








# Return on Conservation™ Index: Marathon Oil Tree Planting

\*For more info on how to read this card and metadata associated with it, please visit [texanbynature.org/roc-index](https://texanbynature.org/roc-index)

Marathon Oil, Texan by Nature Catalyst Member, understands the impact trees have on the communities they operate in, leading them to partner with Texan by Nature and Trees for Houston to plant one hundred trees across the Kenedy ISD campus, a South Texas district with 700+ elementary, middle, and high school students. Economic valuations were derived using the economic proxies in the corresponding proxy chart produced by Texan by Nature and Ecometrics LLC.

**This index illustrates the environmental and economic benefit of planting 100 trees in Kenedy, Texas and its impacts on the surrounding community.**

	Targets	Impact	Economic Value Annually
<b>3</b> GOOD HEALTH AND WELL-BEING 	<b>3.4:</b> Promote mental health and well-being  <b>3.9:</b> Reduce deaths and illnesses from hazardous chemicals and air, water and soil pollution, and contamination	<b>30 volunteers dedicated</b> <b>130 volunteer hours</b>	<b>\$13K</b> cultural value of volunteer efforts and well being enhancement
<b>6</b> CLEAN WATER AND SANITATION 	<b>6.3:</b> Improve water quality by reducing pollution, eliminating dumping, and minimizing release of hazardous chemicals and materials	<b>990,000 gallons of water captured and filtered</b>	<b>\$350</b> annual community value from the reduction in stormwater runoff
<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES 	<b>11.7:</b> Provide universal access to safe, inclusive and accessible, green and public spaces	<b>3.75 acres of increased tree canopy</b>	<b>\$7.4K</b> generated through increased property values and reduction in heat island effect
<b>13</b> CLIMATE ACTION 	<b>13.1:</b> Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters	<b>425,000 pounds of Carbon Dioxide sequestered</b>	<b>\$6.1K</b> in energy demand reduction cost avoidance and climate regulation
<b>15</b> LIFE ON LAND 	<b>15.1:</b> Ensure conservation, restoration, and sustainable use of terrestrial and inland freshwater ecosystems  <b>15.2:</b> Promote sustainable management of all forests  <b>15.5:</b> Halt the loss of biodiversity and reduce degradation of natural habitats	<b>100 trees planted</b>	<b>\$327</b> value of erosion prevention and biodiversity services
<b>17</b> PARTNERSHIPS FOR THE GOALS 	<b>17.19:</b> Develop measurements of progress on sustainable development that complement gross domestic product	<b>1 Return on Conservation™ Index</b>	<b>Not Yet Valued</b>

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 \*Please see the appended methodologies section for more information on proxy use and caveats of the analysis.

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	Targets	Reporting Standards	How Marathon Oil Tree Planting Addresses Sustainable Development Goals
<p><b>3</b> GOOD HEALTH AND WELL-BEING</p> 	<p><b>3.4:</b> Promote mental health and well-being</p> <p><b>3.9:</b> Reduce deaths and illnesses from hazardous chemicals and air, water and soil pollution, and contamination</p>	<p><b>WHO Global Health Observatory Indicator:</b> Policy or plan for mental health</p> <p><b>UN STATS 3.9.2:</b> Mortality and illness rate reduction attributed to unsafe water, sanitation, or hygiene</p>	<p>- This planting garnered <b>30 volunteers dedicated 130 volunteer hours to plant trees which will benefit 1,000 students and staff.</b> Access to trees and volunteer opportunities benefit the mental and overall health of both the volunteers and residents.</p> <p>- Over 40 years, the trees will <b>remove 1350 pounds of ozone, nitrogen dioxide, particulate matter, sulfur dioxide, and volatile organic compounds.</b></p>
<p><b>6</b> CLEAN WATER AND SANITATION</p> 	<p><b>6.3:</b> Improve water quality by reducing pollution, eliminating dumping, and minimizing release of hazardous chemicals and materials</p>	<p><b>UN STATS 6.3.1:</b> Proportion of domestic and industrial wastewater flows safely treated</p>	<p>- 100 trees planted at the Kenedy ISD campus will <b>capture and filter over 990,000 gallons of water</b> and removes phosphorus and nitrogen from runoff.</p>
<p><b>11</b> SUSTAINABLE CITIES AND COMMUNITIES</p> 	<p><b>11.7:</b> Provide universal access to safe, inclusive and accessible, green and public spaces</p>	<p><b>Indicator 11.7.1:</b> Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities</p>	<p>- <b>3.75 acres of school grounds</b> received increased tree canopy for students.</p>
<p><b>13</b> CLIMATE ACTION</p> 	<p><b>13.1:</b> Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters</p>	<p><b>G4-EN19:</b> Reduction of greenhouse gas emissions</p>	<p>- Over 40 years, the planted trees can <b>sequester 425,000 pounds of carbon dioxide (CO2).</b></p>
<p><b>15</b> LIFE ON LAND</p> 	<p><b>15.1:</b> Ensure conservation, restoration, and sustainable use of terrestrial and inland freshwater ecosystems</p> <p><b>15.2:</b> Promote sustainable management of all forests</p> <p><b>15.5:</b> Halt the loss of biodiversity and reduce degradation of natural habitats</p>	<p><b>GRI Standard 306-5:</b> Water bodies and related habitats that are significantly affected by water discharges and/or runoff</p> <p><b>F10.2:</b> Forest engagement - Companies working with smallholders to encourage and support sustainable forest management practices- Forest risk commodity; Working with smallholders</p> <p><b>G4-EN26:</b> Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization’s discharges of water and runoff</p>	<p>- The trees planted in this project <b>benefit quantity and quality of water within the San Antonio River Watershed.</b> The San Antonio River covers 4,180 sq mi and provides important fresh water flows to estuaries and the coast.</p> <p>- <b>Marathon Oil, Texan by Nature, Trees for Houston, and Kenedy ISD</b> partnered to support afforestation.</p> <p>- Water quality and quantity benefits will impact areas downstream of the San Antonio River at the Aransas National Wildlife Refuge which is <b>habitat for endangered Whooping Crane and endangered Attwater’s Prairie Chicken.</b></p>
<p><b>17</b> PARTNERSHIPS FOR THE GOALS</p> 	<p><b>17.19:</b> Develop measurements of progress on sustainable development that complement gross domestic product</p>	<p><b>GRI General Indicators:</b></p> <ul style="list-style-type: none"> <li>- Publicly disclosing sustainability information and increasing accountability and transparency</li> <li>- Advocating for the disclosure and use of sustainable development data</li> </ul>	<p>Marathon Oil and Texan by Nature worked together to report the environmental and economic return on investment of conservation efforts in South Texas to promote investment from private and public sectors.</p>

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# Return on Conservation™ Index: Economic Proxy Use

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UN SDG GOAL	Proxies Used	Unit of Measure	Proxy Explainer	Citation
<b>3</b> GOOD HEALTH AND WELL-BEING 	Human Health	\$/acre/year	The ability of trees to positively impact human physical health, mental well-being, and healing through exposure	Texas Statewide Assessment of Urban Forest Ecosystem Services (2022). Texas A&M Forest Service
	Value of Volunteer Labor	\$/hour/year	Value of volunteer efforts as reflected by the average hourly rate of tree planters . This value is the offset burden to local governments	Bureau of Labor Statistics (2022) - Occupational Outlook Handbook
<b>6</b> CLEAN WATER AND SANITATION 	Watershed Value	\$/acre/year	The ability of forests to intercept, store, and utilize precipitation, resulting in a reduction in stormwater runoff.	Texas Statewide Assessment of Urban Forest Ecosystem Services (2022). Texas A&M Forest Service
<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES 	Cultural & Aesthetic Value	\$/acre/year	The non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, and aesthetic experience	Texas Statewide Assessment of Urban Forest Ecosystem Services (2022). Texas A&M Forest Service
	Economic Value	\$/acre/year	The financial benefit associated with strategically located trees, including increasing property values and reducing energy costs.	Texas Statewide Assessment of Urban Forest Ecosystem Services (2022). Texas A&M Forest Service
<b>13</b> CLIMATE ACTION 	Market value of Carbon Credits	\$/ton	The tons of carbon sequestered by trees can result in economic value by the participation in Carbon Credit trading markets.	Lucy Johnston, Ezra Hausman, Bruce Biewald, Rachel Wilson, David White, "2011 Carbon Dioxide Price Forecast", Synapse Energy Economics, Inc. February 2011
	Climate Regulation	\$/acre/year	The effect trees have on regional and local climates by absorbing greenhouse gases such as carbon dioxide and storing them long-term in forest biomass, and by avoiding emissions through reduced energy needs.	Texas Statewide Assessment of Urban Forest Ecosystem Services (2022). Texas A&M Forest Service
<b>15</b> LIFE ON LAND 	Habitat & Biodiversity	\$/acre/year	The capacity of forests to promote essential biological diversity that drives most other services, as well as provides a sustainable habitat for wild plants and animals, soil formation/conservation, and pollination.	Texas Statewide Assessment of Urban Forest Ecosystem Services (2022). Texas A&M Forest Service
	Erosion Prevention	\$/acre/year	Retaining arable land, slope stability, and coastal integrity	Federal Emergency Management Agency (2022). FEMA Ecosystem Service Value.

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