YAMAHA RIGHTWATERS Trash Interceptor

FAMU-FSU Engineering

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OBJECTIVE

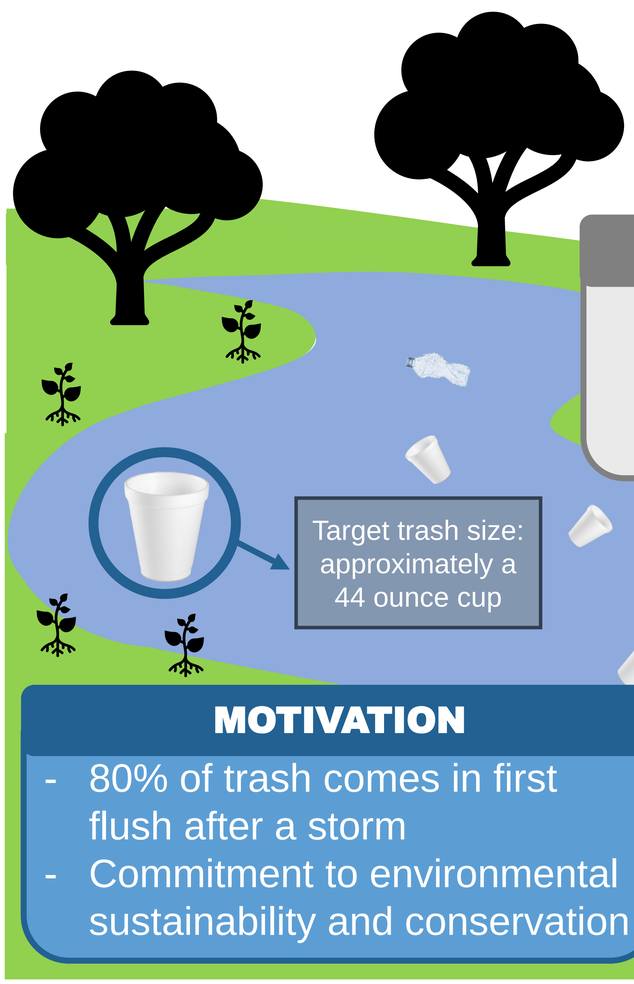
Implement an effective land-based trash interceptor that collects debris in storm drains to prevent trash from entering waterways

KEY GOALS

Scalable	Concentric pipes with buoyant supports for scaling vertically
Expendable	Free standing device, made to withstand minor storms
Economical	Replaceable materials, lowering cost, allowing to reach more people
Deployable	Modules of smaller subassemblies for easier deployment

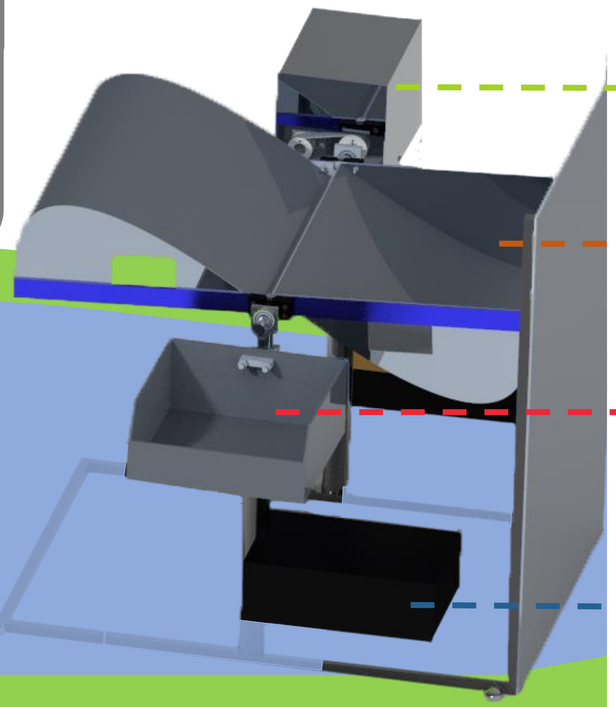
DESIGN DESCRIPTION

- Baskets rotate around a center shaft at 6 rpm
- Trash slides into a temporary reservoir
- Trash is taken from reservoir to dumpster via conveyor



Key Components

Motor Housing
Basket Wheel
Modules
Buoyant Support



MOTIVATION

- 80% of trash comes in first flush after a storm
- Commitment to environmental sustainability and conservation

Required Torque: 14 ft-lb

Collects 10lb of trash at a time

Subassemblies for easy assembly

Vertical Expansion: 2-7 ft