

Aquatic Life Support



Aquatic Life Support Process



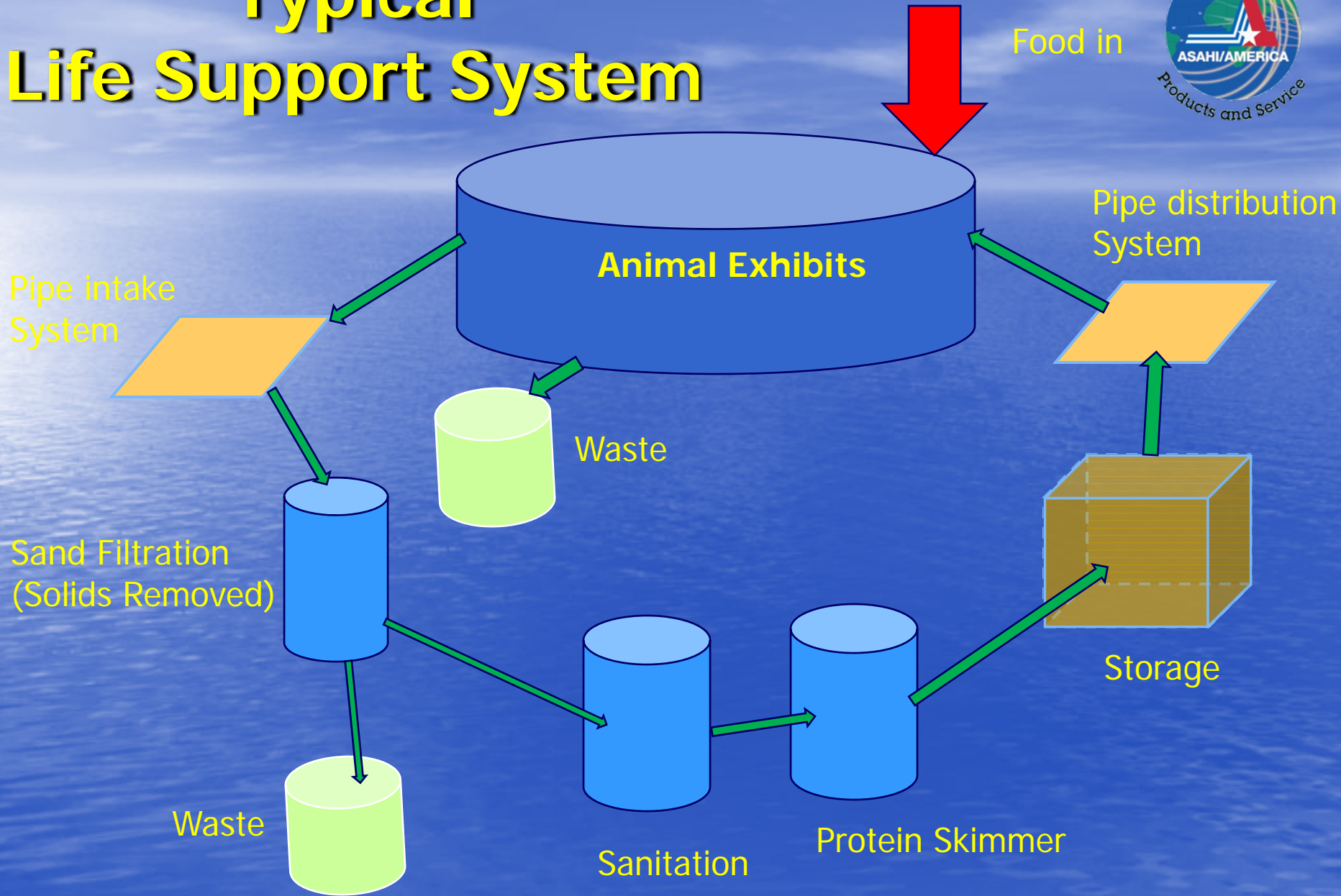
-Life Support

-Filtration

-Backwash

-Pumps

Typical Life Support System



Aquatic Life Support System



Aquatic Life Support Systems consists of Saltwater and Freshwater makeup of appropriate aquatic and zoo exhibits.

There are three types of valves used in Aquatic Life Support Systems

1. Isolation Valves
2. On/Off Valves
3. Control Valves

Aquatic Life Support System



Valves for Saltwater Service



Ball Valves

PVC/EPDM

Typically ½" – 2"

Butterfly Valves

PVC/PP/EPDM

PP/PP/EPDM

PDCPD/PDCPD/EPDM

Typically 3" – 36"

External Material Trim:

304SS/316SS Exposed to Atmosphere

Titanium for Submerged Applications

Aquatic Life Support System

Filtration System



Sand filters are the traditional choice for mechanical filtration.

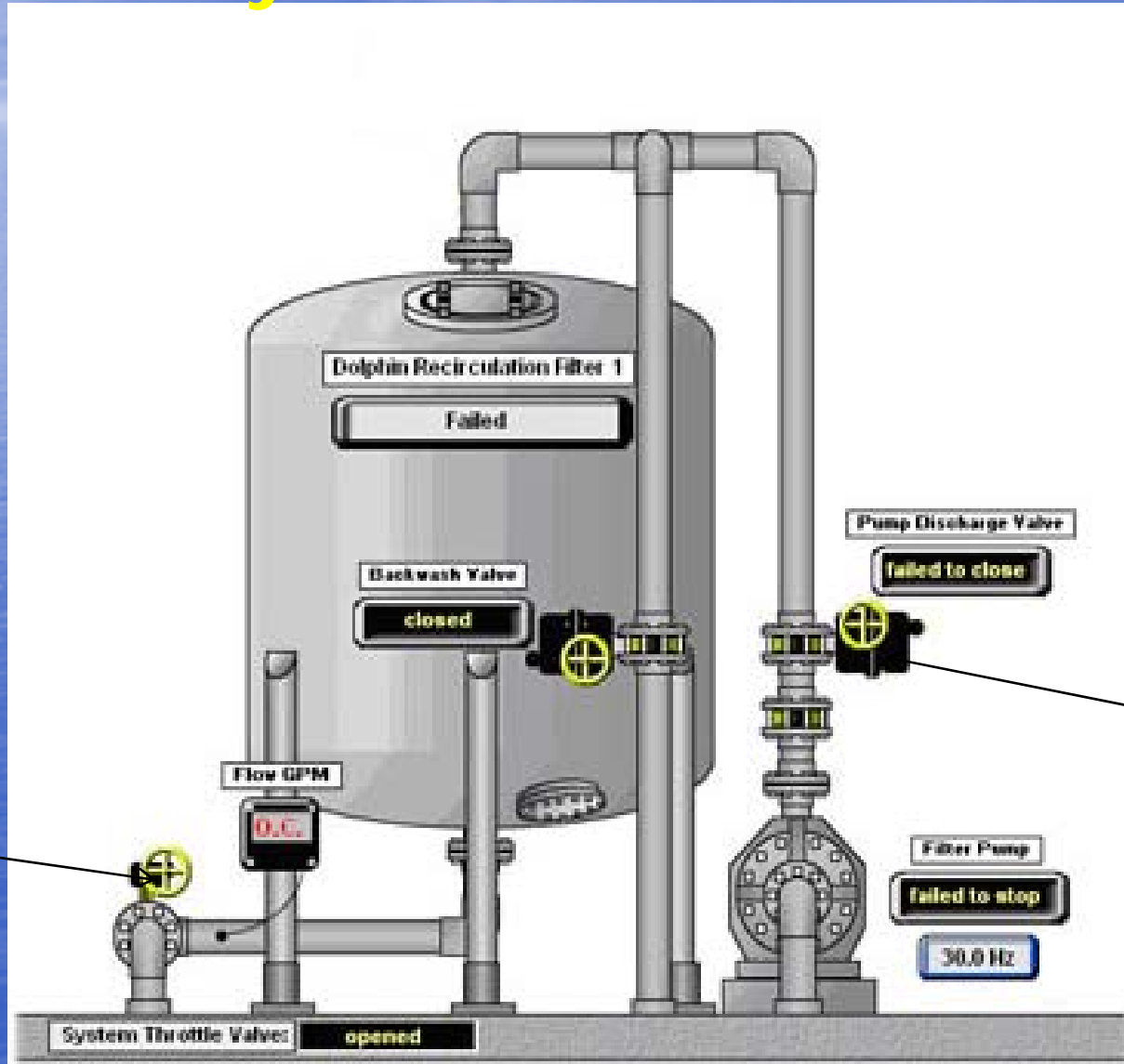
Sand filtration can be run manually by checking the pressure differential daily until a schedule can be established to see if backwash is required or automatically by providing motorized valves and pressure switches.



Backwash water can come from different sources including the exhibit, municipal protected water, or a backwash supply system.

Sand filters remove solids from the water passing through and are the main tools in maintaining water clarity.

Aquatic Life Support System Filtration System



Manual or Automatic Butterfly Valve

Regulates Flow to Exhibits, etc.

Manual or Automatic Butterfly Valve

Regulates Flow into Tank to prevent Packing Sediment

Aquatic Life Support System

Valves for Filtration Systems



Butterfly Valves

PVC/PP/EPDM

PP/PP/EPDM

PDCPD/PDCPD/EPDM

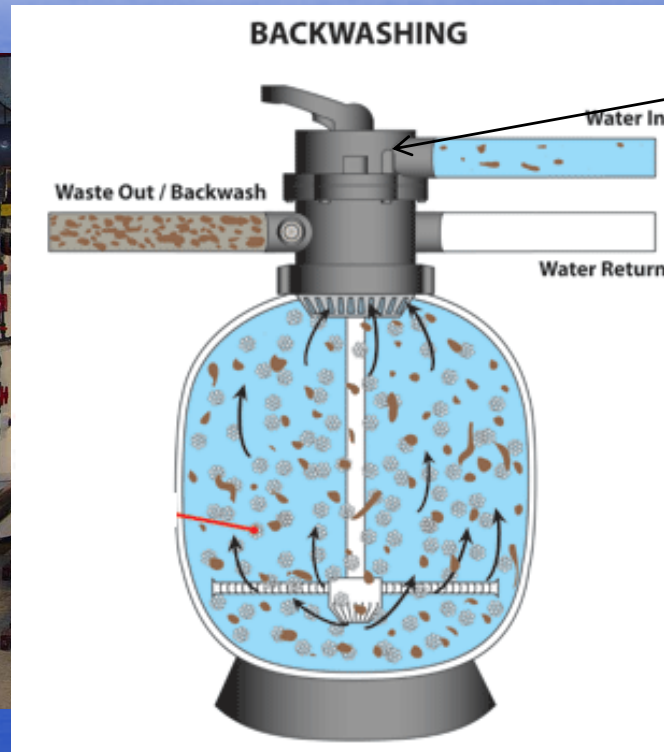
Typically 3" – 36"

External Material Trim:

304SS/316SS Exposed to Atmosphere

Titanium for Submerged Applications

Aquatic Life Support System Backwash System



Multiport
3-way
Ball Valve or
Tandem Butterfly
Valve

Suspended particles
may cause problems
with 3-way ball
valve design

Best Solution-
Tandem
Butterfly Valve

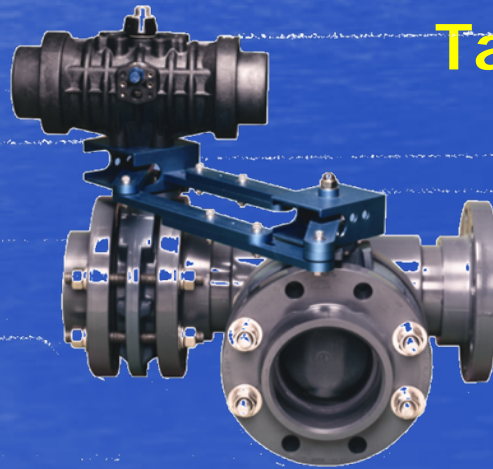
Aquatic Life Support System

Valves for Backwash Systems



Multiport Valves

3-way
2" – 4"

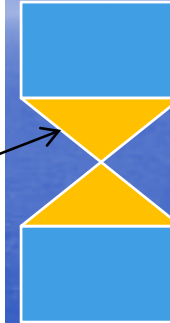
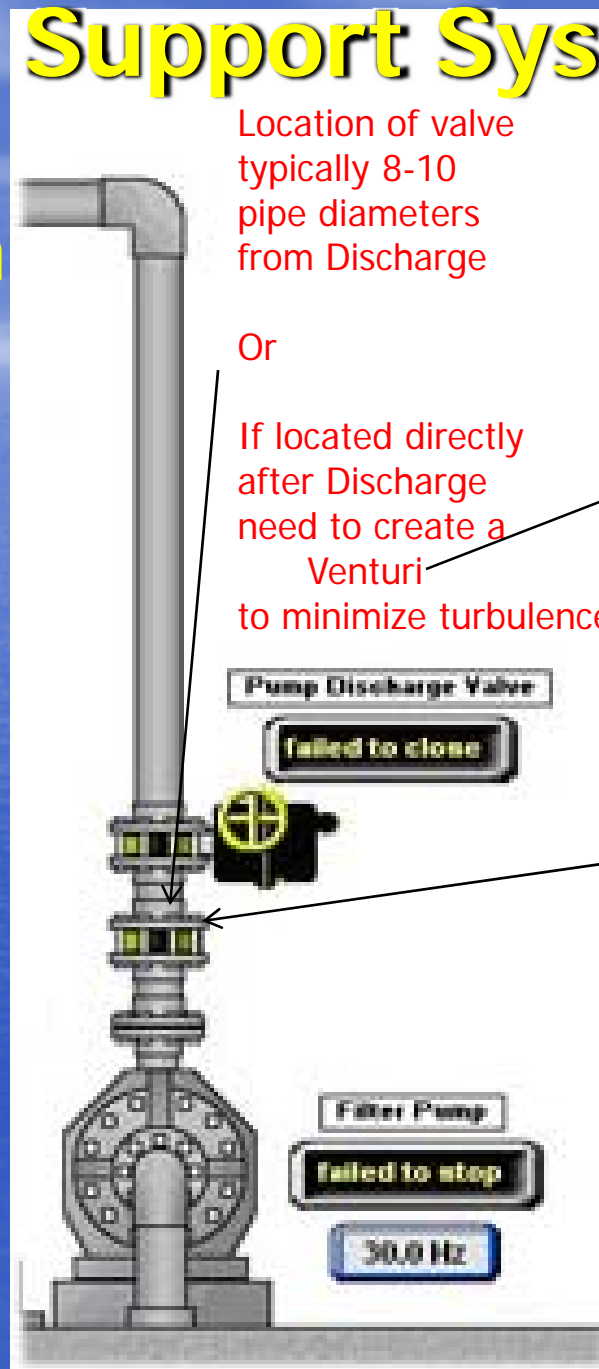


Tandem Butterfly Valves

2" – 8"

Aquatic Life Support System

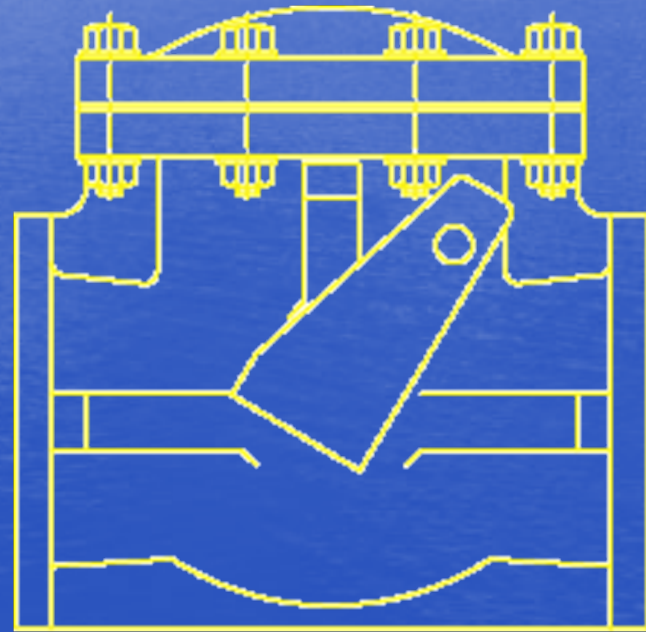
Pump System



Swing Check Valve
Prevents Back flow

Aquatic Life Support System

Valves for Pump Stations



Check Valves

PVC/PP/EPDM

3" – 8"