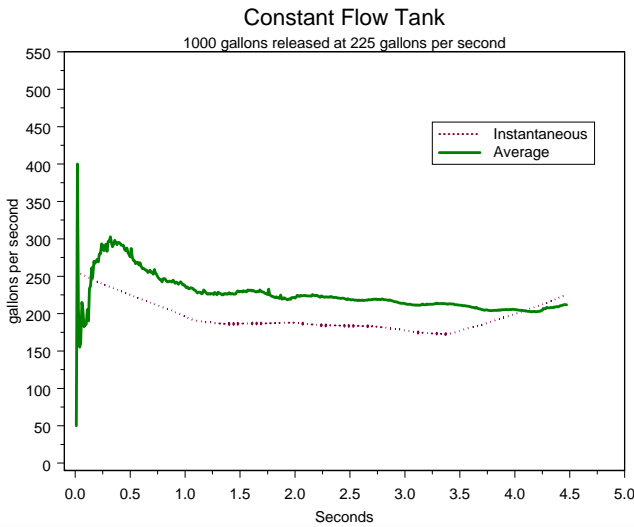




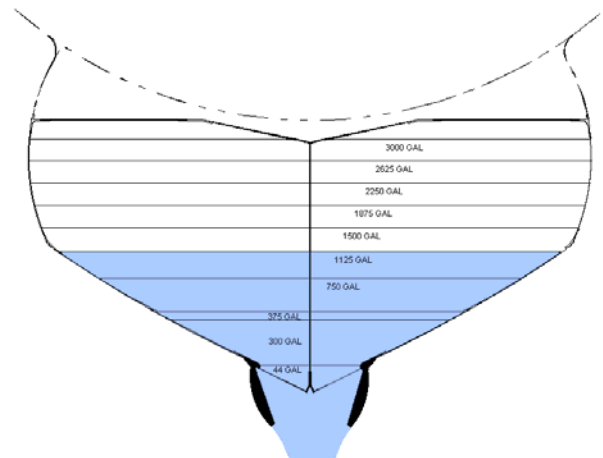
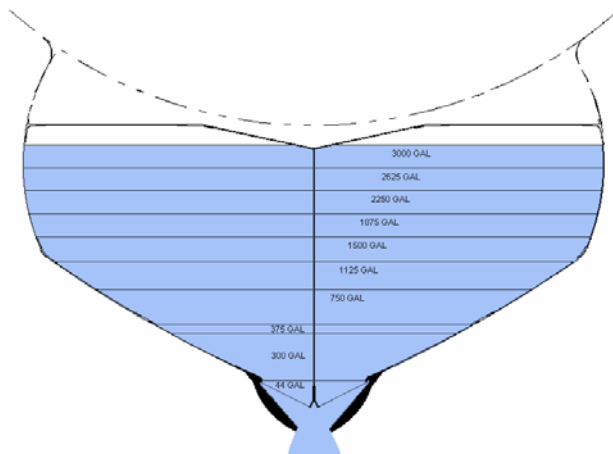
## Constant Flow Delivery System

Ann Suter, Wildland Fire Chemical Systems - MTDC



Constant flow systems have door controls that allow the delivery system to behave as a single tank. Once the drop controller establishes the flow rate, the coverage level produced remains constant over the duration of the drop. The effect of changing the volume released will only change the length of the drop, not the flow rate.

The graph to the left shows the flow rate over time of a constant flow tank. The solid line shows average flow rate over time and the dotted line is the change in flow rate over time. The more horizontal these two lines are the more constant the flow rate is and the more even the coverage will be.



The system achieves constant flow by increasing the door opening as the liquid level falls inside the tank. For drops that require low flow rates, the doors will open a little and gradually widen as the fluid evacuates. For drops that require high flow rates, the doors open wide and have little room for adjustment. The result is the flow rate is not as constant.

Constant Flow Systems

NO.	Owner/Operator	Aircraft		Aircraft Serial No.	Max Vol.
		Type	"N" No.		
00	Aero Union Corp.	P-3A	900AU	151391	3,000
01	Aero Union Corp.	SP-2H	701AU	145920	2,000
03	Aero Union Corp.	SP-2H	703AU	147967	2,000
16	Aero Union Corp.	SP2H	716AU	140963	2,000
18	Aero Union Corp.	SP2H	718AU	147964	2,000
20	Aero Union Corp.	P-3A	N920AU	151355	3,000
21	Aero Union Corp.	P-3A	921AU	151385	3,000
22	Aero Union Corp.	P-3A	922AU	151387	3,000
23	Aero Union Corp.	P-3A	923AU	151372	3,000
25	Aero Union Corp.	P-3A	925AU	151361	3,000
26	Aero Union Corp.	P-3A	926AU	152731	3,000
27	Aero Union Corp.	P-3A	927AU	151369	3,000
82	CDF	S2T	422DF	0341-017	1,200
83	CDF	S2T	424DF	0341-024	1,200
70	CDF	S2T	428DF	865-018	1,200
71	CDF	S2T	441DF	0341-012	1,200
155	Marsh Aviation	S2T	746MA	136746	1,100
181	Queen Bee	AT-802F	5035K	48	800
182	Queen Bee	AT-802A	91092	5	800
183	Queen Bee	AT-802F	9002K	78	800
707	Evergreen	S-64	6979R		2,000
741	Erickson Air Crane	S-64			2,000
742	Erickson Air Crane	S-64			2,000
746	Erickson Air Crane	S-64			2,000
747	Erickson Air Crane	S-64			2,000
748	Erickson Air Crane	S-64			2,000
780	Siller Brothers Inc.	S-64			2,000
743	Erickson Air Crane	S-64			2,000
744	Erickson Air Crane	S-64			2,000
745	Erickson Air Crane	S-64			2,000
730	Erickson Air Crane	S-64			2,000
731	Erickson Air Crane	S-64			2,000
732	Erickson Air Crane	S-64			2,000
733	Erickson Air Crane	S-64			2,000
734	Erickson Air Crane	S-64			2,000
735	Erickson Air Crane	S-64			2,000
736	Erickson Air Crane	S-64			2,000
737	Erickson Air Crane	S-64			2,000
738	Erickson Air Crane	S-64			2,000
739	Erickson Air Crane	S-64			2,000
740	Erickson Air Crane	S-64			2,000