

# RENEW WATER VALUE



Toxsorb develops and delivers proven game-changing water treatment solutions that protect public health while enhancing sustainability. Via exceptionally selective removal of inorganic contaminants from a variety of water sources, we enable our customers to gain valuable water for drinking, industrial and mining purposes.

## VALUABLE WATER RECOVERY

When dealing with the harmful inorganic pollutants in drinking water and wastewater, the health implications are extremely high. At Toxsorb, we excel at removing contaminants to non-detect levels - recovering and regenerating the media to provide high quality, clean water. We rise to each new challenge with daring, dedication and expertise. Based on the circular economy - maximizing resources, minimizing eco-footprint, while saving water and OPEX, we convert polluted water into tangible and valuable assets - shifting the economic model from savings to growth.

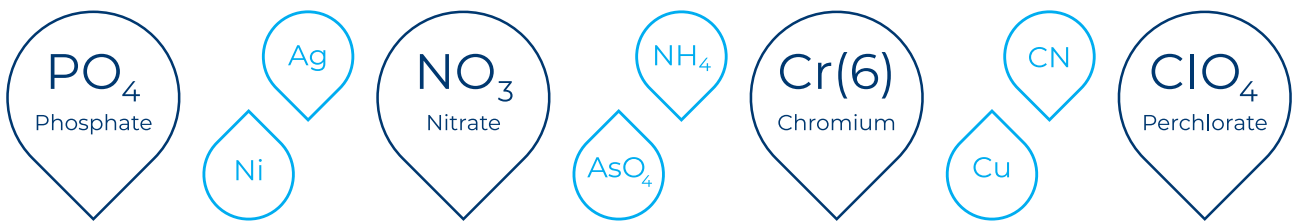
## UNMATCHED OFFERING

Our work is based on a hands-on approach, to precisely understand customer needs including their unique water chemistry and effluent demands, and develop customized modular and turnkey solutions, ensuring optimization of their core business.

Our end-to-end service offering spans from R&D and engineering to pilot demonstration, through to construction, implementation and management.

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### TOXSORB HAS ALREADY PROVEN THE SUCCESSFUL SELECTIVE REMOVAL OF THE FOLLOWING POLLUTANTS



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## DEVELOPING TOMORROW'S TECHNOLOGIES, TODAY

### MAC - MODIFIED ACTIVATED CARBON TECHNOLOGY OUTPERFORMING TRADITIONAL ION EXCHANGE

ToxSorb's novel and proprietary MAC technology has exceptionally high selectivity and affinity. It enables the removal of a wide variety of inorganic pollutants, while maintaining its original adsorption capability for organic pollutants, ignoring non-essential molecules. MAC acts as a catalyst for the destruction of specific pollutants, such as hexavalent chromium, perchlorate and cyanide-complexed solutions - reducing the brine volume for evacuation. Pollutant specific and durable; the platform requires minimal maintenance, providing energy and cost savings. MAC holds approvals, including NSF 61, as well as recognition from the Israeli and American Health Authorities for the removal of chromium, arsenic and perchlorate from drinking water.

### CIRCULAR ECONOMY - RECOVER RESOURCES, GENERATE VALUE

Our next generation offering involves turning pollutants into economically valuable fertilizers. We extract the pollutant and recover it as a highly valuable resource - based on the circular economy model.

#### AMMONIA MANURE RECOVERY

Extracting Ammonia from chicken and pig manure, converting it from a pollutant to a high quality fertilizer via a **zero chemicals process**, using recoverable energy sources such as biogas. The recovery of the potential raw Ammonia substance **subsidizes the treatment cost and creates a revenue stream**.

#### NITRATE BRINE RECOVERY

Removing Nitrate from ground water via a conventional Ion Exchange process, feeding the regenerated brine into our proprietary carbon-based reactor by a chemical-free process, where Nitrate is eliminated from the brine and recovered as a high-quality clean Potassium Nitrate fertilizer. This results in a **near zero cost, enabling both savings and growth**.

# PROJECT HIGHLIGHTS

## CLEAR WATER VALUE FOR 3,000 PEOPLE EVERY DAY



### Customer

Green Village (Hakfar Hayarok), Israel

### Project Type

Drinking water

### Capacity

100,000 m<sup>3</sup>/year

The Green Village, a youth boarding school, approached ToxSorb to help them meet their urgent need of clean water supply for their residents, which required treatment of perchlorate, nitrate, and ethylene di-bromide (EDB). **We managed to reduce the perchlorate level from 150ppb to non-detect levels – below 4ppb. Today, MAC is the only technology in Israel approved by the Ministry of Health as capable of removing perchlorate at a concentration higher than 150ppb.** Due to the plant's success, the Israeli Water Authority granted the Green Village an exemption from the water production fee for 10 years.

## ECO-RESPONSIBLE WASTEWATER REUSE



### Customer

Metal Surfaces Inc (MSI), US

### Project Type

Industrial Wastewater Treatment & Reuse

### Capacity

6,400 GPD,  
14,600 m<sup>3</sup>/year

MSI approached ToxSorb, due to the severe water scarcity caused by drought and complex wastewater streams contaminated by a variety of metals. **The custom filtration system resulted in 15,000 gallons/day savings of fresh water purchase and wastewater discharge, as well as a reduction in chemical use, sludge production, and higher quality rinsing water (<50uS/cm).** Today, our chromium and cyanide reuse facility at MSI is fully operational, enabling cost savings and water autonomy.

## MINING WASTEWATER TREATMENT WITH HUGE COST SAVINGS



### Customer

A leading mining company, Chile

### Project type

Mining Wastewater Pilot

### Capacity

8,760 m<sup>3</sup>/year

The mining company, located in northern Chile, approached ToxSorb with the challenging target of reducing the perchlorate level by two-thirds, as it was causing significant damage to their products. We conducted a pilot which was completed within 3 months, providing high-quality purified brine for clean products manufacturing. **The project achieved significantly lower Perchlorate concentration than the original goal. In addition, we generated significant savings in comparison with the customer's target price.**



## GROWING WITH WATER

A business unit of the WFI group, Israel-based ToxSorb provides proven water and wastewater treatment solutions via proprietary technologies. Our robust and cost-effective platform for removing heavy metals and other contaminants from wastewater and drinking water exceeds the highest international standards. Based on its proven track record, ToxSorb was granted Israel's only MoH approval for recovering water contaminated with Perchlorate and EDB (Ethylene-dibromide) to high-quality potable water. ToxSorb's devoted multidisciplinary team of scientists, researchers, and engineers utilize their innovative approach and vast experience to enable our global customer base to bring their unique water goals to fruition, while simultaneously curtailing pollution and saving costs.



**LET'S CREATE MORE VALUE FROM WATER – TOGETHER**

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