

Table 13 - HDT.RP: Average River Velocity for Specified Reaches

Label	Date	Location		Device	Distance ft	Time min	Velocity ft/min	Text	
		Place (Thoreau)	Sub-place					Main	Comment
B	Jul 25, 59	Boats place	100 feet above A	Surface chips	75.75	4.5	16.83	It [the bottle] came out 1 1/2 rods ahead of 2 chips)	
A	Jul 25, 59	Boats place	behind Channing's	Sunk bottle	100	5	20.00	Bottle sunk low in water floats 100 feet in 5 minutes	
B	Jul 25, 59	Boats place	100 feet above A	Sunk bottle	100	4.5	22.22	100 feet higher up --in 4 1/2 minutes (I think the last is more correct)	
D	Jul 25, 59	Island (at Assabet junction)		Sunk bottle	100	1.5	66.67	Against the island at the junction --100 feet in 1 1/2 minutes (with some aft wind--by boat floats just as fast)	
D	Jul 25, 59	Second Island		Sunk bottle	100	0.75	133.33	By the side of the 2nd island--100 feet in 3/4 of a minute)	
H	Aug 5, 59	Willow Bay		Floating bottle & Sunk Box (both 18 inches deep)	100	5.5	18.18	At willow Bay with an aft wind --(18 inches deep) The floating bottle & the sunk box both together--float 100 ft in 5 1/2 minutes.	The water where I try is 100 feet wide between the pads & as much more beyond taking each side
H	Aug 5, 59	Willow Bay		Sunk Box (18 inches deep)	100	5.5	18.18	same as above	same as above
E	Aug 14, 59	Second Island, forty feet lower		Sunk bottle	100	1.67	59.88	[Insert] Aug 14"" 1 2/3 minutes--perhaps 40 feet lower down (being no wind)	Half speed on Aug 14 relative to Jul 25 at same place, Consistent with Wayland rock falling stage meters, the latter being just before the end of drought
I	Aug 14, 59	Assabet Poke Logan	above willowy island	bottle & sunk box	100	4.5	22.22	the bottle & the sunk box both floated 100 feet with consid. Aft wind--in 4 1/2 minutes above the willowy island--	
J	Aug 14, 59	Assabet Poke Logan	south side island	bottle & sunk box	100	3	33.33	same as above	
F	Jul 27, 59	Nine Acre Corner Bridge		Sunk bottle	99	3	33.00	There being a stong NW wind the bottle floated upstream 6 rds above 9 acre corner B. & the wind blows quite diagonally in 3 minutes--though sunk to the surface. Evidently the surface water was moving that way. It was much harder to row downstream than up.	Sunk bottle moves upstream

Notes:

1. The label is Thorsons, created to differentiate and count places.
2. Thoreau calculates a discharge of 266 cfs using a width of 88.5 feet at boat's place (from 1 ft to 1 ft) and shape based on soundings.
3. Vertical velocity gradients on separate table.

Boatman reference, pages 188-189