

## **Sand Filters and Beyond: The Future of Life Support Design**

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1. PCA Global

Sand filters have been the “Go To” mechanical filtration method for aquatic animal life support system designs for the past 40 years. They are simple, cost effective and with the use of filter aids (including using ozone as a micro-flocculent) can produce excellent water clarity. However, with the increased desire to remove or reduce the use of oxidants in the system, a review of alternative treatment methods has been completed with the objective of optimizing the water quality and minimizing the space requirements, water consumption and capital and operational costs. By looking at existing facilities, installing a full-size pilot plants, and providing a mathematical model to extrapolate the data, an optimization of the full-scale systems was developed. This data will be presented.