Dedicated to helping stabilize the global climate by safely restoring the Earth's natural heat shield.





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### **Our Mission**

Arctic Ice Project (formerly known as Ice911 Research) is a 501(c)3 nonprofit dedicated to researching and testing safe material approaches to make young, thin Arctic ice reflective. Our current, most-promising solution is meant to slow climate change—giving the world's nations time to move to more sustainable economies.



# Why the Arctic

It's the area where we can make the largest impact on the Earth's temperatures. Arctic ice acts as a natural global heat shield, playing a critical role in maintaining a safe and stable climate. Over the past four decades, the oldest, thickest ice in the Arctic has declined by 95%. Arctic sea ice used to act as a huge reflector at the top of the planet, bouncing much of the sun's energy back into space, helping keep the Earth at an even temperature.

Executive Director Tom Light Established 2008

Headquarters Redwood City, CA USA Arctic Lake Ice Test Site Utqiaġvik, Alaska, USA (Also known as Barrow)

Sea Ice Testing Site (in 2021) Winnipeg, Canada

CTO and founder Dr. Leslie Field

### **Our Story**

Twelve years ago, **Dr. Leslie Field** knew that the effects of climate change were not just going to impact people far away in some future time. It was clear that climate change was going to affect everyone in the world, and that the time would be within her own children's lives.

The MIT and UC Berkeley chemical and electrical engineer and inventor with 58 U.S. patents decided to dedicate her life to ensure her two children would have a habitable planet.

Drawing on her experience in chemical engineering, materials science, and microelectronics, Dr. Field approached climate change as a materials issue. One powerful climate feedback loop that kept reappearing, but that nobody seemed to be addressing was the loss of reflective multi-year ice in the Arctic.

Starting in 2007, Dr. Field performed extensive testing in small laboratory setups and local areas to begin to sort out different safe materials that might best reflect the sun's energy.

Fast forward to today and, after years of testing, refining, and testing again, we have the material, the team, and the experience needed to significantly reduce the impacts of climate change and make a difference in the global climate before it's too late.



## **Our Solution**

We've spent the past decade testing and developing material approaches that could be used to make young, thin ice reflective. Our team now focuses on using reflective hollow hydrophilic microsphere, chosen for its safety, effectiveness, and practicality.

This most-promising material choice can be thought of as a kind of small, fine, white beach sand that floats. In a sense, the material is a lot like snow. The reflective beads stick to ice and water on contact, and their chemical composition ensures they don't attract oil-based pollutants.



Our approach isn't the magic wand that will avert a global catastrophe. It's a safe solution that can help buy time for the world's nations to move to a more sustainable economy.

# Timeline

With full funding throughout a span of 5-7 years for selected Arctic sea ice/glacier locations, we could answer all major R&D questions of efficacy, safety, deployment methodology, climate modeling for optimized materials placement, and measurements of effectiveness and eco-impact via test-site monitoring.



Humanity served



Species served



**Ecosystems served** 

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# **Guiding Principles**

#### Do no harm

Based on preliminary toxicology studies, our material is safe for humans and animals. We will continue to test and monitor our material and our deployments for safety. We will always use materials and research methods that will not adversely affect the environment. We will not use any material that proves harmful.

#### Maximize a positive impact with the smallest possible intervention

A small amount of material goes a long way when applied to targeted Arctic locations. There is an immediate year one improvement, and the results compound over time.

#### Work with accountability, transparency, and permission

We believe the public, including local communities and permitting agencies, have a right to be informed and to participate in decisions about the implementation of climate restoration solutions and approaches.

### Take a scientifically rigorous approach

This includes scientific monitoring of all aspects of our testing, collaborations with technical experts, third-party testing for safety, third-party climate modeling, making carefully monitored field deployments, and sharing our results in respected peer-reviewed publications as well as popular publications.

### Work in partnership with

Indigenous, local, regional, and global communities to ensure their voices and inputs are a part of our efforts, to ensure that the solutions implemented are beneficial for the people most closely concerned and affected.

### Be excellent stewards

Our role is to be good stewards of the dollars you give us to restore Arctic ice and to help us build the capacity needed to make the difference in time. Our systems and processes are our way of guaranteeing to our stakeholders, from our staff members and volunteers to our board members and our donors, that we are fiscally responsible with our funds.

## Ways to help

Foundations: Partner, sponsorships, grantsCompanies: Sponsorships, fundingGovernment: Policy, legislation, governance, fundingIndividuals: Donate, volunteer, spread the word