

Oysters Harvesting Cost Calculation by Applying Dr. Keithly & Dr. Kazmierczak Estimated Parameters from 2005 Report

Table 1 - Oysters Harvesting Cost Calculation

	Variables	Values
1	Priv-Publ Reefs	46.39
2	Fuel Price (\$)	5
3	Crew_Wage per Trip (\$)	200
4	Crew Wage per Hour (\$)	33.33
5	Captain Wage per Trip (\$)	350
6	Captain Wage per Hour (\$)	58.33
7	length (Feet)	45
8	Oysters Harvesting Cost	13.65



How to use this table:

This oysters harvesting cost (row 8) is calculated by the given values in table 1. You can change any of these variables (values 1 to 7) to see how it impacts the estimated cost. For example if you change the fuel price from 5 to 4 the estimated harvesting cost will change from \$13.65 to \$13.34. Please do not touch any other tables below. They are just used for the cost calculation.

24-year (1999-2022) Average of Sacks per Trip

Private Reef	Public Reef	Priv-Publ Reefs
47.76	42.80	46.39

Variables							
fuel_P (\$)	Crew_w1 (\$)/trip	Crew_w1 (\$)/hour	Crew_w2 (\$)/trip	Crew_w2 (\$)/hour	Captain_w (\$)/trip	Captain_w (\$)/hour	length (Feet)
5	200	33.33	250	41.67	350	58.33	45

Results; a change in numbers above will change these estimates, and so the final harvesting costs in the table below.

	ln(Pri-Pub_Sack)	ln(fuel_P)	ln(Crew_w1)	ln(Crew_w2)	ln(Captain_w)	ln(length)
	3.84	1.61	3.51	4.07	3.81	
ln(Pri-Pub_Sack)	3.84	14.72				
ln(fuel_P)	1.61	6.18	2.59			
ln(Crew_w1)	3.51	13.45	5.64	12.30		
ln(Captain_w)	4.07	15.60	6.54	14.26	16.53	
ln(length)	3.81	14.61	6.13	13.35	15.48	14.49

Parameters (this parameters are fixed)				(X)	6.45
intercept	a0	4.4	lnVHC	exp(X)	633.40
sacks	as	1.27			
fuel price	b1	0.38			
crew price	b2	0.13			
captain pice	b3	0.32			
lugger length	a1	1.05			
(sacks)2	ass	0.095			
sacks*length	b1s	0.08			
sacks*crew	b2s	0.004			
sacks*captain	b3s	0.006			
sacks*length	asl	0.32			
(fuel price)2	b11	0.02			
fuel*crew	b12	0.01			
fuel*captain	b13	0.02			
fuel*length	b1l	0.04			
(crew price)2	b22	0.005			
crew*captain	b23	0.0007			
crew*length	b2l	0.009			
(captain pice)2	b33	0.01			
captain*length	b3l	0.01			
(lugger length)2	all	0.33			

Sacks per Vesel Trip in Oysters Reefs			
Year	Private Reef	Public Reef	Private+Public Reefs
1999	49.13	45.48	47.37
2000	55.77	50.49	53.16
2001	63.30	62.87	63.08
2002	64.17	65.02	64.65
2003	55.46	52.24	54.14
2004	51.59	48.69	50.70
2005	51.28	49.16	50.60
2006	57.61	49.62	55.17
2007	52.79	56.86	54.24
2008	64.20	56.49	60.36
2009	60.80	35.66	52.04
2010	54.18	20.03	35.90
2011	53.09	23.72	42.60
2012	50.25	17.60	46.05
2013	48.40	32.18	46.33
2014	45.22	14.35	40.46
2015	45.02	29.55	42.16
2016	40.10	12.14	36.27
2017	38.82	19.13	37.34
2018	35.51	13.48	34.27
2019	32.55	12.28	31.54
2020	29.47	8.66	28.73
2021	47.90	11.60	47.24
2022	38.88	13.20	36.06
	47.76	42.80	46.39

