0.13</td>
<td>0.10</td>
<td>0.08</td>
</tr>
<tr>
<td>Total direct emissions (Mt CO₂e) Scotford Upgrader</td>
<td>2.85</td>
<td>2.98</td>
<td>3.25</td>
<td>3.42</td>
<td>2.91</td>
</tr>
<tr>
<td>Energy Indirect Total GHG* (Mt CO₂e) Scotford Upgrader</td>
<td>0.41</td>
<td>0.38</td>
<td>0.39</td>
<td>0.20**</td>
<td>0.33**</td>
</tr>
<tr>
<td>Total direct emissions (Mt CO₂e) JPM and MRM</td>
<td>1.44</td>
<td>1.73</td>
<td>1.48</td>
<td>1.52</td>
<td>1.48</td>
</tr>
<tr>
<td>Energy Indirect Total GHG (Mt CO₂e) JPM and MRM</td>
<td>1.32</td>
<td>1.21</td>
<td>1.34</td>
<td>1.31</td>
<td>1.17</td>
</tr>
<tr>
<td>Total CO₂ Stored — Quest (Mt CO₂)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.37</td>
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<tr>
<td>Net CO₂ Reduction — Quest (Mt CO₂)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.32</td>
</tr>
</tbody>
</table>

Totals may not add due to rounding

*Energy Indirect Total GHG includes import electricity and steam/heat

**Since 2014 Energy Indirect Total GHGs excludes indirect emissions from import hydrogen; previous years have not been recalculated

***Reflects the oil sands CO2 emissions and CO₂ intensity performance, including Quest operations.
Oil sands mining, in situ and upgrading operations require water for separating bitumen from sand, producing hydrogen and steam, and for cooling hydrocarbon streams. Our mining operations are located near the Athabasca River, the Scotford Upgrader operates near the North Saskatchewan River and our in situ operations are located by the Peace River.

We continuously look for ways to optimize water usage in pursuit of our long term aspirational goal — to minimize our freshwater footprint and water management costs in consideration of net environmental effects and long term liability. Independent and co-operative monitoring efforts by government, industry and stakeholder groups are also being enhanced on an ongoing basis.

In 2015 Shell used 0.90 barrels of water from the Athabasca River for every barrel of bitumen extracted from our mining operations and 1.67 barrels of freshwater overall (including river water, groundwater, precipitation and surface water run-off that is collected and retained). We use recycled water to make up the remainder of the water used for extraction. In 2015 our water recycle rate was 85%, which is an increase compared to previous years.

In 2015, the AOSP withdrew 12.1 Mm³ of water from the Athabasca River, a reduction of 21% from 2014 and 23% from 2013. This marked improvement resulted from a combination of efforts including increased tailings monitoring, strategic water import throughout the year, increased reclaim capacity to transfer processed water from Jackpine Mine to Muskeg River Mine and other process improvements.

At the Scotford Upgrader, we draw water to cool hydrocarbon streams and produce hydrogen. Scotford uses about 0.4 barrels of water from the North Saskatchewan River for every barrel of bitumen that is upgraded and around 0.5 barrels of freshwater overall (including river water, precipitation and surface water run-off). About 90% of the wastewater from the upgrading process is reused in operations and the final wastewater effluent is disposed of via deep well injection. Effluent from the treatment of raw river water is returned to the river after testing to meet environmental standards.

Our Goals

Long term water goals

■ Optimize use of on-site water at the Muskeg and Jackpine Mines to reduce Athabasca River water use.
■ Optimize/integrate water use and wastewater treatment at the Scotford Complex.
■ Increase use of brackish water in place of river water for in situ make-up water requirements.
■ Develop technology to enable reduced river water requirements.

Aspirational Goal

Minimize our freshwater footprint and water management costs in consideration of net environmental effects and long term liability.
## WATER DATA

### WATER

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCOTFORD UPGRADER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total water use (million m³)</td>
<td>7.4</td>
<td>7.3</td>
<td>7.6</td>
<td>7.9</td>
<td>7.2</td>
</tr>
<tr>
<td>Net Fresh Water Consumption (million m³)</td>
<td>4.8</td>
<td>5.6</td>
<td>5.4</td>
<td>6.0</td>
<td>5.2</td>
</tr>
<tr>
<td>Total Effluent treated and returned to the river (million m³)</td>
<td>2.6</td>
<td>1.7</td>
<td>2.2</td>
<td>1.9</td>
<td>2.0</td>
</tr>
<tr>
<td>Percentage net fresh water consumption</td>
<td>65%</td>
<td>76%</td>
<td>71%</td>
<td>76%</td>
<td>72%</td>
</tr>
<tr>
<td>Fresh water intensity (bbl water consumed/bbl MRM and JPM bitumen)</td>
<td>0.42</td>
<td>0.45</td>
<td>0.42</td>
<td>0.45</td>
<td>0.40</td>
</tr>
</tbody>
</table>

### MRM AND JPM*

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Water Intake (million m³) = Freshwater from the Athabasca River including FAS** + Freshwater from other sources + recycled pond water</td>
<td>130.9</td>
<td>143.1</td>
<td>140.6</td>
<td>150.4</td>
<td>141.7</td>
</tr>
<tr>
<td>Total Water Consumption (million m³) = (Freshwater from the Athabasca River + Freshwater from other sources + recycled pond water) — FAS</td>
<td>130.4</td>
<td>142.6</td>
<td>140.2</td>
<td>150.0</td>
<td>141.3</td>
</tr>
<tr>
<td>Mine Recycle Water Use (million m³)</td>
<td>101.9</td>
<td>117.5</td>
<td>105.7</td>
<td>117.5</td>
<td>119.9</td>
</tr>
<tr>
<td>Athabasca River Water Withdrawal (million m³), includes FAS</td>
<td>23.5</td>
<td>15.1</td>
<td>16.0</td>
<td>15.5</td>
<td>12.1</td>
</tr>
<tr>
<td>Athabasca River Water Consumption (million m³), minus FAS</td>
<td>23.0</td>
<td>14.6</td>
<td>15.6</td>
<td>14.7</td>
<td>11.7</td>
</tr>
<tr>
<td>Groundwater Consumption (million m³)</td>
<td>2.5</td>
<td>4.4</td>
<td>5.2</td>
<td>4.1</td>
<td>5.8</td>
</tr>
<tr>
<td>Surface Water Consumption (million m³)</td>
<td>2.9</td>
<td>6.1</td>
<td>13.7</td>
<td>13.3</td>
<td>4.0</td>
</tr>
<tr>
<td>Percentage Freshwater Consumed = (River water + GW + SW runoff — FAS)/Total Water consumption</td>
<td>22%</td>
<td>18%</td>
<td>25%</td>
<td>22%</td>
<td>15%</td>
</tr>
<tr>
<td>Percentage Recycled Water Pond = (Mine Recycled water use/Total water consumption)</td>
<td>78%</td>
<td>82%</td>
<td>75%</td>
<td>78%</td>
<td>85%</td>
</tr>
<tr>
<td>Percentage Athabasca River Water Consumed = (Athabasca Riverwater Consumption/Total Water Consumption)</td>
<td>18%</td>
<td>10%</td>
<td>11%</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>Percentage Groundwater = (Groundwater consumption/ Total Water Consumption)</td>
<td>2%</td>
<td>3%</td>
<td>4%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Percentage Surface Water = (Surface water consumption / Total Water Consumption)</td>
<td>2%</td>
<td>4%</td>
<td>10%</td>
<td>9%</td>
<td>3%</td>
</tr>
<tr>
<td>Athabasca River Water Intensity (bbl river water/bbl bitumen) = Athabasca River water consumed/bbl bitumen</td>
<td>2.01</td>
<td>1.19</td>
<td>1.21</td>
<td>1.14</td>
<td>0.90</td>
</tr>
</tbody>
</table>

### IN SITU

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Freshwater Consumption (million m³)</td>
<td>2.2</td>
<td>1.7</td>
<td>1.6</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Freshwater Intensity (bbl water consumed/bbl in situ bitumen)</td>
<td>2.22</td>
<td>1.38</td>
<td>1.40</td>
<td>1.61</td>
<td>2.16</td>
</tr>
</tbody>
</table>

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*The water data for the Muskeg River and Jackpine Mines is portrayed differently to reflect the distinction between water that we intake (which includes our FAS**) versus water we consume in our operations.

**FAS — Flow augmentation system
Canada’s oil sands lie under approximately 142,200km² of land. Only about 3% of that area (only about 0.01% of the Canadian Boreal Forest) could potentially be impacted by mining operations as the vast majority of oil sands deposits lie too deep and can only be recovered through in situ methods, which cause less direct land disturbance.

Alberta law requires oil sands operators to reclaim all lands disturbed by oil sands operations. Before any shovel breaks ground, companies must have developed reclamation and closure plans that span the life of the project.

Oil sands operations have long life spans and typically produce for over 40 years. During that time access to the land is required to mine the deposits and to accommodate associated infrastructure for hauling, extraction and processing.

Before mining begins, the material overlaying oil sands deposits is removed and stored to preserve it for when it is needed again for reclamation. This represents a temporary impact to the ecological function of the land for a period of time and highlights the importance of reclamation in returning the land to productive use.

Reclamation involves refilling the mined out areas with tailings and re-establishing contours that fit within the natural landscape. Previously salvaged material including top soils are then replaced and planted with suitable vegetation. Although it will not be exactly the same as the original landscape, the land disturbed by our oil sands operations will be reclaimed to a condition that supports a self-sustaining, locally common boreal forest, as required by law.

We are committed to starting large scale reclamation of our mining area within 20 years of our first land disturbance. Though full reclamation is a staged process which takes decades to complete, reclamation work at our sites is constantly underway and begins years before it is required.

In 2015, we reclaimed 19.7 hectares (ha) of land and planted over 91,000 native trees and shrubs at our mine site. Additionally, Shell planted 5,300 rat root plants, a wetland plant that holds medicinal significance to local Indigenous groups. Plant seeds are harvested locally, as part of an Oil Sands Vegetation Cooperative in which Shell takes a leadership role. These seeds are stored in a greenhouse until they are required for reclamation.

To date, we have salvaged and stockpiled approximately 46 Mm³ of soil for future reclamation and a total of 185ha of land has been permanently reclaimed at our mine site. As of March 2016, we have conserved 697ha of land through our partnership with the Alberta Conservation Association. Along with the Shell True North Forest, north of Grande Prairie, Alberta, and the Shell Buffalo Hills Conservation Ranch, southeast of Calgary, Alberta, Shell Canada has conserved just over 4,000ha of land in Alberta.

Our Goals

Long term land goals

- Reduce disturbance footprint.
- Increase reclamation areas.
  - Use conservation areas when considering the disturbance gap.
  - Integrate planning and execution of mining, waste disposal and reclamation.
  - Continue to provide opportunities for stakeholder participation in reclamation, especially to Indigenous communities.
  - Improve tailings management technology to enhance reclamation.

Aspirational Goal

Net neutral land disturbance.
<table>
<thead>
<tr>
<th>LAND</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total active footprint — mine + plant size (ha)</td>
<td>7,165</td>
<td>8,156</td>
<td>8,281</td>
<td>8,353</td>
<td>8,356</td>
</tr>
<tr>
<td>Permanent reclamation (ha) (cumulative)</td>
<td>12.0</td>
<td>38.7</td>
<td>166.1</td>
<td>166.1*</td>
<td>166.1</td>
</tr>
<tr>
<td>Temporary reclamation (ha) (cumulative)</td>
<td>202.0</td>
<td>196.0</td>
<td>158.0</td>
<td>154.2</td>
<td>154.2</td>
</tr>
<tr>
<td>JPM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total active footprint — mine + plant size (ha)</td>
<td>4,301</td>
<td>4,925</td>
<td>5,179</td>
<td>5,607</td>
<td>5,337</td>
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<tr>
<td>Permanent reclamation (ha) (cumulative)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>19.7</td>
</tr>
<tr>
<td>Temporary reclamation (ha) (cumulative)</td>
<td>5.6</td>
<td>3.3</td>
<td>57.1</td>
<td>57.4</td>
<td>57.4</td>
</tr>
</tbody>
</table>

*This figure was rounded down in the 2014 Oil Sands Performance Report and has now been adjusted.
Oil sands ore is processed with warm water to separate the sand from the bitumen. Tailings is a term used to refer to the remaining sand, silt, clay, water and residual hydrocarbons that remain once the bitumen is separated.

Tailings are an important part of any mining operation. Tailings ponds allow us to recycle water and reduce the amount of river water required for the production process. Around 80% of the water we use in our oil sands mining operations is recycled from the tailings facilities at our mines.

Tailings are initially stored in above ground facilities but as mining progresses, tailings are deposited into the mined out pit. This in-pit backfilling process begins about eight to 10 years after mining has started once mining has progressed enough that containment can be built within the mined-out area. In-pit placement of tailings has begun at Muskeg River Mine where approximately 8.9km² of the total tailings area is in-pit.

Tailings are carefully managed to minimize impact to the surrounding environment and wildlife. The separation process leaves small amounts of residual bitumen which can end up in tailings and float to the surface posing a risk to waterfowl. Tailings are monitored continuously and sophisticated bird-deterring technology is used to prevent birds from landing on the water.

At the Muskeg River and Jackpine mines, tailings areas covered 42.9km² at the end of 2015. This is in line with the planned development of the mines, as the size of the ponds has increased to both support ongoing production and accelerate the reclamation of older ponds.

We expect to begin the reclamation process for our external tailings facilities at Muskeg River Mine between 2020 and 2025 as more tailings are deposited in-pit.

While the water from tailings ponds is constantly recycled, sand particles in the mixture settle to the bottom relatively easily but the tiny clay and silt particles called fines, or fluid fine tailings (FFT), remain suspended in the fluid and can take many years to settle. This increases the time required to reclaim tailings as well as the space needed to store them.

Once water is removed from tailings the dried tailings can be blended and treated to produce material suitable for use in the reclamation process.

We have invested approximately $465 million during the past decade to develop technologies that speed up the drying or dewatering process for FFT. In 2015, we processed about 5.1 Mm³ of FFT at our mines through drying, flocculation and centrifuging.

Tailings Policy and Regulation

In March 2015, the Government of Alberta introduced the Tailings Management Framework (TMF), a policy designed to manage existing and new tailings pond accumulation and remediation. The TMF and associated regulation will manage tailings throughout a project life cycle and will include limits on tailings accumulation. The framework also ensures tailings are treated and progressively reclaimed and all fluid tailings are ‘ready-to-reclaim’ (as per the TMF definition) within 10 years of the end of mine life. We continue to work towards improving tailings treatment technologies to treat FFT that have a high percentage of fine particles.
### TAILINGS DATA

**TAILINGS — ANNUAL FLUID FINES**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MRM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluid fine tailings growth [millions m³]</td>
<td>6.0</td>
<td>8.7</td>
<td>8.3</td>
<td>N/A*</td>
<td>6.4</td>
</tr>
<tr>
<td>Total Fluid fine tailings [millions m³]</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>94.4***</td>
</tr>
<tr>
<td>Fines capture (millions m³)</td>
<td>1.5</td>
<td>2.45</td>
<td>3.17</td>
<td>7.06**</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>JPM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluid fine tailings growth [millions m³]</td>
<td>4.9</td>
<td>4.14</td>
<td>3.59</td>
<td>N/A*</td>
<td>4</td>
</tr>
<tr>
<td>Total Fluid fine tailings [millions m³]</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>23.6***</td>
</tr>
<tr>
<td>Fines capture (millions m³)</td>
<td>0.91</td>
<td>1.63</td>
<td>1.78</td>
<td>1.17</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Fines capture figures reflect tailings fines materials that have been actively treated using a tailings technology.

*Following the release of the Tailings Management Framework and subsequent suspension of D074 by the Alberta Energy Regulator, new reporting parameters are being developed for D085. The 2014 volumes have been adjusted to establish Legacy Fluid Tailings Baseline (Jan 1, 2015). This adjustment makes 2014 annual growth figures not applicable. From 2015 total volume is reported as per D085 requirements.

**In 2014, Shell received credit for fines capture that was achieved in a previous year, but not previously credited.

***These volumes were measured in the tailings pond at the end of June 2015. (These figures are reported annually each June).
INVESTING IN THE COMMUNITY

Fostering and maintaining a good working relationship with local communities is a core value to Shell; our stakeholders grant us our social license to operate. Active engagements and the practice of listening and responding help us learn from the ideas, experiences and concerns of those who live near our operations and those who take an interest in our business.

As the average life cycle of an oil sands project is typically 40 years, we have a long-term interest in the communities in which we operate. We are committed to working with the communities affected by our projects and operations to mitigate impacts and provide benefits to the communities.

Indigenous Communities

Shell has been working closely with Indigenous peoples in Canada for many years. Our engagements include direct consultation on projects and operations, ongoing interaction and collaboration through industry relations committees and through formal engagement with Elders, and First Nation and Métis Leaders.

We greatly value the perspectives and input of Indigenous communities into our development and have successfully established a number of agreements with several local First Nations and Métis groups.

Shell provides opportunities to qualified local businesses and residents, with emphasis on ensuring Indigenous businesses are able to participate in the contracting and employment processes. Since 2005, the Athabasca Oil Sands Project has invested over $1.8 billion with more than 70 Indigenous-owned businesses and contractors that provide a broad range of products and services for our operations.

Progressive Aboriginal Relations

Shell received gold certification for Progressive Aboriginal Relations (PAR), a CCAB-sponsored program that acknowledges leadership and corporate performance in Aboriginal relations.

The certification is recognized as an indication of a good business partner, a great place to work and the company’s commitment to prosperity in Aboriginal communities. The designation is supported by an independent, third party verification of company reports and the final certification level is determined by a jury comprised of Aboriginal business people.

Read more about Shell’s PAR certification at www.shell.ca

Social Investment

Social investment is our voluntary contribution to communities in Canada. We seek to initiate and support programs relevant to our business activities and focus our social investment around science, education, innovation and business skills.

In 2015, Shell made approximately $2.2 million in contributions on behalf of the AOSP and our in situ operations. Figures for social investment are all representative of 100% of the AOSP contributions unless otherwise noted. The AOSP social investments represented reflect the joint venture owner proportions: Shell Canada Energy 60%, Chevron Canada Limited 20%, Marathon Oil Canada Corporation 20%.

Indspire

Indspire is an Indigenous-led registered charitable organization that invests in the education of Indigenous people for their individual benefit as well as the benefit of their families, communities and our country.

Shell proudly became a founding sponsor of Indspire’s Industry in the Classroom: Careers in Oil and Gas module in 2014. The program aims to motivate and empower Indigenous students to stay in school and plan for the future with a focus on the available opportunities in the oil and gas sector.

Learn more about our support for Indspire and read about the 2016 Indspire Awards at www.shell.ca
Radway Fish Pond Capital Improvement Project

Shell invested $50,000 in the reforestation of the Radway Fish Pond. The new vegetation will be made up of evergreens which will provide shade and enhance the open space of the area. The funding will also go towards installing a picnic shelter for community gatherings.

Inspire the Wonder School Programs

Inspire the Wonder School Programs were created to provide opportunities for experiments, demonstrations, and discoveries through hands-on activities and student participation designed to make science fun, easy to understand, and relevant to life across Western Canada. Shell contributed $450,000 to programming to educate and entertain upwards of 185,000 K-12 students each year.

Steps Forward Program

Shell committed $450,000 over three years to support the Fort McKay First Nation Steps Forward Program. The program is open to all Fort McKay community members. The workforce development project aims to help community members better understand their interests, skills and aptitudes and offers opportunities for skill and personal development.

First Nation, Métis & Inuit (FNMI) Program

Shell supports the Fort McMurray Catholic School District First Nation, Métis & Inuit Program through multi-year social investment of $105,000 which provides an infrastructure for educational success and the development of an Aboriginal workforce. The program develops and supports educational programs and services to give students the opportunity to develop an understanding and appreciation for Aboriginal history, culture and lifestyle.

Linking Our Youth, Community, Land Culture & Education Initiative

2015 was the first year of a multi-year commitment to Northland School Division 61 which will see a total of $255,000 in social investment support for the development and implementation of a land-based learning program at Athabasca Delta Community School in Fort Chipewyan, Alberta. The program connects Elders, youth and community, and supports the school curriculum through cultural and language activities practiced on the land.

Northern Lakes College Water and Wastewater Management Online Curriculum

Recognizing the need for water management specialists in a variety of sectors, Shell has provided $50,000 from our in situ social investment budget to Northern Lakes College for the development of an online course that will provide water and wastewater management training. This online curriculum will be offered to all communities within the Peace River area.
Sponsorship

Shell Place

In 2015, Shell Canada and its Athabasca Oil Sands Project (AOSP) joint venture partners, Chevron Canada Limited and Marathon Oil Canada Corporation celebrated the grand opening of Shell Place, located in Fort McMurray, Alberta. As the title partner of the facility, Shell’s contribution supported the MacDonald Island Park Expansion Project. This much needed recreation facility provides local residents with access to quality of life activities and services and features a multi-use performance stadium, a baseball stadium and the largest non-profit agency shared space in the region.

Western Canada Summer Games

In 2015, the Regional Municipality of Wood Buffalo, Alberta hosted the Western Canada Summer Games, which welcomed 1,800 young athletes, 400 coaches and thousands of spectators and visitors to the region. As the Exclusive Volunteer Sponsor of the Games, Shell’s support went towards providing uniforms, meals, and training materials to more than 3,000 volunteers. Over 100 committees dedicated over 250,000 planning and execution hours to make the Games a success.

COMMUNITY AND SOCIAL INVESTMENT

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Investment Spend (Millions $)</td>
<td>3.4</td>
<td>3.9</td>
<td>4.2</td>
<td>3.6</td>
<td>2.2</td>
</tr>
<tr>
<td>Indigenous Contracting Spend (Millions $)</td>
<td>159</td>
<td>175</td>
<td>206</td>
<td>182</td>
<td>121</td>
</tr>
</tbody>
</table>
Athabasca Oil Sands Project (AOSP)
A joint venture among Shell Canada Limited (Operator and 60% owner), Chevron Canada Limited (20%) and Marathon Oil Canada Corporation (20%), the AOSP consists of the Muskeg River and Jackpine Mines located north of Fort McMurray, Alberta and the Scotford Upgrader and Quest carbon capture and storage project, located near Edmonton, Alberta.

Bitumen
A thick hydrocarbon, referred to as heavy oil.

Centrifugation
The use of centrifuge force to extract process water from fluid fine tailings.

CO₂e
Carbon dioxide equivalent. The 100-year time horizon global warming potential of a specified gas expressed in terms of equivalency to CO₂. (Source: Specified Gas Emitters Regulation)

Direct Emissions
The release of specified gases from sources under the direct control of the operating facility expressed in tonnes CO₂e.

Effluent
Wastewater (treated or untreated) that flows out of a treatment plant, sewer, or industrial facility. (Source: Environment Canada)

Emissions Intensity
The quantity of specified gases released by a facility per unit of production from that facility.

Flocculation
The combination of single particles, or small groups of particles, into multi particle aggregates or “flocs”.

Greenhouse Gas (GHG)
Mainly, carbon dioxide (CO₂), methane (CH4), and nitrous oxide (N₂O), all of which contribute to the warming of the Earth’s atmosphere. (Source: Government of Alberta, Department of Energy)

ha
Hectare. A unit of surface area equal to a square that is 100 metres on each side.

In Situ
Refers to various methods used to recover deeply buried bitumen deposits, including steam injection, solvent injection, electrical heating and cold production.

JPM
Jackpine Mine.

km²
Square kilometre. A unit of surface area equal to a square that is one kilometre on each side.

Lost-Time Injury Frequency
Refers to the rate of recordable injuries requiring time off work per one million exposure hours worked.

MRM
Muskeg River Mine.

Mm³
Millions of cubic metres.

m³
Cubic metre. A unit of volume or capacity equal to 1000 litres.

Mt (Megatonne)
Megatonne. A unit of mass equal to one million tonnes.

Reclamation
Returning disturbed land to a land capability equivalent to what it was prior to disturbance. Reclaimed property is returned to the Province of Alberta at the end of operations.

Tailings
The residual by-product that remains after the bitumen is separated from the mined oil sands ore; tailings are composed of water, sand, clay, heavy metals and residual bitumen.

Total GHG Emissions
Includes GHG emissions from direct and indirect sources.

Total Recordable Case Frequency
Refers to the rate of recordable injuries that required medical attention per one million exposure hours worked.
Overall
Data cited in this report has been confirmed as of April 22, 2016. If substantial data changes occur after preparation of this report, they will be updated in next year’s publication.

CO2
Total CO2e intensity is calculated on the basis of operational emissions.

Social Investment
Shell’s social investment spend does not include funding provided by Shell to Aboriginal neighbours as part of sustainability agreements or the value of local contracting agreements.

CAUTIONARY NOTE
The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate legal entities. In this report all references to “Shell” refer specifically to Shell’s oil sands businesses in Canada. Likewise, the words “we”, “us” and “our” are also used to refer to Shell’s oil sands business in Canada in general or to those who work for them. These expressions are also used where no useful purpose is served by identifying the particular company or companies. “Subsidiaries”, “Shell subsidiaries” and “Shell companies” as used in this report refer to companies over which Royal Dutch Shell plc either directly or indirectly has control. Entities and unincorporated arrangements over which Shell has joint control are generally referred to “joint ventures” and “joint operations” respectively. Entities over which Shell has significant influence but neither control nor joint control are referred to as “associates”. The term “Shell interest” is used for convenience to indicate the direct and/or indirect ownership interest held by Shell in a venture, partnership or company, after exclusion of all third party interest.

This report contains forward-looking statements concerning the financial condition, results of operations and businesses of Royal Dutch Shell plc. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management’s current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Royal Dutch Shell plc to market risks and statements expressing management’s expectations, beliefs, estimates, forecasts, projections and assumptions. These forward-looking statements are identified by their use of terms and phrases such as “anticipate”, “believe”, “could”, “estimate”, “expect”, “goals”, “intend”, “may”, “objectives”, “outlook”, “plan”, “probably”, “project”, “risks”, “schedule”, “seek”, “should”, “target”, “will” and similar terms and phrases. There are a number of factors that could affect the future operations of Royal Dutch Shell plc and could cause those results to differ materially from those expressed in the forward-looking statements included in this report, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Shell’s products; (c) currency fluctuations; (d) drilling and production results; (e) reserves estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, fiscal and regulatory developments including regulatory measures addressing climate change; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; and (m) changes in trading conditions. All forward-looking statements contained in this report are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements. Additional risk factors that may affect future results are contained in Royal Dutch Shell plc’s 20-F for the year ended December 31, 2015 (available at www.shell.com/investor and www.sec.gov). These risk factors also expressly qualify all forward looking statements contained in this report and should be considered by the reader. Each forward-looking statement speaks only as of the date of this report, April 22, 2016. Neither Royal Dutch Shell plc nor any of its subsidiaries undertake any obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this report.

We may have used certain terms, such as resources, in this report that United States Securities and Exchange Commission (SEC) strictly prohibits us from including in our filings with the SEC. U.S. Investors are urged to consider closely the disclosure in our Form 20F, File No 1-32575, available on the SEC website www.sec.gov.