



## **Challenge: LCBA - SPA Aqua Prima - Bioremediation**

### **Challenge Statement/Synopsis:**

The high concentrations of organic loads in surface waters from domestic and agricultural run-off are resources that could be harvested and recycled into products that improve crop yields, and add value to crop resources for communities. SPA Aqua Prima is seeking innovative nutrient recycling and bioremediation solutions; specifically, biofiltration technologies for outdoor open surface waters and for (chlorine-free) indoor pools.

### **Context:**

Nutrient-recycling promotes environmental and water conservation and sustainability. Nutrient recycling infrastructure, such as floating island platforms, offer opportunities for surface water bioremediation. As a floating platform, the island can incorporate additional water treatment technologies such submerged aerators for increasing dissolved oxygen and for thermal mixing, and carbon based biofilters for sequestering various pollutants.

The used/charged biofilters are potential soil amendment materials that could be harvested and recycled into value-added products, preventing and closing the loop in surface water pollution.

As part of its pilot project, SPA Aqua Prima is looking to implement an innovative pool/surface water system designed with circularity in mind, through integrated nutrient recycling and bioremediation technologies. The pilot project will consist of launching 1-2 demonstration units, followed by the development of at least 10 units. The smallest unit will be 2.5m x 3m x 1.2m and operate between 28 and 36 degrees Celsius.

### **Response Criteria:**

- SPA Aqua Prima is seeking modular and scalable solutions for bioremediation and nutrient recycling in outdoor open surface waters and indoor pools.
- SPA Aqua Prima is targeting companies with solutions that land between TRL 6-9 of the technology readiness scale (TRL), although it will consider low TRL solutions on a demonstration basis if they are especially novel.
- Proponents must explain how their solutions meets safety and regulatory standards and provide a description of successful deployments where applicable.
- Provide CAPEX and OPEX details for the solution.
- If applicable, proponents should explain impact, operational reliability and examples of previous customers/success installations.



**The Opportunity:**

- Participate in SPA Aqua Prima’s inaugural pilot installation.
- Pitch your solution during GLOBE Forum 2022, North America’s longest running sustainable business conference.
- Meet new customers and access new markets.

**About SPA Aqua Prima:**

Based in Southwest Calgary, Alberta, SPA Aqua Prima is an aquatic manual therapy pool and clinic, and an atelier for “Blue Green” sustainable infrastructures.

\*\*\*Only non-confidential information should be included in your response \*\*\*