



BRING YOUR OWN HYDRANT®



WATER SHUTTLE OPERATIONS



■ Single standard Otter supplying three apparatus at once

Lack of or inadequate pressurized hydrant water infrastructure is a global problem for countless rural communities. Metropolitan areas additionally struggle for access to adequate water supply volume under extreme response conditions such as a fully involved wildfires, wreaking havoc on fire department response capacity.

Lacking critical pressurized hydrant water, communities must rely on alternative water supplies, including dry hydrants and accessible open water suction points and hauled water tanker/tender shuttles. Each added apparatus increases the complexity of tanker/tender operations, manpower allocations, capital expenditures and further slows the overall response time. The Otter Pumping System provides rapid high-volume water supply intervention using any open water source.

Water Shuttle Operations 101

When does a fire department need to establish a water shuttle operation?

- Needed Fire Flow (NFF) for a structure cannot be met by water carried on the first due apparatus (engines and water tanker/tenders)
- The fire incident is outside the hydrant coverage area or there is a need to supplement a weak or damaged hydrant system
- Fire pumper apparatus relay operation would not be feasible due to distance, time or resource limitations

What equipment is needed to facilitate shuttle operations?

- Fireground: Attack engine(s) fighting structure or ground fire
- Dump Site: Remotely located from fireground to provide logistically favorable water supply operation
 - Typically, one primary supply engine/pump for relay pumping to fireground drafting from primary portable water tank
 - Second transfer engine/pump circulating water from support tanks to primary tank
 - Tanker/tenders dumping water into the support tank(s) to keep operations fully flooded



■ Congested dump-site operation



Train Derailment Response



The Otter Solution

Why use the Otter Pumping System

- **IMPROVE RESPONSE TIME:** Deploy in minutes and rapidly fill tanker/tenders and portable tanks alike. No priming required. Fill an average size tanker/tender in approximately 60 seconds!
- **REDUCE PERSONNEL:** An Otter system only requires a single firefighter to setup and operate. This allows more firefighters to engage in structural firefighting rather than in water supply operations.
- **ACCESS MORE WATER:** The Otter includes a 100' hydraulic umbilical allowing the pumping system to reach difficult access open water sources such as lakes and rivers. Drafting concerns and limitations are eliminated
- **LOWER EQUIPMENT COSTS:** A standard Otter is only roughly 10% of the cost of a drafting engine and can be mounted to any heavy duty pickup truck (or trailered).
- **IMPROVED ISO FSRs RATING:** The ability to access and move more water from more sources with less personnel can provide the opportunity to improve your community's overall ISO rating.

The KASE Pumping Systems Difference

- **MULTIPLE SIZES AVAILABLE:**
 - Otter MINI: Up to 2000 GPM (7571 LPM)
 - Otter Standard: Up to 3500 GPM (13250 LPM)
 - Otter HP: Up to 5000 GPM (18927 LPM)
- **EASE OF OPERATION:** Simple push-button operation
- **ADVANCED COMPOSITE MATERIALS:** Our submersible pumps are made from saltwater corrosion proof carbon-fiber, the lightest pump designs in the world.
- **RIGHT TO REPAIR:** Our systems are easy to repair and maintain without the need of special technicians.



Dump tank circulation



Remote Stream Deployment



Carbon-fiber submersible