

# DISPERSANT AIRCRAFT CAPABILITY FORM

## PLATFORM

**Bell UH-1H**  
**With Simplex Model 6810**  
**Spray Bucket (240 gallons)**

**Operator:** Pacific Helicopters  
**OSRO:** Clean Islands Council



Photo compliments of Clean Islands Council

### DATA SOURCE LEGEND

- 1. (Black):** Indicates the data are based on documented field trials or is a fixed design value
- 2. (Blue):** Indicates the data are based on limited field observations or operator's stated practice or stated value (little or no documentation)
- 3. (Red):** Indicates the data are based on reasonable calculations or performance of comparable systems

		Unit	U.S. Regulatory Calculation Values	Data Source 1-2-3	Range	Reference(s)
<b>AIRCRAFT PARAMETERS</b>						
<b>1</b>	Swath Width	feet	<b>65</b>	<b>1</b>	<b>60-70</b>	Clean Island Council exercises
	a. Application (gallons per acre)	gpa	<b>5</b>	<b>3</b>	<b>1-10</b>	<b>Manufacturer specifications</b>
	b. Altitude	feet	<b>50</b>	<b>1</b>	<b>50</b>	Clean Island Council exercises
	c. Application Speed	knots	<b>50</b>	<b>1</b>	<b>30-90</b>	Clean Island Council exercises
	d. Pump Rate (gallons per minute)	gpm	<b>40</b>	<b>1</b>	<b>30-50</b>	Clean Island Council exercises
	e. Boom Pressure (pounds/square inch)	psi	<b>40</b>	<b>1</b>	<b>38-42</b>	Clean Island Council exercises
<b>2</b>	Transit Speed at Altitude From Base to Staging Airport	knots	<b>110</b>	<b>3</b>	<b>100-120</b>	<b>General Specifications</b>
<b>3</b>	Transit Speed at Altitude Staging Airport to/from spill	knots	<b>90</b>	<b>1</b>	<b>90</b>	Clean Island Council exercises

4	Dispersant Spraying Reposition Speed	knots	50	1	30-90	Clean Island Council exercises
5	Time to Fully Load Dispersant Tank	min	10	3	10	Estimate based on loading pump rate of 60 gpm
6	Time to Fully Load Fuel Tanks	min	5	3	5	Estimate based on loading pump rate of 60 gpm
7	Load Dispersant & Fuel simultaneously (Yes/No)	-----	Yes	3	Yes	See Other Comments below 5* & 6*
8	Time to Make U-turn (Turn 180 degrees)	min	0.75	3	0.75	Estimate
9	Dispersant Payload Maximum	gal	240	1	240	Simplex Model 6810 spray bucket capacity
10	Fuel with maximum dispersant payload	lbs	1170	3	1170	Estimate from general specifications
11	Approach Distance for spraying	nm	0.5	3	0.5	Estimate
12	Departure Distance for spraying	nm	0.5	3	0.5	Estimate
13	Taxi Time Take-Off	min	1	3	1	Estimated time
14	Taxi Time Landing	min	1	3	1	Estimated time
15	On-site Check-In/Safety Time	min	10	2	10	Estimated from exercises
<b>CASCADE PARAMETERS*</b>						
16	Take-off with <b>Maximum Payload and Maximum Take-off Weight</b> (assume no wind and <b>VFR</b> fuel reserve)					
	a. Maximum Flight Time	hours	2.0	2	2.0	Clean Island Council exercise information
	b. Maximum Flight Range	nm	180	3	180	General Specifications
	c. Optimal Altitude	feet				
	d. True Air Speed	knots	90	3	110	General Specifications
	e. Fuel Consumption	lbs/hour	585	3	585	Estimated
17	Take-Off with <b>Maximum Fuel and No Payload</b> (assume no wind and <b>VFR</b> fuel reserve)					
	a. Maximum Flight Time	hours	2.5	3	2.5	General Specifications
	b. Maximum Flight Range	nm	225	3	225	General Specification
	c. Optimal Altitude	feet				
	d. True Air Speed	knots	90	3	90	General Specifications
	e. Fuel Consumption	lbs/hour	585	3	585	Estimated
18	Staging area briefing	min	45	2	45	Estimated from exercises
<b>AIRPORT PARAMETERS</b>						
19	Runway length - <b>Minimum</b> (For take-off at maximum gross weight assuming sea level, 90° F, no wind using a balanced field concept, i.e., go, no go speed)	feet	Helo pad 37 ft x 37 ft	2	Helo pad 37 ft x 37 ft	
20	Runway weight restrictions for maximum aircraft weight	lbs	Helo pad	2	Helo pad	

<b>OTHER COMMENTS</b>	
<p><b>5*-</b> <b>6*</b></p>	<p>The time to load dispersants and fuel are stand alone times independent of each other. If item 7 indicates that fuel and dispersants can be loaded simultaneously, then the longer of fuel or dispersant load time is used in the capability calculations. If item 7 indicates fuel and dispersants can NOT be loaded simultaneously, then the times are added together to calculate the aircrafts capability. To load simultaneously depends upon the airport, aircraft, and support crew. The loading times depend upon the loading system i.e., 5000 tank truck, 55 gallon drums or other means and the pumping system used. The time shown in items 5 and 6 is for loading from a tank truck which is standing by ready to commence loading when the aircraft comes to a stop in the loading area, i.e. the fastest loading time possible.</p> <p>Note: Load time may be reduced if two spray buckets are used and helicopter drops one off and picks up a loaded one. This ability is dependent upon the distance from the staging base to the spill site.</p>
<p>*</p>	<p><b>Cascade Parameters:</b> The aircraft's calculated capability when cascading uses the same fuel loading and taxi times for dispersant operations as listed in items 6, 13 and 14.</p>