

## Strategic growth through lithium extraction



## Capitalize on lithium's growth

#### **Executive Summary**

At Lithium Harvest, we are transforming produced water management, turning what was once a costly waste stream into a valuable resource. Our patented lithium extraction process is faster, more sustainable, and cost-effective than traditional mining, giving our partners a competitive edge in the growing lithium market.

This strategic opportunity allows you to leverage existing infrastructure to enter the lithium market efficiently, minimizing capital expenditures and unlocking new revenue streams. By partnering with Lithium Harvest, your company can lead in the clean energy transition while achieving long-term profitability and aligning with corporate sustainability objectives.

#### From Waste to Profit: We Operate, You Profit

Produced water has long been viewed as a costly waste stream for oil and gas operations, but at Lithium Harvest, we are changing that. Our innovative, patented lithium extraction solution transforms produced water into a valuable asset, allowing you to unlock new revenue streams. By extracting high-value lithium and other critical minerals, your operations can expand beyond traditional oil and gas profits, tapping into the rapidly growing lithium market.

Our approach maximizes lithium recovery while aligning with your sustainability goals and profitability objectives:

- Seamless Integration: Our extraction solution integrates effortlessly into your existing produced water management systems with minimal modifications.
- Strategic Co-location: We strategically co-locate our extraction and refining plants at your midstream facilities or disposal wells, reducing logistical challenges, enhancing operational efficiency, and cutting costs.
- Scalable & Modular: Our solution is designed to be flexible, adapting to both small and large-scale operations. Whether you handle high or low volumes of produced water and varying lithium concentrations.
- Turnkey, End-to-End Solutions: We provide a turnkey Design-Build-Own-Operate (DBOO) solution, managing the entire process from concept to operation. You can focus on your core operations while we handle the complexities of lithium extraction.



### Lithium demand is expected to grow 3.5x by 2030 and 6.5x by 2034.

#### **Lithium Market Dynamics**

The lithium market projections show that lithium demand will surge by 250% between 2023 and 2030, with an even greater emphasis on securing sustainably sourced lithium.

#### **Current Market Size:**

 2023 global lithium production was estimated at approximately 850,000 mt of lithium carbonate equivalent (LCE).

#### **Future Demand Projections:**

 Global lithium demand is expected to grow 3.5x by 2030 and 6.5x by 2034 from 2023 levels.

#### Supply Constraints:

- By 2029, demand is expected to outstrip supply or even sooner.
- The race to secure lithium intensifies as countries focus on energy security and reducing reliance on foreign supply chains.
- Cuts/delays in lithium projects and geopolitical risks further threaten supply stability.

#### **Technology Benchmark**





	Lithium Harvest Solution	DLE from Brine	Solar Evaporation Brine Extraction	Hard Rock Mining
Feedstock	Produced water	Continental brine	Continental brine	Rock / spodumene
Project implementation time	12-15 months	5-7 years	13-15 years	8-10 years
Lithium carbonate production time	2 hours	2 hours	2-3 years	3-6 months
Lithium yield	>95%	80-95%	20-40%	6-7%
Average footprint per 1,000 mt LCE	1.4 acres	1.4 acres	65 acres	115 acres
System design	Modular and mobile	Mobile / stationary	Stationary	Stationary
Environmental impact	Minimal	Minimal	Soil- and water contamination	Soil- and water contamination
Water consumption per 1,000 mt LCE	20 million gallons	80 million gallons	550 million gallons	250 million gallons
CO2 footprint per 1,000 mt LCE	Neutral	1.5 million kg	5 million kg	15 million kg
Average invested capital per 1,000 mt LCE	\$18 million	\$45 million	\$50 million	\$60 million
Average cost per metric ton	\$4,550	\$5,700	\$5,800	\$6,900
				Source: Columbia University JEA ICMN

#### **Our Innovation Surges Ahead of Competitors**

At Lithium Harvest, our lithium extraction solution outpaces traditional methods and competing solutions by delivering one of the most cost-efficient and sustainable lithium extraction processes available today. Here is how we surge ahead:

Unmatched Cost-Efficiency: Unlike traditional mining or evaporation ponds, which are capital and resource-intensive, our solution offers a low-cost approach by transforming oilfield wastewater into valuable lithium compounds using existing infrastructure. With CapEx up to 70% lower and OpEx up to 35% lower than traditional mining methods, we significantly reduce operating expenses and eliminate the need for large-scale infrastructure investments, giving us a clear cost advantage over competitors.





One of the Most Sustainable Lithium Solutions: Our process significantly reduces the environmental footprint of lithium extraction by minimizing water usage and carbon footprint. Using produced water from oil and gas operations, we turn a waste stream into one of the most sustainable lithium sources on the market, aligning with the highest ESG standards.

 Fastest to Market: Our solution accelerates lithium production timelines, enabling us to bring lithium compounds to market faster than traditional mining methods. Oil and gas companies can quickly capitalize on new revenue streams with shorter project development cycles.

By offering a cost-effective, environmentally responsible, and fast-to-market solution, Lithium Harvest ensures thatyou can stay ahead of the curve, meeting the demand for sustainable lithium while maximizing profitability.

#### Planned Projects to Elevate U.S. Lithium Output

	Facility Details – ND 1	Facility Details – ND 2
Location	North Dakota	North Dakota
Initial Capacity	400 mt	600 mt
Maximum Capacity	1,300 mt	1,500 mt
Footprint	41,000 sq ft	62,000 sq ft
<b>Construction Start</b>	H2/2024	H2/2024
<b>Expected Production Start</b>	H2/2025	H2/2025

- Co-Located Facilities: Our lithium extraction facilities are co-located with the produced water collection facilities. On-site lithium extraction and refining optimize operational efficiency and minimize environmental impact.
- Carbon Neutral Commitment: We are dedicated to carbon neutrality and significantly reducing our environmental footprint through innovative practices.
- Pioneering Technology: Our facilities will be the world's first large-scale facilities to produce lithium from oilfield wastewater utilizing our patented lithium extraction technology.

#### **Competitive Advantages & Strategic Market Positioning**

- Diversification & Market Leadership: Entering the lithium market provides oil and gas companies with strategic diversification, reducing reliance on traditional energy sectors while unlocking new revenue streams. Early adoption is key to securing a leadership position in this fast-growing market.
- Leveraging Existing Infrastructure: With Lithium Harvest, lithium extraction integrates seamlessly into your existing operations, minimizing capital expenses and shortening project timelines. Leverage your midstream assets for immediate benefits without significant operational changes.
- First-Mover Benefits & Competitive Edge: Our solution offers a clear advantage, positioning us ahead of competitors in the race to supply critical minerals. Lithium Harvest's solution provides faster, more cost-effective, and environmentally friendly lithium than traditional methods, ensuring our leadership in the evolving market.

#### Sustainability Meets Profitability: Transform Waste into Lithium

At Lithium Harvest, we drive profitability and environmental responsibility. Our innovative solution aligns with your sustainability goals and the highest environmental standards. Partnering with us unlocks new revenue streams while contributing to the green energy transition, proving that sustainability and profitability go hand in hand. This partnership delivers a double sustainability win. You will enhance your ESG goals through better water and resource management while revolutionizing sustainability practices in the lithium industry. Together, we will set new standards for responsible resource management and lead the way to a greener future in both sectors.



#### **Profit-Boosting Business Scenarios**

Explore tailored setups with Lithium Harvest's turnkey lithium extraction from produced water solution - where we operate, you profit, and lead in environmental stewardship. We invite you to meet with our team to explore business cases customized to your infrastructure, aligning with your corporate growth strategy. Together, we can introduce new revenue streams and build a strong business case for joint success in this emerging market.

	Form a Joint Venture with Lithium Harvest	Turn Your Produced Water into Profit
Benefits	A joint venture that generates prof- it and establishes your company as a pioneer in the sustainable lithium market, driving both profitability and environmental leadership.	You earn royalties from the produced water while boosting your ESG pro- file by contributing to sustainable water and resource management from lithium extraction.

# Seize the future with lithium



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