


# CITY OF CORAL GABLES

## --MEMORANDUM--



**TO:** City Commissioners

**FROM:** Mayor Vince Lago 

**DATE:** November 6, 2025

**SUBJECT:** Oasis Waterway Decontamination Project

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I am pleased to introduce an upcoming environmental initiative that will be on the agenda for discussion at our November 18, 2025 commission meeting. This project, spearheaded by the non-profit, Clean Rivers Foundation and Applied6 Engineering, aims to enhance water quality and ecological health through the installation of a pilot filtration system within one of the city's waterways.

As proposed, the project would operate as a two-month test trial to evaluate the filter's effectiveness in improving water clarity and reducing pollutants at no cost to the city. The inventor and Coral Gables resident, Mr. Richard Ricardo has provided detailed information on the system's design, function, and expected outcomes. Please see his remarks below, and the attached presentation and video link.

### **The Problem:**

Our waterways may look clean, but beneath the surface they are quietly struggling. Stormwater runoff carries fertilizers, herbicides, and oils into canals and estuaries, killing seagrass, coral, and marine life. The goal is clear: reduce water pollution by half by 2026, starting with the city's most at-risk waterways. Clean Rivers Foundation, in partnership with Applied6 Engineering, proposes a simple, science-based solution that restores water quality without chemicals or noise — creating visibly clearer, healthier waterways where marine life can return.

### **The Solution:**

In partnership with Applied6 Engineering, we propose a 60-day pilot of the OASIS AQUABOT — a silent, chemical-free, floating unit (8'×8'×20") that combines ozone nanobubbles with AquaChar, a magnetic, carbon-negative purification medium that removes pollutants, heavy metals, and microplastics while returning oxygen-rich water to the canal. Conceived and built in Coral Gables by inventor Richard Ricardo, the unit requires no permanent construction and minimal staff support. We respectfully request approval to place one OASIS AQUABOT at a designated site to demonstrate measurable improvements in clarity, odor reduction, and aquatic activity; all costs (equipment, installation, insurance, and monitoring) will be fully covered by the Clean Rivers Foundation.

The Commission's input and guidance on identifying the most suitable location will be essential to moving this initiative forward.

Thank you for your consideration and continued commitment to environmental sustainability within our community.

[AquaBot Demonstration Video](#)

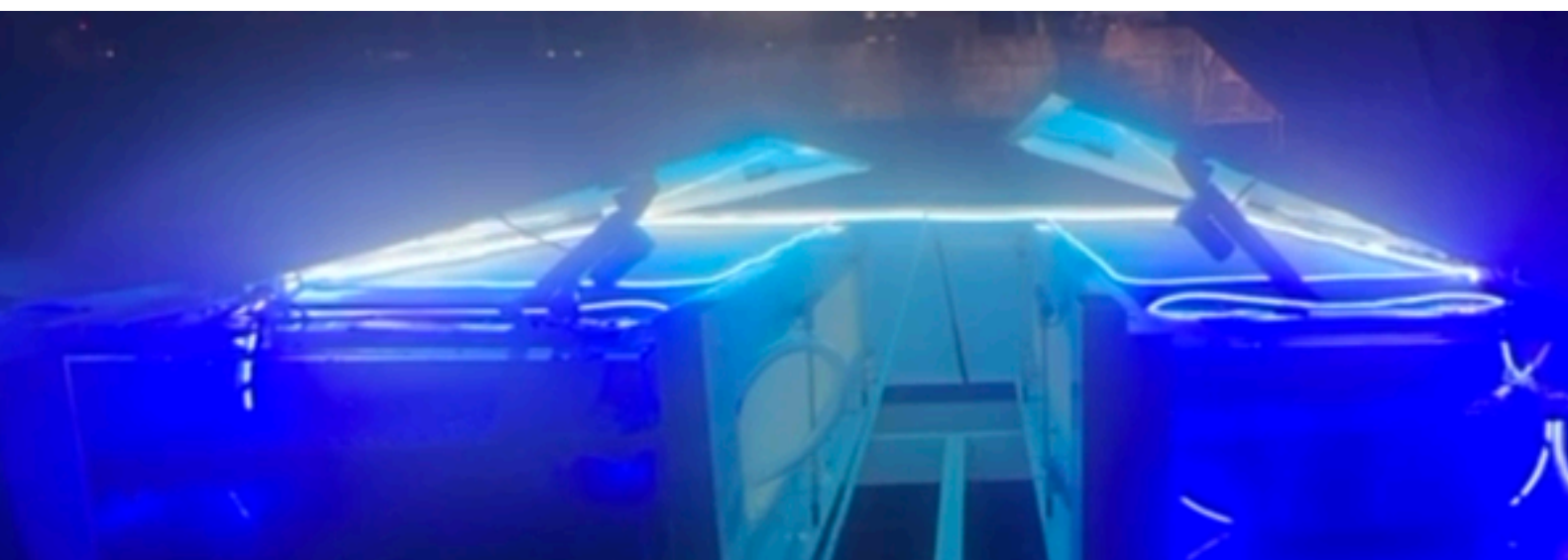


# OASIS PROJECT: CORAL GABLES CLEAN-UP

## OASIS AQUABOT: Summary of Project Intentions, Process, and Goals

Our waterways may look clean, but beneath the surface they are quietly struggling. Stormwater runoff carries fertilizers, herbicides, and oils into canals and estuaries, killing seagrass, coral, and marine life. The goal is clear: reduce water pollution by half by 2026, starting with the city's most at-risk waterways. Clean Rivers Foundation, in partnership with Applied6 Engineering, proposes a simple, science-based solution that restores water quality without chemicals or noise – creating visibly clearer, healthier waterways where marine life can return.

OASIS is **technology that mimics nature**. By combining **ozone nanobubbles** with **AquaChar**, a revolutionary carbon-negative purification medium, OASIS forms the cleanest water purification system in the world. AquaChar acts like a magnet, attracting pollutants, heavy metals, and microplastics, while ozone destroys pathogens at the DNA level and returns oxygen-rich water to the ecosystem. Conceived and built locally by **inventor Richard Ricardo**, the OASIS AQUABOT operates quietly and self-sufficiently. We respectfully request a **two-month pilot installation** at a designated waterway, with all costs covered by the Clean Rivers Foundation.







This is more than technology. It is about restoring the living waters.

*Prepared by Clean Rivers Foundation and Applied6 Engineering*

*November 03, 2025*

*Richard Ricardo, Inventor – (786) 521-1490*



# ***Pollution Problems in Miami's Waterways and Coastal Areas***

Our waterways may appear calm, but beneath the surface they are struggling.

Stormwater runoff carries fertilizers, herbicides, and oils into canals and estuaries, suffocating seagrass, coral, and marine life.

The goal is clear: reduce water pollution by half within the next few years – beginning with the most at-risk canal and waterway zones.





# The Solution: OASIS AQUABOT

**OASIS is technology that mimics nature – and together with AquaChar, it forms the cleanest water purification system in the world.**

At the heart of OASIS is **AquaChar**, a revolutionary carbon-negative purification medium unlike any filter ever created.

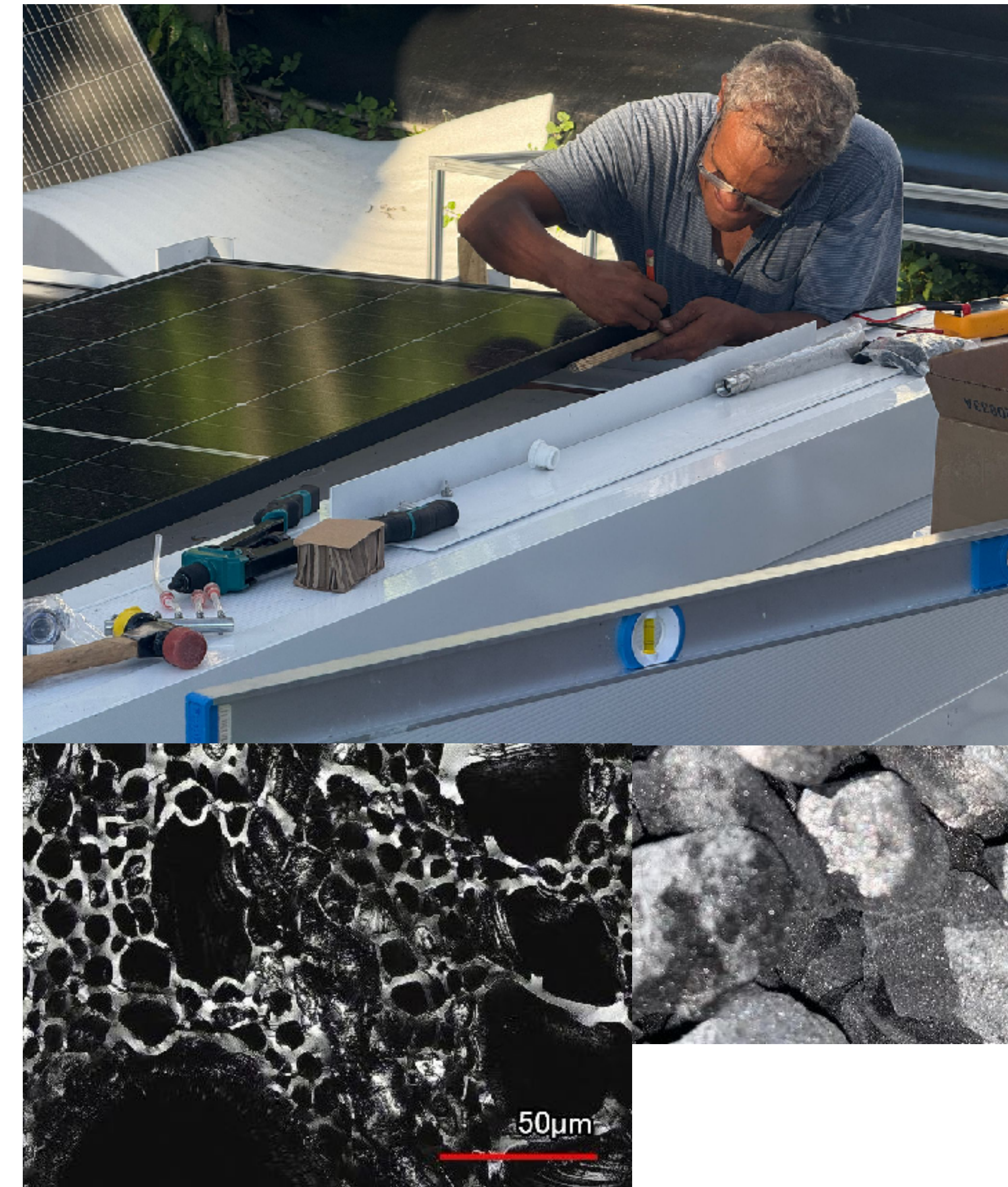
Traditional filters strain and clog; AquaChar **acts like a magnet**, pulling in pollutants and binding them at the molecular level.

Its graphene-enhanced carbon structure attracts and captures **heavy metals, fertilizers, pesticides, oils, microplastics, and chemical residues** – locking them safely away inside a self-cleaning microbiome.

When paired with the **ozone nanobubble system** inside OASIS, the results are unmatched:

- 1. Pathogens are destroyed at the DNA level.**
- 2. Toxins and heavy metals are neutralized and permanently bound.**
- 3. Purified, oxygen-rich water is released back into the ecosystem.**

This dual-action process doesn't just clean water – it restores living systems, creating visibly clearer water and conditions where marine life can thrive again.

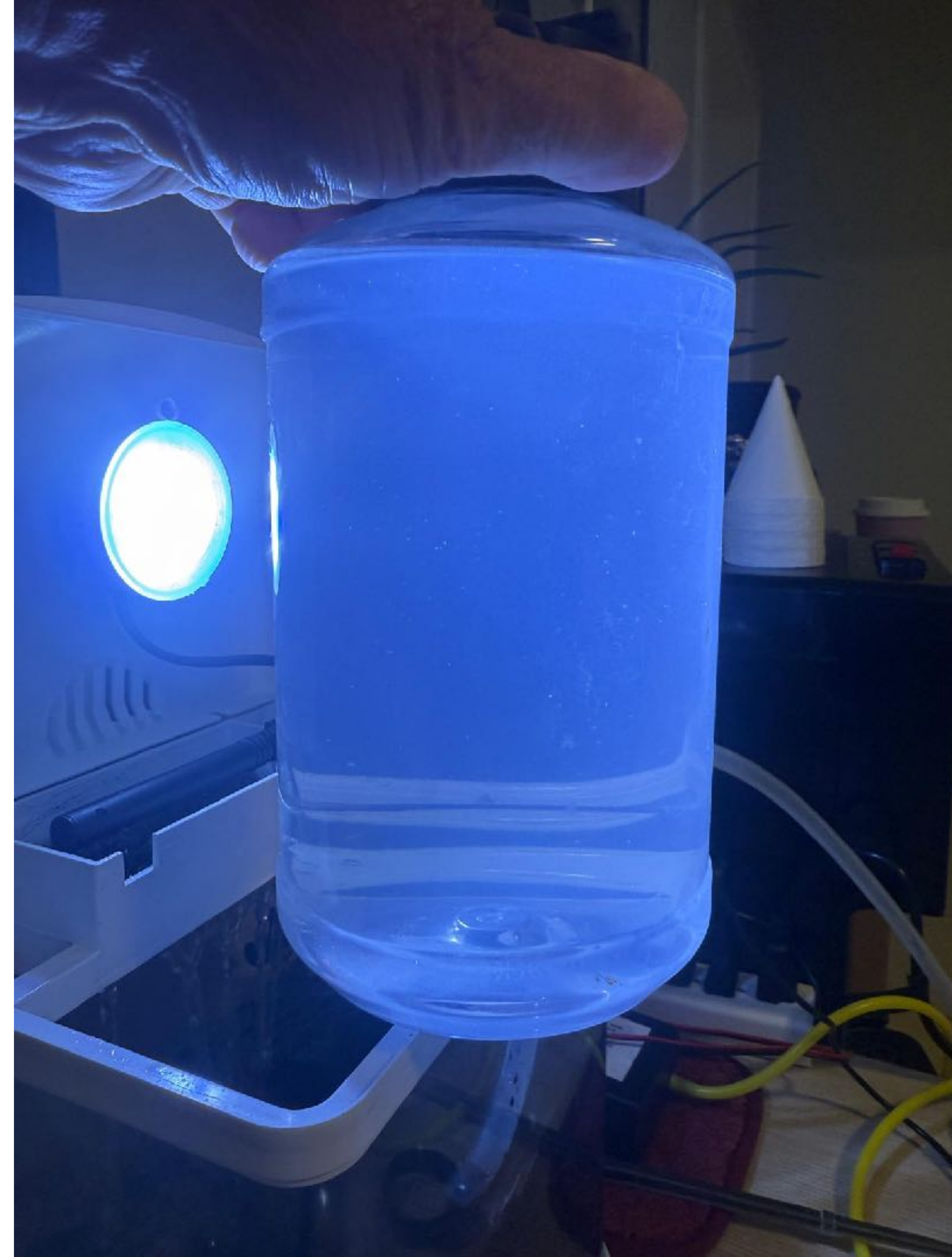




# About the OASIS AQUABOT

- **Conceived and built right here in Coral Gables** by **Richard Ricardo, inventor**, the **OASIS AQUABOT** is a **compact, floating, self-contained platform** that merges advanced engineering with nature-inspired purification.
- **Silent operation:** no mechanical noise, vibration, or odor.
- **Low-impact design:** requires no chemicals, no permanent structures, and minimal maintenance.
- **Flexible power:** operates on solar or standard grid connection.
- **Continuous renewal:** draws in water, treats it with ozone and AquaChar, and returns it cleaner than ever before.

The OASIS AQUABOT works quietly in the background – visible only through the transformation it brings to the water itself.





# Request for Pilot Location

We respectfully request the City's approval for a **two-month pilot installation** of one **OASIS AQUABOT** at a **semi-permanent location** within the city's waterways.

This location will serve as a live demonstration site to measure improvements in:

- water clarity,
- odor reduction, and
- the gradual return of aquatic life.

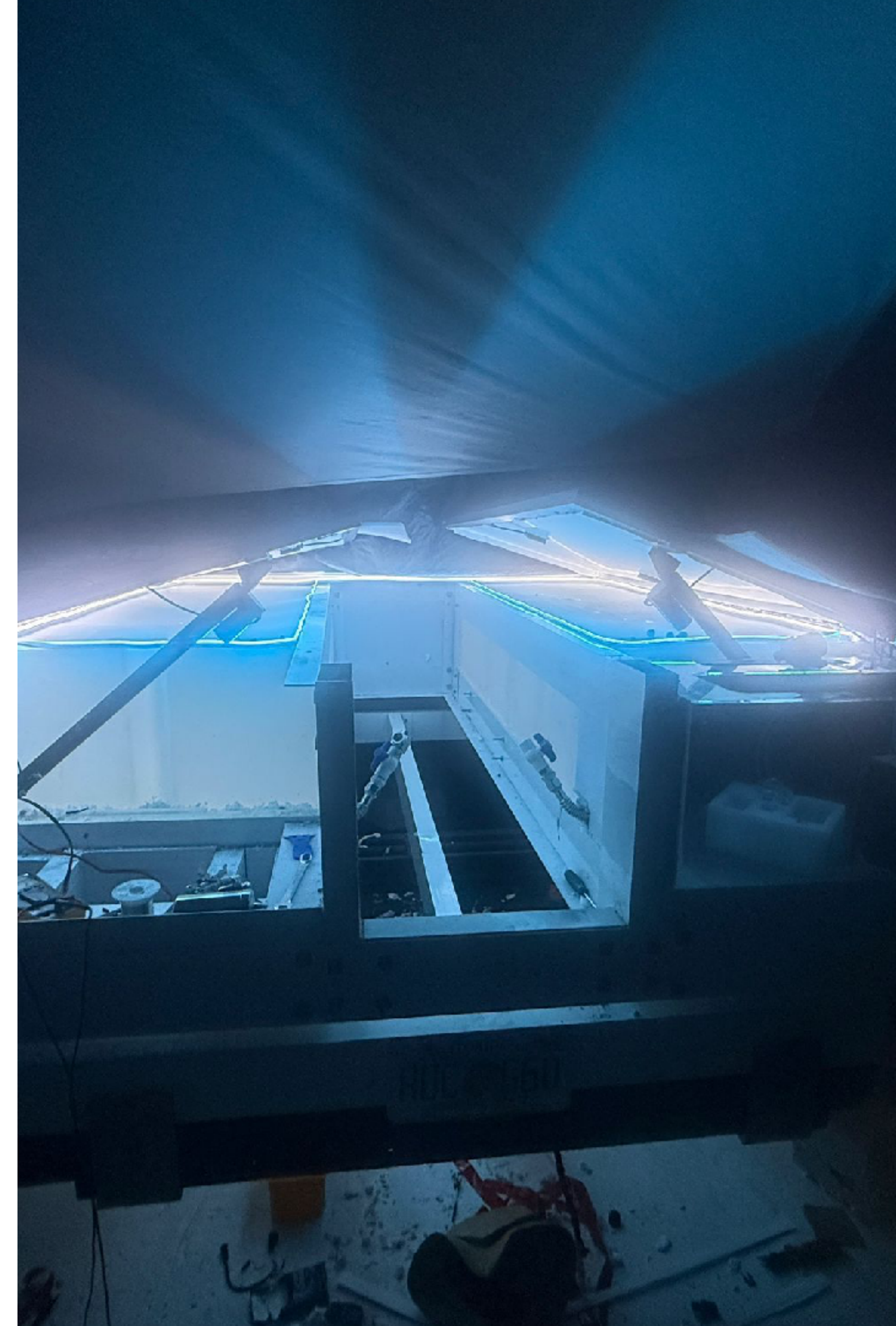
The unit will be **securely anchored and fully self-contained**, requiring no construction, dredging, or structural modification.

It will **operate silently**, and all safety and operational protocols will be coordinated with city staff.

At the end of the two-month demonstration period, Clean Rivers Foundation will:

- remove the unit,
- provide a short results report with before-and-after water quality data, and
- offer recommendations for potential long-term deployment sites.

All expenses – equipment, installation, insurance, and monitoring – will be **fully covered by the Clean Rivers Foundation**.





# Our Commitment

OASIS represents a breakthrough in how cities can protect their natural resources – quietly, cleanly, and scientifically.

This is **the world's cleanest, most sustainable water purification technology**, born from the partnership between **AquaChar** and **Applied6 Engineering**, under the leadership of the **Clean Rivers Foundation**, and **invented right here in Coral Gables by Richard Ricardo**.

Together, we can prove that environmental innovation and civic action can make every waterway a living, breathing system once again.

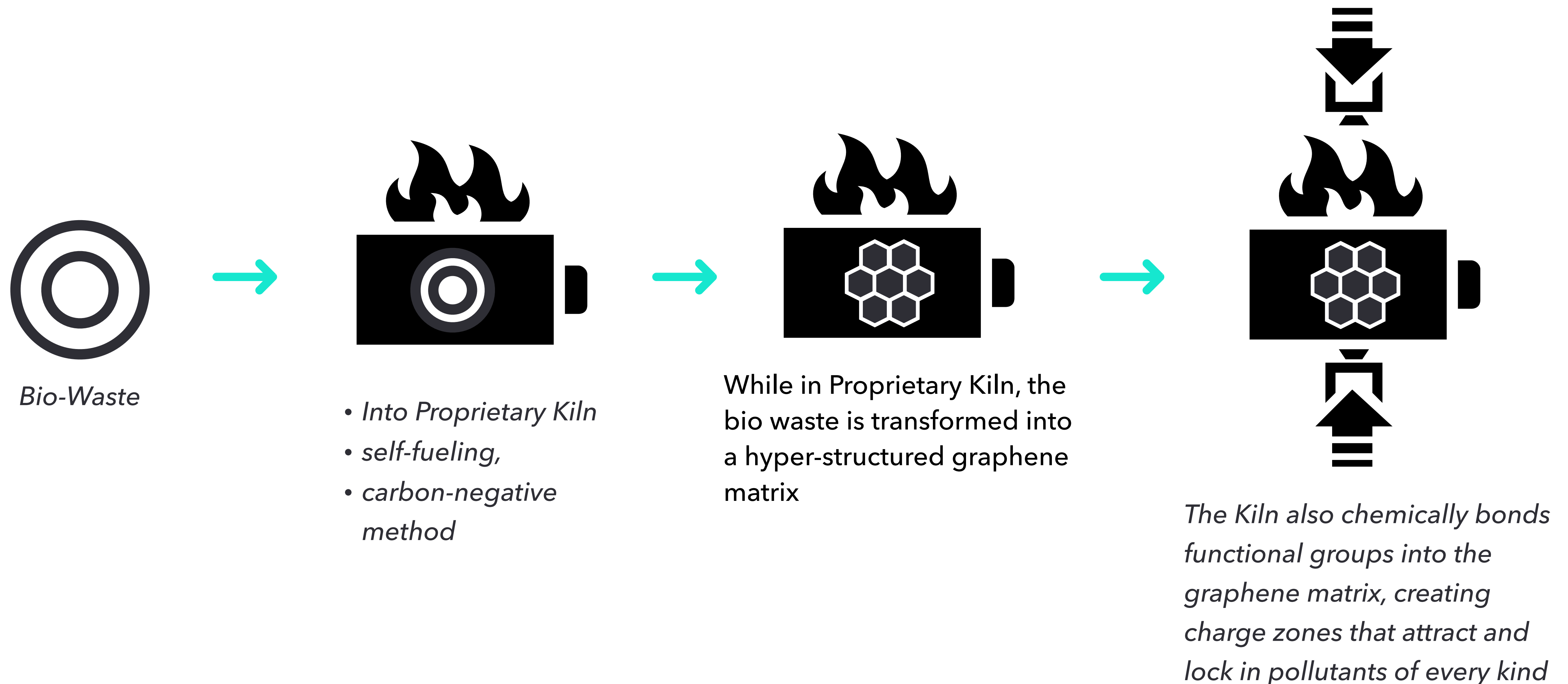
**Cleaner water begins here – with OASIS.**





# **AquaChar** – *The Life-Restoring Filter*

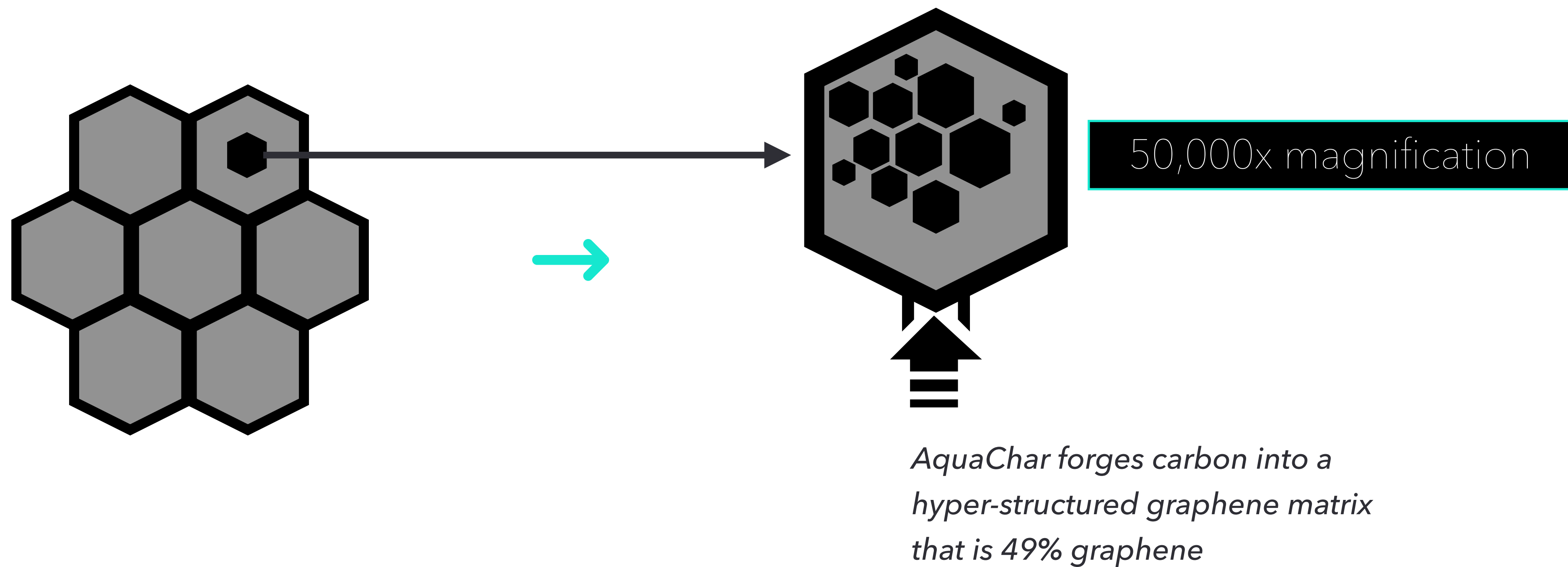
## *Proprietary Forged Carbon Process*





# AquaChar – *The Life-Restoring Filter*

# *Aqua Graphene - Hyper-structured carbon matrix*



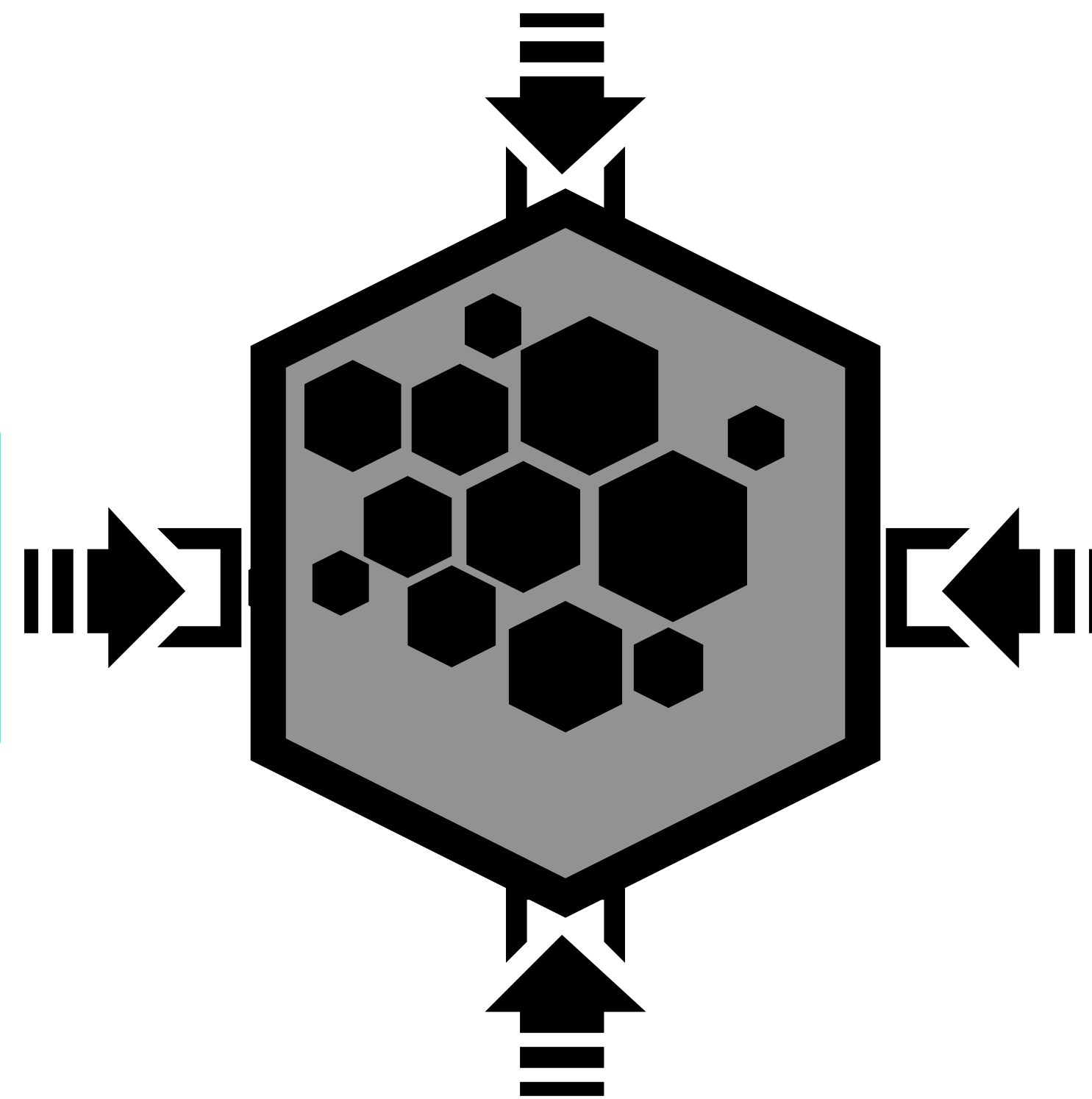
# **AquaChar** – *The Life-Restoring Filter*

9

## *The four B.A.M.S.™ functional groups*

-OH (hydroxyl groups) → hydrogen bonding, great for attracting polar contaminants like pesticides.

-SO<sub>3</sub>H (sulfonic groups) → strong negative charges that grab positively charged toxins, enhance water interaction.



-COOH (carboxyl groups) → bind heavy metals & PFAs, increase acidity for pollutant capture.

-NH<sub>2</sub> (amine groups) → form electrostatic and covalent bonds with microplastics and organic pollutants.

*The AquaChar forging process activates graphene's edge sites, allowing functional groups to chemically bond – creating positive and negative charge zones that attract and lock in pollutants of every kind.*

# 1. **AquaChar** – *The Life-Restoring Filter*

*This Isn't Just a Better Filter – It's the End of Sieve Thinking*



## **Old Sieve Era**

- Passive barriers
- Just screens out particles
- Clogs quickly, needs replacing
- Creates waste after use
- A stop-gap solution



## **AquaChar Magnetic Era**

- Active, graphene-charged matrix
- Pulls in *all forms of pollutants* (PFAs, microplastics, toxins)
- Works for months without clogging
- Ends as soil enrichment, not landfill waste
- A total reinvention, not an upgrade

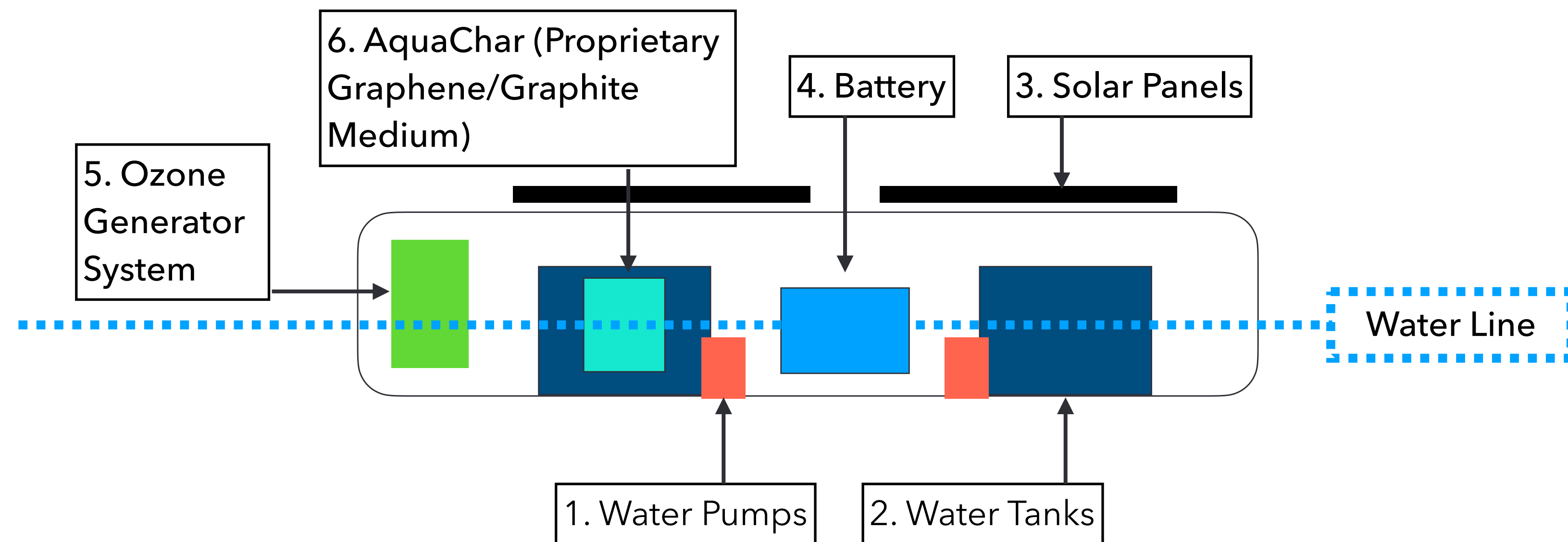
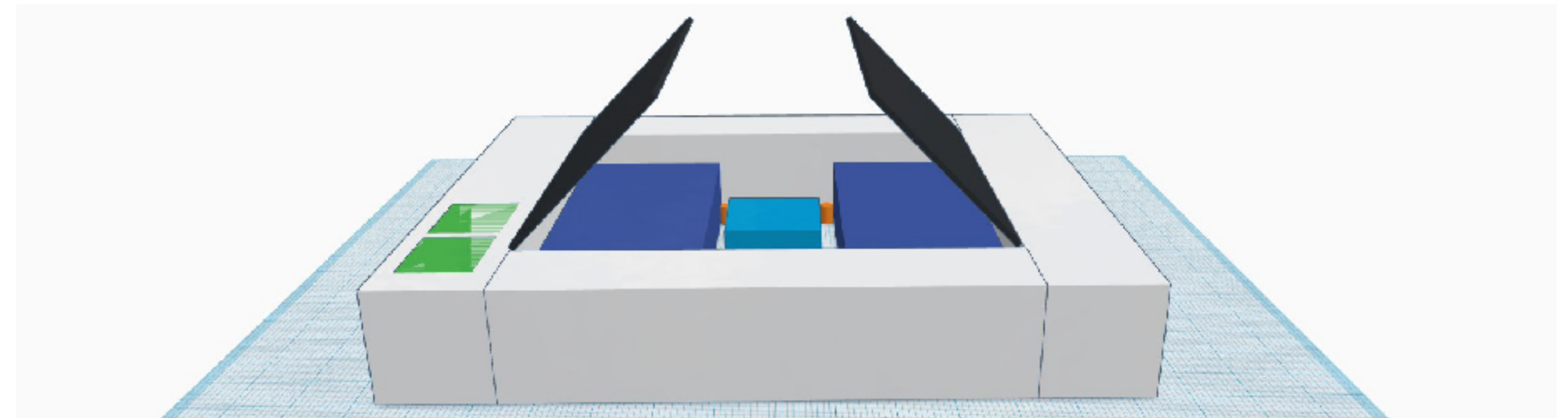


# OASIS Water Sanitation System

## *The Engine of Renewal*

A **science-driven water restoration platform** that:

- **Sanitizes:** Destroys pathogens, prevents closures, protects public health
- **Decontaminates:** Removes heavy metals, pesticides, micro plastics
- **Rejuvenates:** Restores oxygen, reverses dead zones, revives biodiversity



# OASIS Water Sanitation System

## *Components and Functions*

### 1. Water Pumps

- Draw untreated water into the primary tanks at a flow rate of 1,100 gallons per hour.
- Each primary tank has one inflow and one outflow pump.

### 2. Water Tanks

- Receive untreated water for processing.
- Treat water with high concentrations of ozone.
- Include internal AquaChar filtration bags to enhance purification.

### 3. Solar Panels

- Charge the onboard battery system using renewable energy.

### 4. Battery

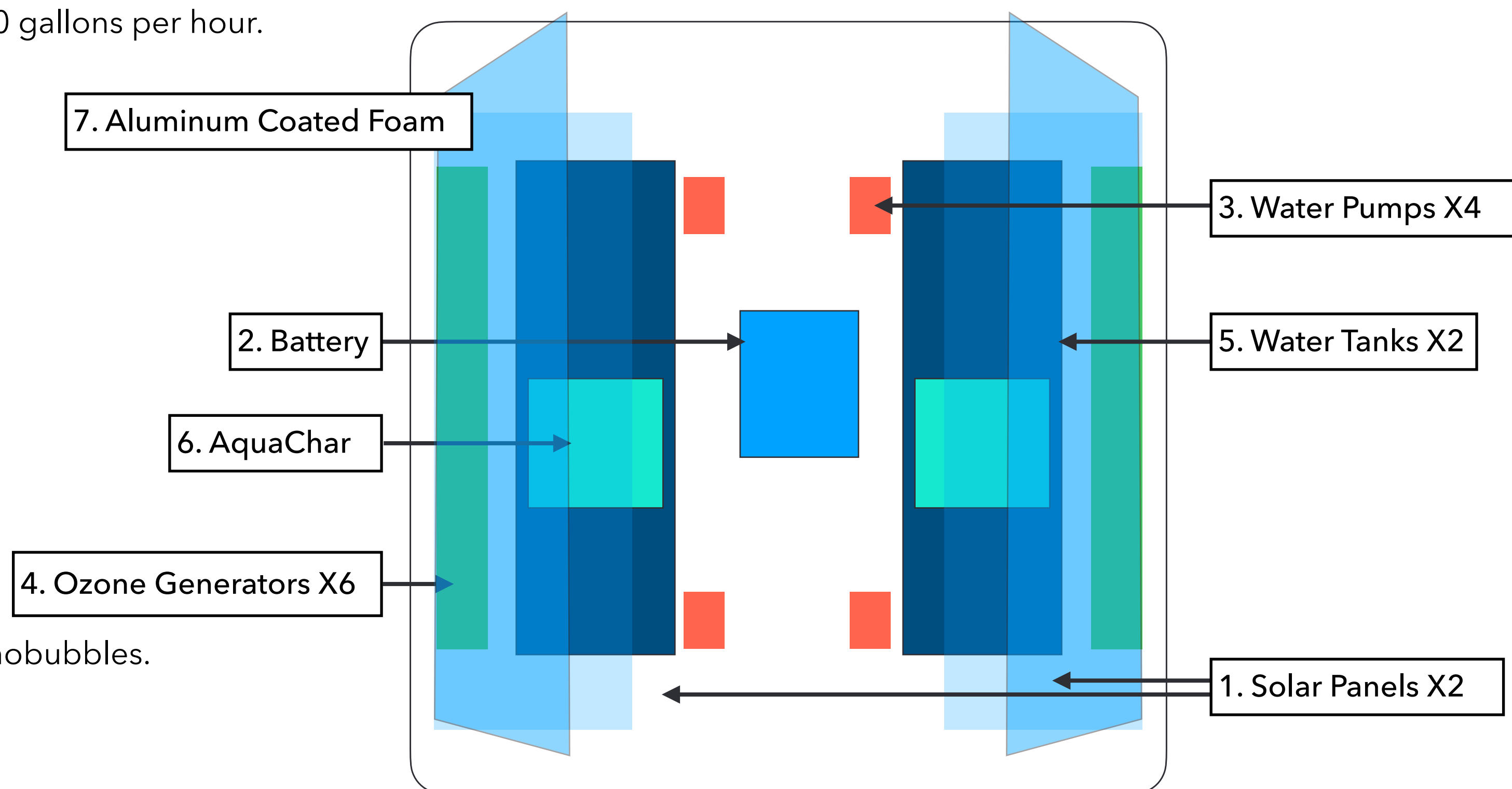
- Stores solar energy.
- Powers lights, pumps, and ozone generators.

### 5. Ozone Generator System

- Bombards untreated water with high concentrations of ozone nanobubbles.
- Kills biologics (microorganisms, algae, viruses, etc.).
- Breaks down chemicals through oxidation.

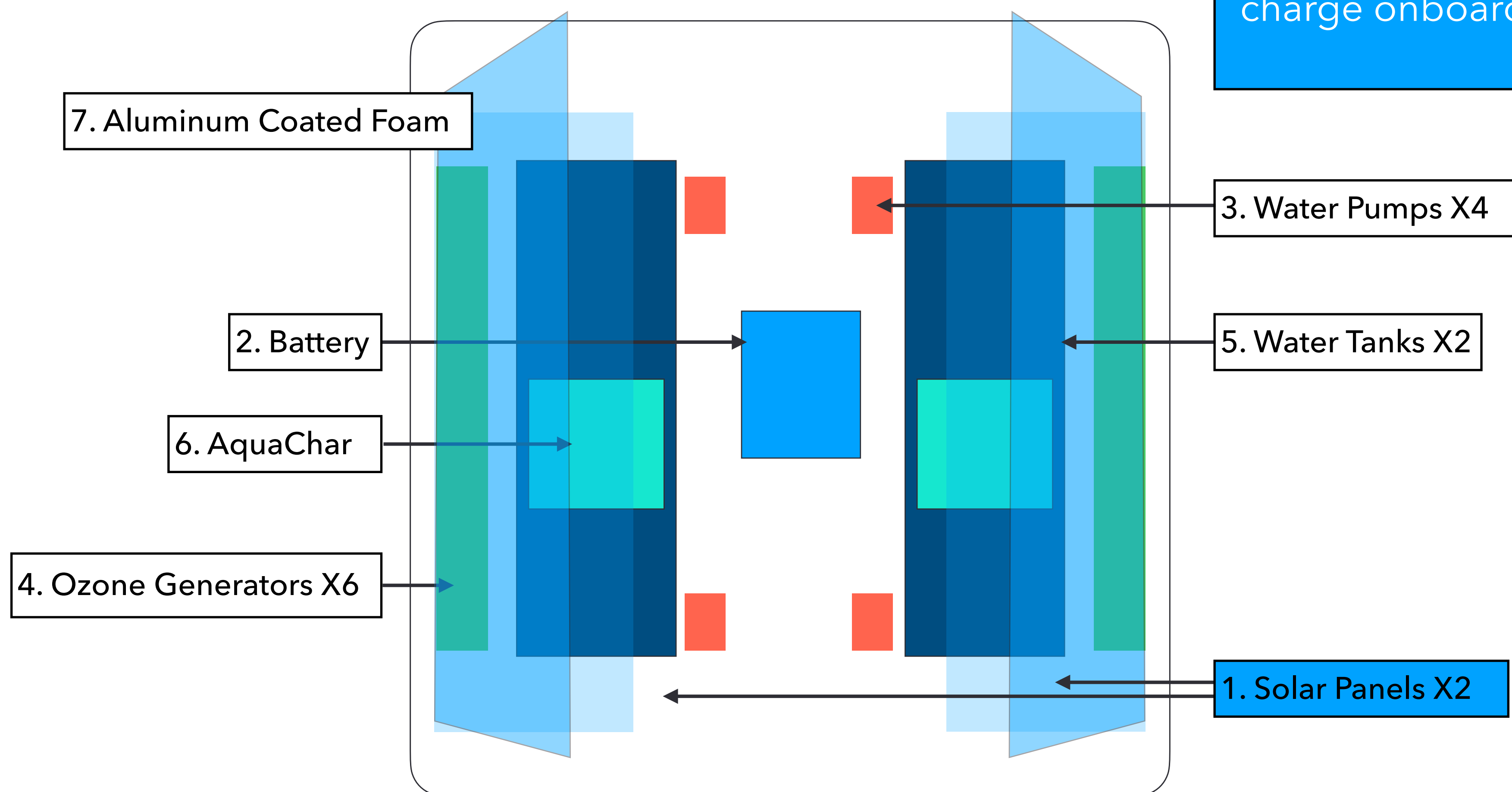
### 6. AquaChar (Proprietary Graphene/Graphite Medium)

- Absorbs heavy metals from the water.
- Traps and breaks down microplastics in conjunction with ozone nanobubbles.
- Neutralizes ozone ( $O_3$ ) into oxygen ( $O_2$ ).



# OASIS Water Sanitation System

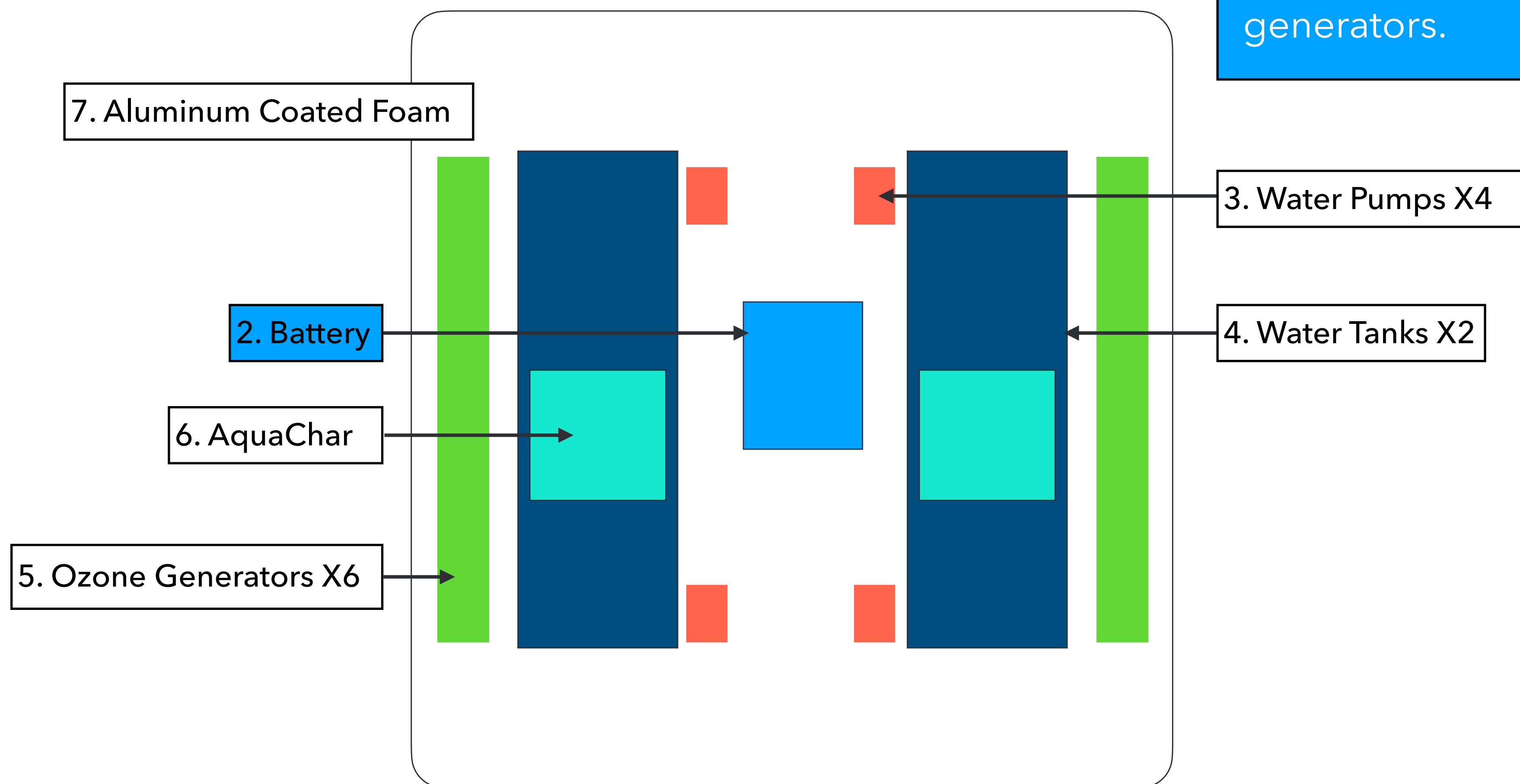
## *The Engine of Renewal*





# OASIS Water Sanitation System

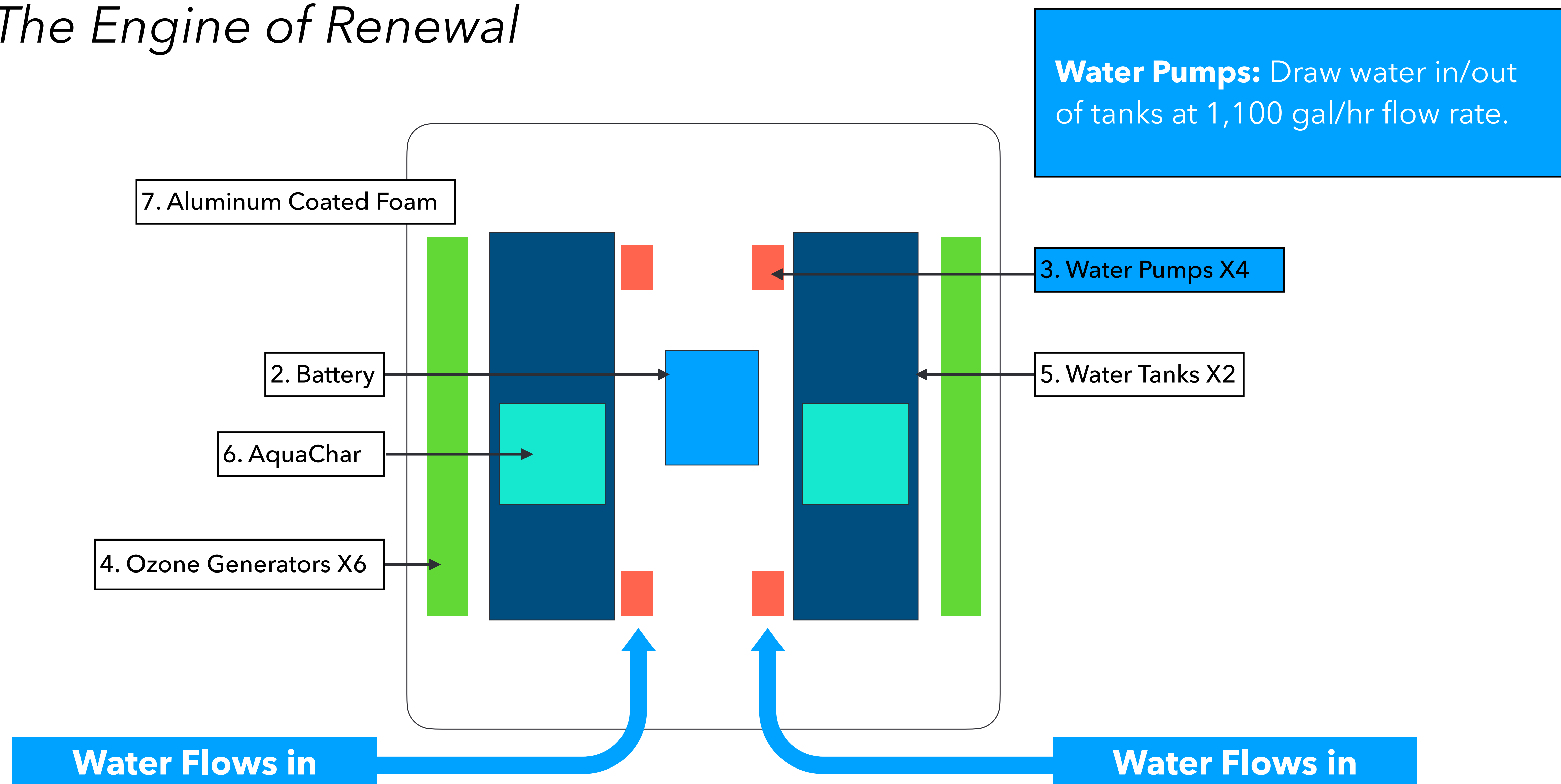
## *The Engine of Renewal*



**Battery System:** Stores power; runs pumps, lights, and ozone generators.

# OASIS Water Sanitation System

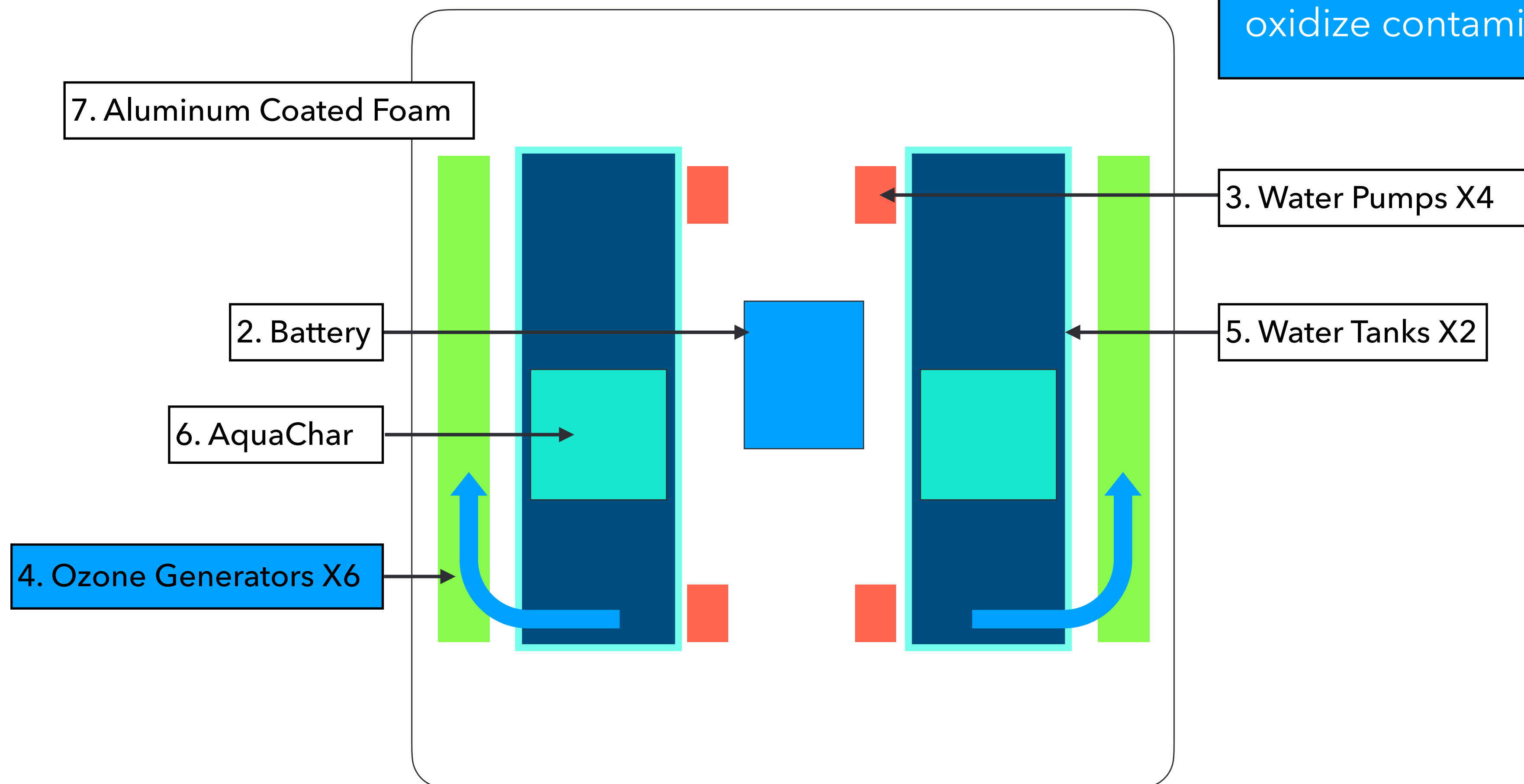
## *The Engine of Renewal*





# OASIS Water Sanitation System

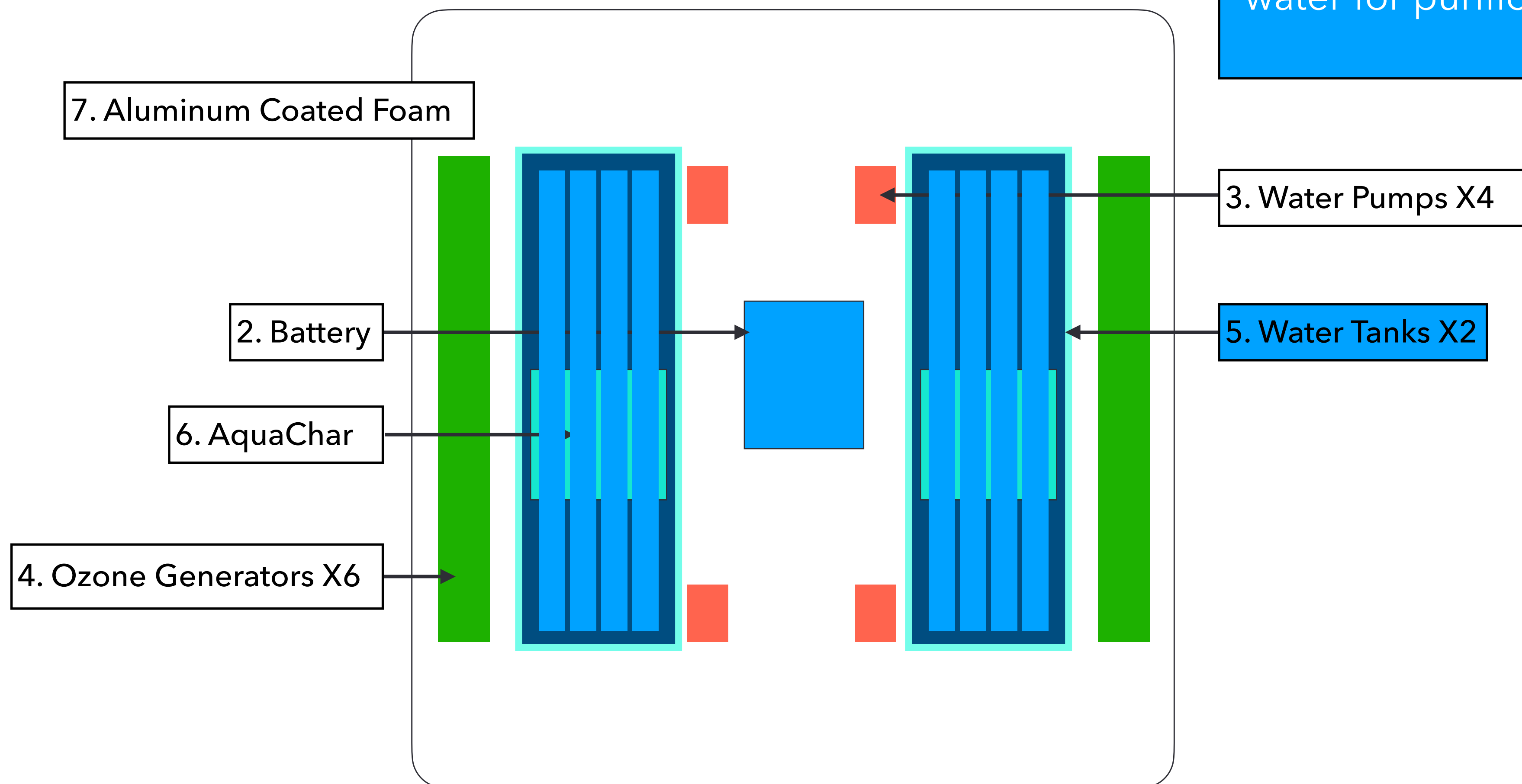
## *The Engine of Renewal*



**Ozone Treatment:** Injects ozone nanobubbles to sterilize and oxidize contaminants.

# OASIS Water Sanitation System

## *The Engine of Renewal*

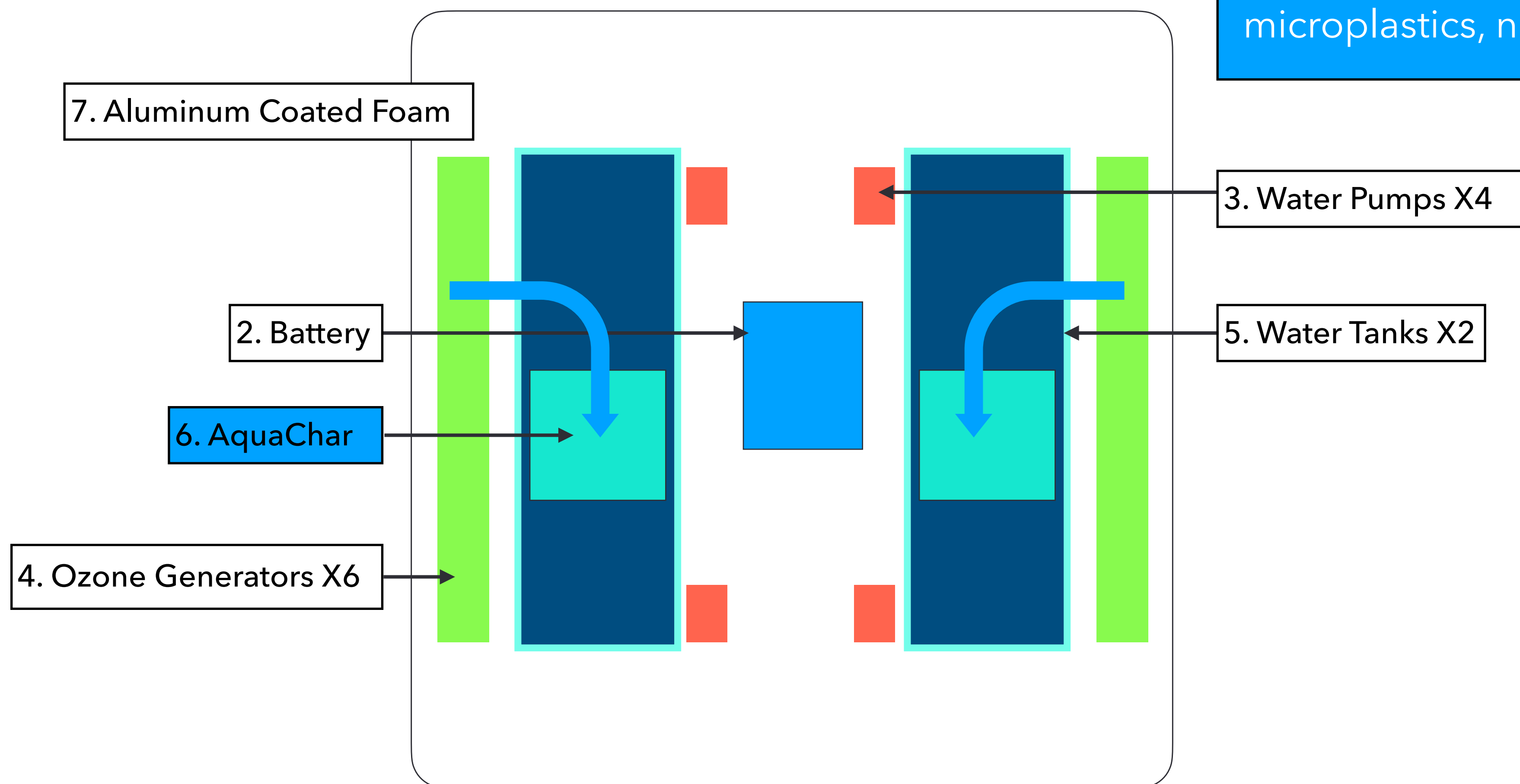


**Water Tanks:** Receive untreated water for purification.



# OASIS Water Sanitation System

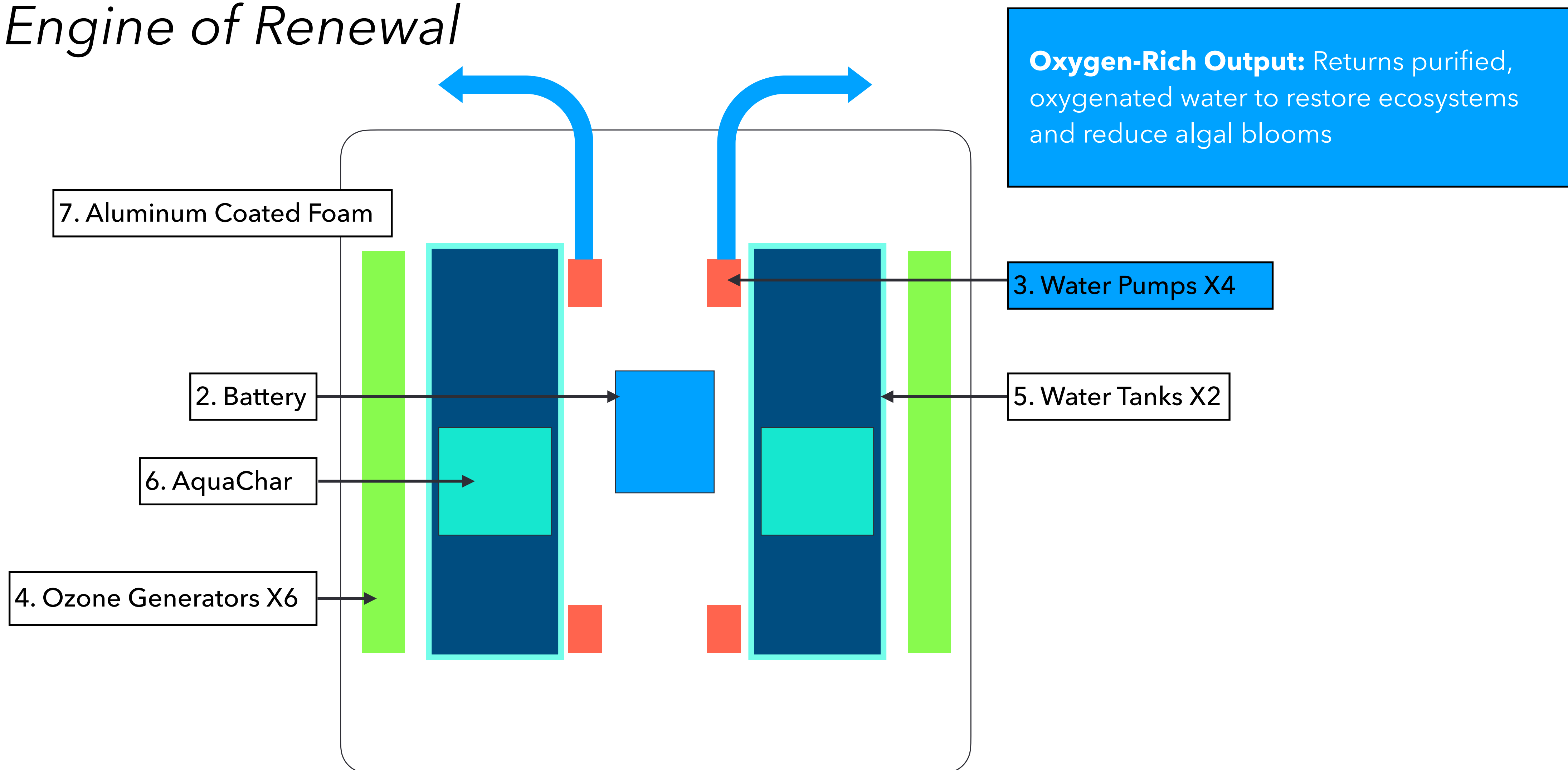
## *The Engine of Renewal*



**AquaChar Filtration:** Absorbs heavy metals, breaks down microplastics, neutralizes ozone.

# OASIS Water Sanitation System

## *The Engine of Renewal*





## *Impact for Miami*

- **Health:** Fewer illnesses, safer beaches, thriving communities.
- **Environment:** Coral restoration, fish recovery, resilient food chains.
- **Economy:** Protects billions in tourism and fisheries revenue.
- **Legacy:** Miami as the first global model city to restore its waters at scale, inspiring others worldwide.

# Why Partner With Us



- **Unique Technology:** AquaChar + OASIS represents the world's only proven synergy of graphene filtration and ozone nanobubbles for full-spectrum water restoration.
- **Holistic Approach:** We address the entire cycle – sanitation, decontamination, and rejuvenation.
- **Sustainability:** Carbon-neutral, solar-powered, and circular economy design.
- **Global Vision:** Clean Rivers Foundation connects local impact to a worldwide movement.



## *We invite Miami to join us in launching a pilot project*

*Deploying OASIS units with AquaChar integration in Biscayne Bay and priority canals. Together, we will:*

- Demonstrate measurable improvements in water quality within months.
- Protect Miami's health and economic future.
- Establish Miami as a beacon of **restored waters and resilient cities** for the world to follow.



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