

Cost Management in Public Aquariums - Challenges and Opportunities

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1. Aqua Logo Engineering

Aqua Logo Engineering is an outsource maintenance team for the Moskvarium, Oceania and Aquatica public aquariums in the Russian Federation, and the Ocean Plaza Aquarium, in the Ukraine. Aquarium investors are critically interested in cost efficiency. The primary factors that affect aquarium management costs and therefore management decisions include the following:

1. What determines management costs?

- 1.1. General design decisions – building structure, its ergonomics, and engineering.
- 1.2. Conceptual decisions – types of exposed inhabitants, collection sizes and diversity, and regulatory requirements.
- 1.3. Technology decisions – selected filtration scheme, electricity and water requirement, and number of filtration circuits.
- 1.4. Maintenance methods – choice of engineering and animal husbandry teams, and planning and decision-making principles.

2. What are the critical components of management costs?

- 2.1. Water and electricity.
- 2.2. Food – it is often difficult to forecast animal diet, food quality, and food cost. Feeding costs frequently rise over the time due to biomass growth.
- 2.3. Water quality maintenance consumables (e.g., salt, coal, chemicals, UV-lamps) – these costs are easy to predict, but impossible to ignore.
- 2.4. Spare parts and replacement of high-wearing components, as well as unforeseen repairs.
- 2.5. Animal collection replenishment – these costs are possible to calculate and are necessary. Staff and/or a management company must be motivated to ensure the longevity of the animal collection.
- 2.6. Staff working with animals and visitors.

3. How can one influence the expenses of an already existing exhibition?

- 3.1. Reducing the consumption of seawater.
- 3.2. Optimizing water treatment practices.
- 3.3. Developing staff qualification systems.
- 3.4. Implementing a dispatching system.
- 3.5. Investments in animal welfare.

Conclusions: A significant part of aquarium operation costs can be optimized during aquarium design. However, there is a variety of techniques to further optimize aquarium operations and reduce costs once an aquarium is already operating.