

# ProMoss™ Sustainable Water Treatment

ProMoss is the only all-natural and sustainable plant-based water treatment solution for today's water issues. ProMoss uses the natural properties of Sphagnum moss to improve water quality and affect every surface the treated water touches. ProMoss offers a powerful, simple, natural water treatment program requiring no complicated chemical feed and control systems. ProMoss naturally reduces the formation of organic contamination wherever the treated water touches a surface.



## Features

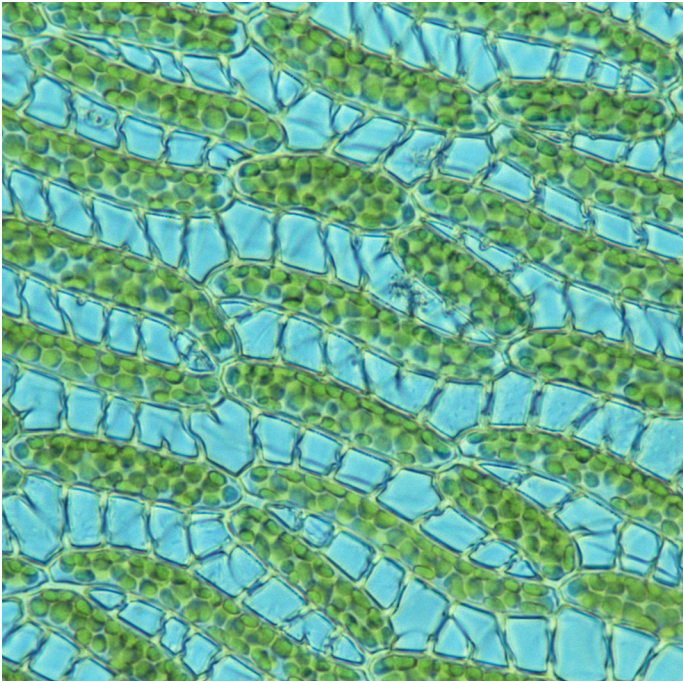
- Removes positively charged ions: calcium, iron, magnesium, zinc, etc
- Reduces organic contamination on contact surfaces
- Reduces heavy metal ions
- Absorbs 10x its weight in oil
- Stable to 250° F
- Non-toxic, safe to handle, lightweight
- NSF Registered (G5 and G7)

## Benefits

- Inhibits and removes scale
- Improves the efficiency of heat transfer by reducing organic contamination and scale
- Stabilizes and buffers pH and softens water
- Improves water quality, clarity, and stability
- Prolongs equipment life
- Improves energy savings
- Decreases corrosion on contact surfaces
- Lower safety risk compared to chemicals
- Reduces chemical use, disposal, and wastewater discharge
- Reduces maintenance and cleaning
- Lower storage and transportation costs

# Innovative Material Science

Creative Water Solutions' ProMoss technology is a nature-inspired solution revolutionizing the water treatment industry. This product harnesses the innate power of Sphagnum moss to naturally soften water, effectively removing potentially harmful impurities like calcium, magnesium, iron, and other metals and minerals. These impurities contribute to scaling and corrosion in water systems. Our Sphagnum moss is rich in carboxylic acid groups and offers exceptional cation exchange capacity, efficiently neutralizing alkalinity. Additionally, it reduces organic contamination, cleaning and removing deposits from system surfaces. Notably, it outperforms traditional chemical treatments by reducing organic contaminants, which chemical agents struggle to address effectively.



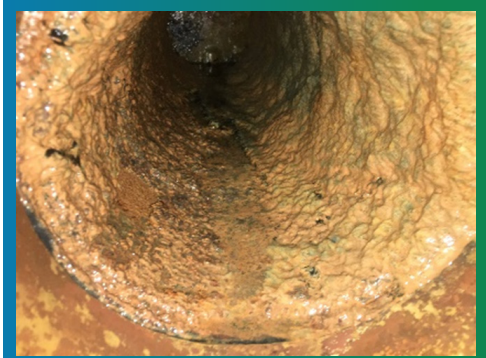
Microscopic image of a ProMoss Sphagnum moss Leaf (hyaline & chlorophyllase cells)

Utilizing a ProMoss water treatment program results in superior water quality, lower water and power usage and long-term equipment protection.

## Proven Performance

### Scale Prevention

ProMoss reduces organics that hold deposits together. Using ProMoss can reduce deposits on wetted surfaces, exceeding any prior results obtained with chemical treatment. The following photos show the feeder piping to one of the plate and frame heat exchangers at a tobacco facility. The first is at the start of the ProMoss program, three months into treatment, and the final photo is after 18 months of using ProMoss.



Before ProMoss



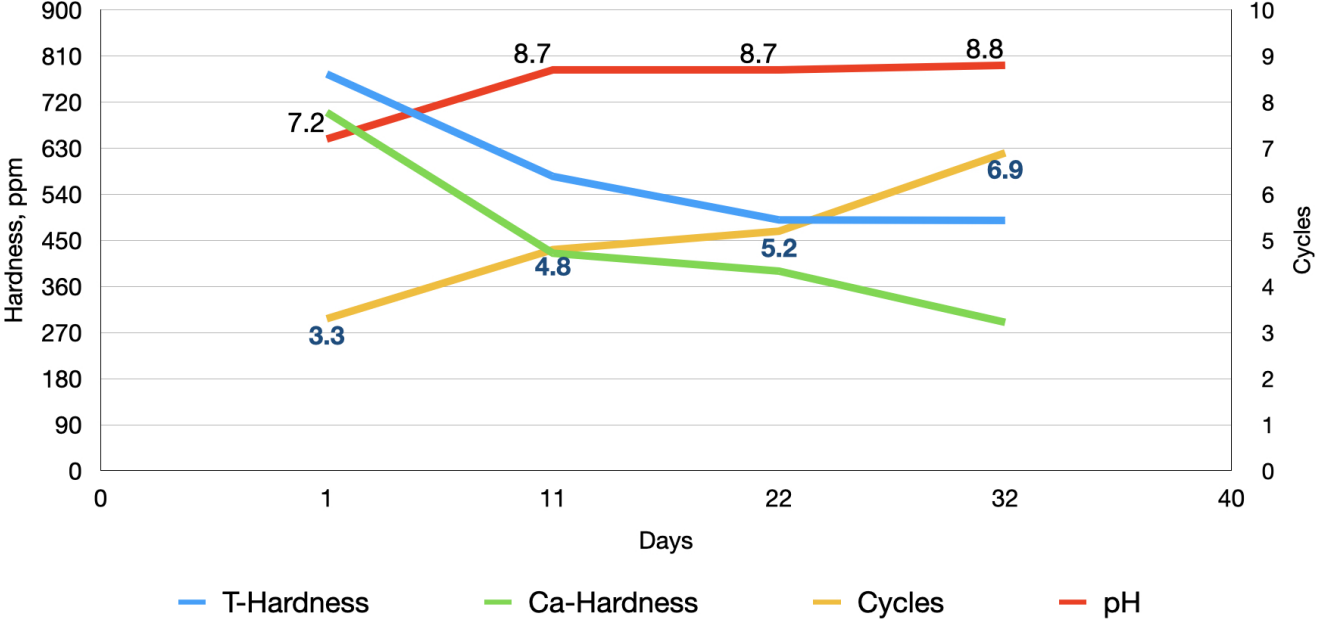
After 3 Months of ProMoss Treatment



After 18 Months of ProMoss Treatment

# Higher Cycles of Concentration

ProMoss enhances water efficiency by enabling systems to operate at increased cycles of concentration, overcoming hardness, alkalinity, and pH limitations. This improvement is illustrated by data from a cooling tower system that transitioned from chemical to ProMoss treatment. Previously, acid feed facilitated operation at 3.3 cycles under chemical treatment. With the initiation of ProMoss treatment, acid feed and other chemicals were eliminated. Figure 1 displays the rise in cycles of concentration, highlighting changes in hardness values and pH levels. The mechanism by which ProMoss treatment works involves the absorption of hardness ions by the ProMoss, which releases hydrogen ions, effectively neutralizing the alkalinity.



In this case, a plant was able to double cycles of concentration, resulting in a more than 60% reduction in tower bleed off to drain- over 5 million gallons of water per year on this system. The need for sulfuric acid feed was also eliminated as the system cycled to a stable pH between 8.7 and 8.8, under their discharge limit of 9.0.

## Applications

- ✓ Cooling towers
- ✓ Hot and Cold-water loops
- ✓ Reclaimed water
- ✓ Fountains
- ✓ Ponds
- ✓ Oil absorption/remediation

# Multiple Delivery Options Allow Easy Integration into Existing Water Systems

Creative Water Solutions has contact chambers for every application and system setup. Open cage submersible chambers are used when there is an open body of water to be treated. The offline contact chambers are uniquely designed to create a tumbling action that creates a maximal moss and water interface.



# Achieve Sustainability Goals Without Sacrificing System Performance or Increasing Costs

Leading companies have incorporated ProMoss into their water treatment programs to achieve their Environmental, Social, and Governance (ESG targets). ProMoss offers many environmental benefits when compared to chemicals used in water treatment.

## Advantages

- ✔ Sustainable Sphagnum Moss
- ✔ Reduced Water Usage
- ✔ Lower Energy Consumption
- ✔ Elimination of Chemical Drums
- ✔ Safe Disposal
- ✔ Reduction of Transportation Emissions
- ✔ Water Reuse



## Contact Information

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