

FAQs

PBI Polar Bear Forest

Frequently Asked Questions

What is a Polar Bear Forest?

A Polar Bear Forest is a site newly planted with native trees through support from Polar Bears International. The primary objective is to help preserve polar bear habitat by creating forests that remove CO₂ from the atmosphere.

The Polar Bear Forest program also contains an educational component. The goal is to help individuals become motivated to take action to reduce their personal carbon footprint by planting trees themselves.

How does planting trees help polar bears?

Trees act as *carbon sinks* that absorb CO₂ from the air. They store carbon in roots, trunks, stems, and leaves while they grow—and in wood products after they're harvested.

In order to reverse global warming, we must reduce the build-up of carbon in the atmosphere. Polar bears depend on sea ice to hunt, breed, and in some cases to den. Less carbon in the atmosphere means better conditions to retain arctic sea ice and improve polar bear habitat and survival.

How will the Polar Bear Forests be managed?

All Polar Bear Forests will be managed using sustainable forest management principles. Active management such as periodic thinning and final harvest are important tools to help keep the forest healthy and to meet society's needs. Once harvested and used as forest products, the wood continues to store carbon.

How did the Polar Bear Forest get started?

The Polar Bear Forest program is a unique partnership between Polar Bears International (PBI) and the Wisconsin Department of Natural Resources (WDNR). It was initiated to promote rural and urban tree planting as an effective means of increasing carbon sequestration. The long-term objective is to positively impact polar bear habitat in the Arctic by reducing CO₂.

The concept originated with a WDNR employee who traveled to the Arctic in 2007 during the polar bear migration. Afterward, she learned about PBI Project Polar Bear—a contest that challenges teen teams to reduce carbon emissions. Tree planting was one of the contest options. She contacted PBI to see if her agency could help advance tree-planting through the contest. The talks led them to explore a pilot program in Wisconsin that could serve as a model for other states. PBI and the WDNR held formal discussions in 2008, created a partnership in 2009, and planted the first Polar Bear Forest on 35 acres in Wisconsin in 2010.

Where can I see a Polar Bear Forest?

The inaugural Polar Bear Forest, planted on public land in April 2010, is in the Kettle Moraine State Forest in southeast Wisconsin. Future Polar Bear Forests will be located on public lands with a long-term goal of expanding to community forests and private lands across North America.

Individuals can establish their own Polar Bear Forest by planting one or more trees at their residence or business. They can also make a contribution to help others plant trees on their behalf.

How much does it cost to establish a Polar Bear Forest?

It depends. Tree-planting costs vary depending on the species being planted, the age/size of the nursery stock, planting site conditions, site preparation requirements, labor costs, and follow-up maintenance. Costs also vary between rural reforestation projects and tree-planting projects in urban settings.

Where does the funding come from?

Polar Bear Forests are funded through donations to Polar Bears International, the AAZK's **Trees for You and Me** fundraising campaign, and compatible contributions provided by the landowner. The Polar Bear Forest program pledges to maximize the number of trees planted for each dollar donated. The cost variables outlined above will influence the actual in-the-ground number.

How much carbon does a Polar Bear Forest sequester in its lifetime?

A number of factors influence the rate of carbon a tree or a forested acre sequesters. These include the tree species, condition of the planting site, the soil type, and the topography. Here are a few examples of carbon savings:

- Planting a one-inch diameter sugar maple at a home or business will reduce atmospheric carbon by 17 pounds per year
- One acre of trees absorbs an annual average amount of carbon equal to the emissions of a car driven 8,700 miles
- One acre of conifer seedlings planted in the Great Lake states will absorb a cumulative total of approximately 157,806 pounds of carbon by age 80
- One acre of hardwoods, depending on the species, will sequester 131,799 to 138,852 pounds of carbon by age 80

Who claims the carbon credits and timber sale revenues on a Polar Bear Forest?

The landowner of record retains the rights to any future carbon credit or timber sale revenue.

How can I get involved in establishing a Polar Bear Forest?

- Plant a tree(s) personally
- Support existing tree planting and management programs in your community or advocate for reforestation activities on publicly managed lands
- Work with developers to incorporate native tree plantings in new community developments
- Volunteer to work with the **PBI Acres for the Atmosphere** tree-planting initiative, which was started by zoo keeper graduates of the PBI Leadership Camp
- Donate to PBI or the AAZK **Trees for You and Me** campaign

What are the key principles involved in successfully planting trees?

- Develop a plan: know your objectives, familiarize yourself with the planting site's capabilities, and learn what resources are available.
- Plant native species. Select trees to match site conditions and planting location. In urban locales, remember to anticipate tree growth.
- For best results, work with a forestry professional or tree care specialist.
- Properly prepare the site prior to planting to remove competing vegetation.
- Use proper planting techniques to ensure long-term survival.
- Remember that long-term success includes on-going maintenance and management ... it's not about sticking a tree in the ground and then walking away!
- Keep in mind that trees are part of the balance within the natural ecosystem. Not every acre should be planted as there are multiple landowner objectives suitable to the landscape and appropriate to resource management.
- Also remember that timber harvesting is a viable tool to help keep the forest healthy and to supply important products to meet society's needs. Once harvested and used as forest products, the wood still stores carbon.