



## PPSC SIP and PUFF System

Piers Park Sailing Center (PPSC) is a non-profit community sailing center, providing enriching opportunities to at-risk youth and individuals with disabilities.

PPSC is emerging as the national leader for disabled individuals to sail independently.

In the fall of 2009, Piers Park Sailing Center in East Boston, MA became the only facility on the East Coast to offer the empowering opportunity for a sailor to operate a boat with a Sip and Puff System on Boston Harbor.



US Blind Sailing Team member Arthur O'Neil with World Blind Sailing Championship Bronze Medalist Mark Bos, training at Piers Park Sailing Center's facility in Boston Harbor.



PPSC Adaptive Sailing Coordinator, Maureen McKinnon-Tucker, the first woman in history to win a gold medal for sailing in the Paralympics. Maureen and the PPSC team ensure the disabled sailors in the program leave with the skills to sail as independently as possible while also gaining significant therapeutic benefits.

Sailing is an athletic activity, art form and life long passion for participants at Piers Park Sailing Center. A harmony of skills moves a vessel through the water by means of wind alone.

As our society works towards becoming fully accessible, there is a growing need for adapting a broadening range of activities such as sailing with improved accessibility.

The Tractor Steering system seen here is one of the first pieces of adaptive equipment designed and built at PPSC and is still in use.



## PPSC SIP and PUFF System

The Sip and Puff System focuses on assisting adaptive sailors with significant disabilities, like neck-down paralysis. The Sip and Puff System is the same technology used by quadriplegics like Christopher Reeve to operate their wheelchairs.

The Sip and Puff system design is compact and fully compatible with any Sonar sailboat. The Sonar is a Paralympic class vessel sailed at PPSC, chosen specifically for their adaptability with minimal configuration required to incorporate adaptive sailing equipment.



In this system a sailor uses a straw to maneuver the vessel.

The sailor 'sips' or 'puffs' to activate an air valve that converts the air flow from a mechanical signal to an electric one.



Safety is the main concern at PPSC. A full scale template was designed with the assistance of a PPSC adaptive sailor, to ensure it meets the needs of a quadriplegic.



All components were chosen for their ability to retain strength

through welding.

The frame is not permanently attached to anything for ease of removal and adaptability to any boat.



## PPSC SIP and PUFF System

A quadriplegic adaptive sailor took their first sailing lesson, on a clear afternoon in Boston Harbor.

The sailor is commanding the vessel with PPSC's own uniquely modified Sip and Puff System.

The crew sail away from PPSC dock and across the harbor towards the downtown waterfront skyline.

That day a dream was realized by this new sailor.

He was introduced to a world of freedom and empowerment never before experienced in his life as a quadriplegic.



*PPSC's staff and new sailor celebrate this great achievement. The next goal is to continue expanding the Sip and Puff program in 2010.*