



association of
seafood producers



Snow Crab 2024

Submission to the Standing Fish Price Setting Panel

March 29, 2024

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1. OVERVIEW

1. ASP has presented a final offer on the price formula and a position on the terms and conditions of sale that is fair and reasonable for both harvesters and processors. ASP's offer on price and its offer on the conditions of sale reflect the market realities in a time of consistently low market prices that are not expected to significantly rise this 2024 season.
2. ASP's offers fairly allocate risk between the harvesters and the processors. ASP's price offer leaves harvesters with a market share of more than 50%. Harvesters would only share in the upside of the market. The price floor of \$2.60 would protect harvesters from any downturn in the market. ASP's offer on conditions of sale, if its formula is accepted minimizes the quality deductions, which creates a strong risk allocation for the harvesters.
3. The Panel's role is to select a final offer on the price formula, and then to engage in interest arbitration on the conditions of sale. ASP has provided an alternative position on the conditions of sale in the event that the Panel selects the FFAW's formula. This position reflects the essential elements of the Blackwood Report, in anticipation that the FFAW will propose a Blackwood-like formula. These key elements are: (1) a 20% variance; (2) quality deductions; and (3) the Urner Barry Crab, Snow, Newfoundland, Cluster 5-8oz low¹ as a price proxy. Without these key elements, a Blackwood-like formula allocates all risk to the processors and does not reflect the marketplace.

2. FINAL OFFER SELECTION: ASP'S PROPOSED FORMULA

4. ASP proposes the following formula for determining a Raw Material Price (RMP) paid to harvesters through the 2024 season. The formula will operate by the conversion of Urner Barry Crab, Snow, Newfoundland, Cluster 5-8oz low USD convert to CAD through a range of \$7.43 CAD\$/lb to \$12.15 CAD. For market prices below \$7.43 CAD a harvester will be paid a minimum of \$2.60 CAD/lb, subject to the currency provision under Appendix 1 of the attached crab price schedule.
5. The formula is:

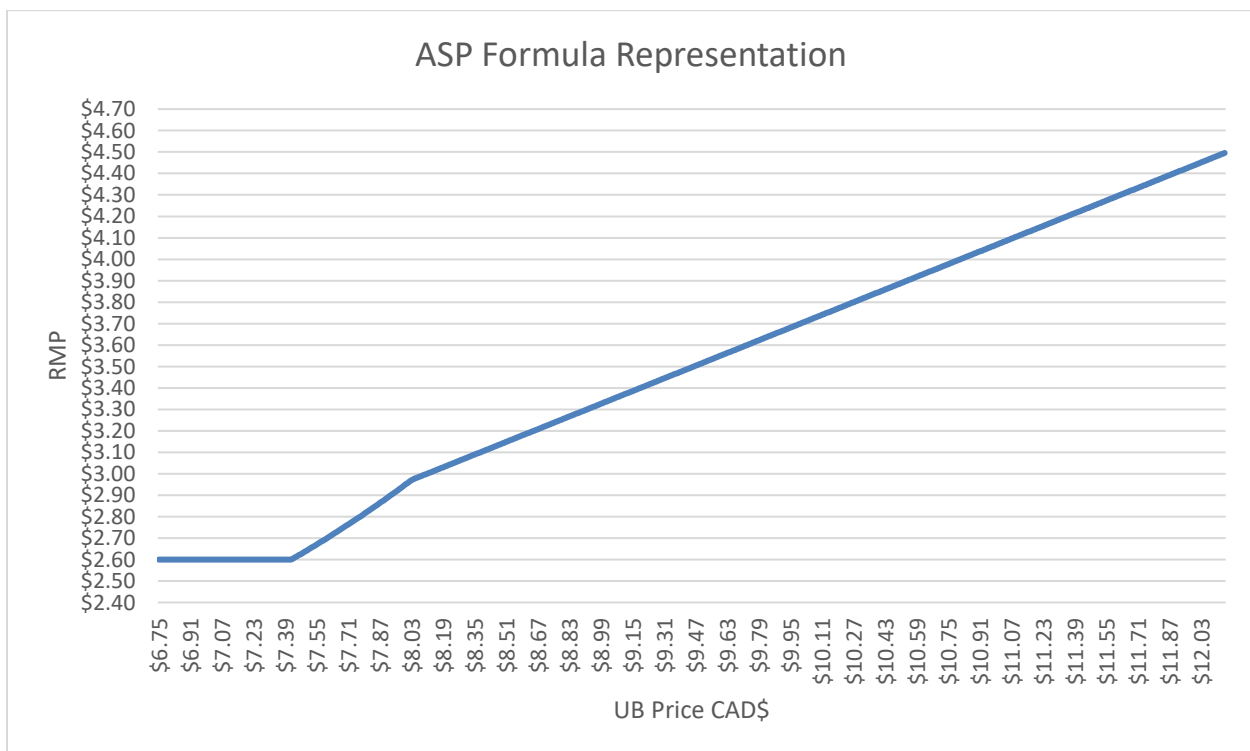
$$y = \min(0.13x^2 - 1.4x + 5.83, 0.37x)$$

¹ Referred to as the Urner Barry, the Urner Barry low, UB, or UB low through this submission.

6. Where y is the RMP, and, x is the average of the Tuesday and Thursday Urner Barry low price (UB Crab, Snow, Newfoundland, Cluster, 5-8oz) for the prior week, converted to CAD\$. The exchange rate used will be an average of the prior week, Sunday to Saturday.
7. Should Urner Barry provide a listing on Tuesday or Thursday, but not both, that listing shall be used for the basis of the calculation. Should no Urner Barry listing be provided during the week, the most recent prior Urner Barry listing shall be the basis of the calculation.
8. The y is determined through calculating a minimum of:

$$y = (0.13x^2 - 1.4x + 5.83) \text{ and } y = 0.37x$$

9. This means that when the ratio implied by the quadratic formula is less than 0.37 of RMP to market price, the RMP is determined by $y = (0.13x^2 - 1.4x + 5.83)$. When the ratio implied is greater than 0.37, the ratio is equal to 0.37 multiplied by x .
10. The following figure provides a graphical representation of the relationship between the market price (horizontal axis) and the RMP (vertical axis).



11. In the above, the harvester has a floor price of \$2.60 CAD/lb if the UB converted price is less than \$7.43 CAD. However, if the price meets or exceeds \$7.43 CAD then the formula will calculate the RMP based on market price. A variance to determine an initial payment is not used in the ASP formula, nor is there a reconciliation at the season's end. The RMP calculated provides some risk mitigation for producers, as well as provides a greater share to harvesters, of more than 50% of the market price. A full table is included as Appendix 1. However, the following segment illustrates the above.

Market Price	RMP	Yield 65% Raw Material Cost	Harvester Share of Market Price
CAD\$			
\$7.43	\$2.60	\$4.01	53.9%
\$7.44	\$2.61	\$4.02	54.0%
\$7.45	\$2.62	\$4.02	54.0%
\$7.46	\$2.62	\$4.03	54.0%
\$7.47	\$2.63	\$4.04	54.1%
\$7.48	\$2.63	\$4.05	54.1%
\$7.49	\$2.64	\$4.06	54.2%
\$7.50	\$2.64	\$4.07	54.2%
\$7.51	\$2.65	\$4.07	54.2%
\$7.52	\$2.65	\$4.08	54.3%
\$7.53	\$2.66	\$4.09	54.3%
\$7.54	\$2.66	\$4.10	54.4%
\$7.55	\$2.67	\$4.11	54.4%
\$7.56	\$2.68	\$4.12	54.5%
\$7.57	\$2.68	\$4.13	54.5%
\$7.58	\$2.69	\$4.13	54.5%
\$7.59	\$2.69	\$4.14	54.6%
\$7.60	\$2.70	\$4.15	54.6%
\$7.61	\$2.70	\$4.16	54.7%
\$7.62	\$2.71	\$4.17	54.7%
\$7.63	\$2.72	\$4.18	54.8%
\$7.64	\$2.72	\$4.19	54.8%
\$7.65	\$2.73	\$4.20	54.9%
\$7.66	\$2.73	\$4.21	54.9%

\$7.67	\$2.74	\$4.22	55.0%
\$7.68	\$2.75	\$4.22	55.0%
\$7.69	\$2.75	\$4.23	55.1%
\$7.70	\$2.76	\$4.24	55.1%

12. Once the market price reaches \$8.02 CAD/lb, the harvester share of the market price remains constant at 56.9%.
13. Unlike Alaska, which uses a linear equation with 50/50 sharing irrespective of price, a non-linear equation such as the Blackwood quadratic equation increase the fisher price as the market increases, up to 65.65% as price reaches \$9.00 USD/lb.² ASP has modeled its formula based on a fair distribution of value.
14. This formula is very fair to harvesters. At a minimum, harvesters share in more than 50% of the market. Further, the harvesters share in the upside. The harvesters are protected from any drop in the market by the price floor of \$2.60 CAD/lb.
15. Last year the Panel set the minimum price at \$2.20 CAD/lb while the Urner Barry proxy was \$5.65 USD/lb. The present Urner Barry proxy is less this year at \$5.45 USD/lb, which on its face would support a lower price. However, ASP is offering a \$0.40 increase in price, despite the lower market price, expecting a stable market.
16. This formula is not the Blackwood Formula.³ ASP attempted to negotiate using the Blackwood Formula.⁴ The FFAW refused to consider the critical elements of the Blackwood Formula, being the 20% variance (or holdback in other words), Urner Barry Crab, Snow, Newfoundland, Cluster 5-8oz low proxy, and quality deductions. Without those elements, the formula would not be consistent with the Blackwood Report. As such, we have proposed a different formula that is in keeping with the intent of the Blackwood Formula and equitably shares the risk between harvesters and processors.
17. For clarity, the formula above reflects ASP's final offer on formula for the purposes of final offer selection. If ASP is successful in final offer selection, it is not seeking further quality

² Report of Fish Price-Setting Strategic Review Team dated October 31, 2023 ("Blackwood Report") at 57

³ Defined below.

⁴ ASP's Offers for the 2024 Season are attached as Appendices 2-6.

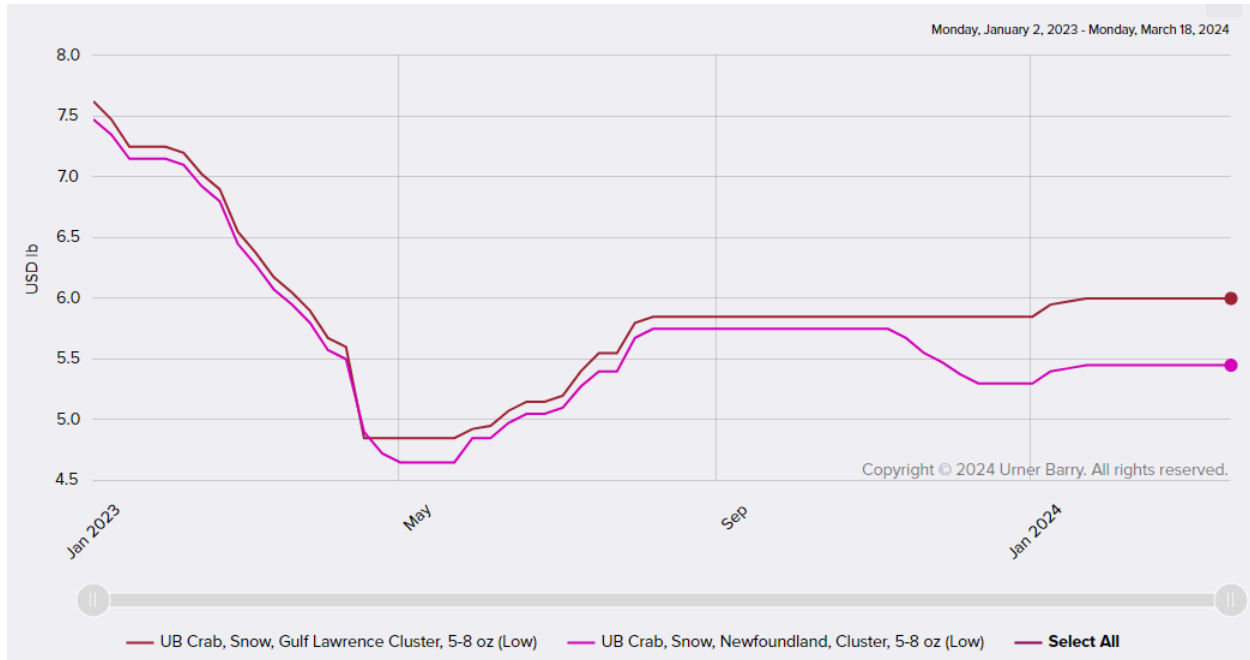
deductions for the purposes of interest arbitration on the conditions of sale, other than for size and barnacles. If the FFAW's final offer is selected, ASP does seek additional quality deductions, among other things.

18. ASP's proposed formula does not include deductions for quality, but it does take into account the market realities related to the quality of Newfoundland and Labrador crab, including:

- (a) Critically weak crab;
- (b) Overfilled pans;
- (c) Crab not kept at proper temperatures;
- (d) The presence of barnacles; and
- (e) Presence of leech eggs.

A. The NL price must be lower than the Maritimes price

19. The Maritimes price is **not** an appropriate proxy for Newfoundland and Labrador. In 2023, the US imported 91% of Newfoundland and Labrador's snow crab production, but at a price point lower than the Gulf of St. Lawrence (which includes crab being sold from the Maritimes). There has historically been a \$0.10 to \$0.15 difference between the Gulf and Newfoundland Urner Barry pricing until mid-November 2023, when the spread began to increase to the current \$0.55 spread, as depicted below:



20. The Gulf snow crab has maintained a higher market price due to its physical characteristics (colour and shell cleanliness) and also in size distribution (larger average size). Gulf snow crab are larger and have less defects, such as barnacles and leech eggs. These favourable characteristics allow processors in the Gulf to obtain higher prices in the market⁵. A 2014 independent study by Gardner Pinfold⁶ found a \$0.15 - \$0.20/lb market price differential between crab from the Gulf and Maritimes.
21. Given a 27% cut in the gulf quota we would expect a larger differential in 2024. In addition, while some of the physical characteristics are captured in the price differential, others like size distribution are not.
22. In addition to larger and higher quality crab, that the processors in Newfoundland and Labrador face higher costs. Our transportation to Boston is an additional \$0.05 - \$0.10 per pound, our plant labour rates are higher, and our productivity is lower because we must

⁵ Gardner Pinfold (2014). Review of differences in snow crab shore prices paid in Newfoundland and Labrador vs. the rest of Atlantic Canada. Halifax, Nova Scotia: Gardner Pinfold. ("Gardner Pinfold Report") [Appendix 7]

⁶ Gardner Pinfold Report.

deal with organic material seldom a problem in New Brunswick, e.g., barnacles, sea lice, etc.

23. The Gardner Pinfold Report revealed that NL processors experience higher costs as follows:
 - (a) WorkplaceNL and Employment Insurance premiums, which are not paid by processors in the Maritimes, have an effective increase in shore price of \$0.08/lb;
 - (b) Higher transportation and freight costs of \$0.04 - \$0.05/lb as compared to processors in the Maritimes; and
 - (c) Mandatory dockside grading, which is not mandatory in the Maritimes, adds \$0.015 - \$0.02/lb for processors in this Province.
24. Collectively, the Gardner Pinfold Report confirms that there a cost differential ranging between \$0.27 and \$0.35, not adjusted for inflation, when understood against a 27% cut in the gulf quota we would expect a larger differential in 2024.
25. As a result of size and quality and cost disparity between Gulf and Newfoundland and Labrador, the price paid to harvesters in the Maritimes has historically exceeded the price paid to harvesters in this Province. Not only does Newfoundland and Labrador snow crab sell for less once it reaches the market, the crab costs more to produce and make market-ready.
26. In the face of all that analysis, the FFAW continues to maintain that Maritime pricing - for larger sizes, cleaner crab, and less tail costs - is the same as this Province. The FFAW contention is not supported by the evidence or careful analysis.
27. The price of crab in the Maritimes this year is \$3.00 CAD, with UB Crab, Snow, Gulf Lawrence, Cluster, 5-8 oz at \$6 USD/LB for 5/8 Sections. The Maritimes price is not a formula, does not have quality deductions, and permits a true-up at the end of the year to account for price increases. As noted in the correspondence from the NB Processors Association,⁷ the \$3.00 CAD opening price could be adjusted up or down depending on how the market reacts. This number reflects the fact that the market recognizes the higher

⁷ Letter from Giles Theriult, Executive Director of New Brunswick Snow Crab Processors Inc. [Appendix 8].

value of Gulf crab. It further supports the price being set at \$2:60 at the current NL Urner Barry of \$5.45 USD for NL 5/8 ounce sections.

28. ASP's formula, based on the current Urner Barry, gives a price of \$2.60, which is consistent with historical market differences between Newfoundland and Labrador and the Maritimes.
29. Further, the Maritimes market is currently impacted by their 27% decrease in quota, which is increasing demand and price for their larger and cleaner crab.

B. Predicting price and export sales requires consideration of contextual knowledge

30. Predicting export sales and therefore, by extension, the annual price at which sales can be realized, has been proven to be a challenging, if not near impossible, proposition. There is no evidence in the literature to support that any single statistical method is reliable or that any qualitative or contextual knowledge is consistently able to predict prices⁸. The reality is that judgmental techniques are often relied on, and the reason is because market knowledge and experience is key to understanding and predicting price.
31. What the evidence does support is that the more information considered including executive opinion, personal judgement, customer market information and statistical projections, as well as more advanced statistical methods, the better the predictive results. This is required because of the complexity of variables that impact prices and the turbulent and fickle nature of volatile markets and the consumers they contain.⁹ Accordingly, the information presented in this submission relies on significant contextual knowledge that it is key to any actual business prediction of what actual prices and returns can be potentially realized in the market for snow crab in 2024.

C. The price must allow producers to absorb declines in the market

32. Looking at UB low data for 5-8 oz snow crab, since 2000 the price from May to December has declined 7 times, which is 29.1% in the sample size. In the last 6 years, from 2018 to 2023 it has declined twice, 33.3% in that sample, albeit 2018 experienced a 1% decline. Therefore, while it may be argued in approximately 70% of years the price has

⁸ Winklhofer and Diamantopoulos "Export Sales forecasting by UK firms, technique utilization and impact on forecast accuracy, Journal of Business Research 56 (2003), 45-5.4. ("Winklhofer Report") [Appendix 9].

⁹ Winklhofer Report.

experienced some increase, the decreases are what jeopardizes producers' viability. As with 2022, paying a raw material price which is above what can be realized for finished product in the market leaves producers with either selling at a loss or carrying excessive inventory, which increases carrying costs.

UB Crab, Snow, Newfoundland, Cluster 5-8 oz

Date	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
May	4.18	3.30	3.41	4.35	4.29	3.40	2.90	3.96	4.02	3.17	3.82	5.86
December	4.07	3.45	4.30	4.75	4.17	3.08	4.11	4.56	3.91	3.29	5.50	5.15
Gain/Loss	\$0.11	\$0.15	\$0.89	\$0.40	\$0.12	\$0.32	\$1.21	\$0.60	\$0.11	\$0.12	\$1.68	\$0.71
% Change	-2.63%	4.55%	26.10%	9.20%	-2.80%	-9.41%	41.72%	15.15%	-2.74%	3.79%	43.98%	-12.12%

Date	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
May	4.72	4.61	5.10	4.78	5.89	7.18	8.84	8.04	6.90	13.11	10.41	4.65
December	5.01	5.25	5.25	5.17	7.95	8.10	8.75	9.18	9.90	16.80	7.77	5.32
Gain/Loss	\$0.29	\$0.64	\$0.15	\$0.39	\$2.06	\$0.92	\$0.09	\$1.14	\$3.00	\$3.69	\$2.64	\$0.67
% Change	6.14%	13.88%	2.94%	8.16%	34.97%	12.81%	-1.02%	14.18%	43.48%	28.15%	-25.36%	14.41%

33. Setting a formula with the mindset that crab prices always increase, only favours one side in the arbitration process. It places the financial risk burden on producers, while guaranteeing profitability and no financial risk to harvesters. The price must be set at a level that allows producers to absorb declines in the market and this year uncertainty still exists in the market. There is no conclusive evidence that prices have reached the bottom and stabilized, in fact the evidence supports the opposite conclusion. In 2023, March prices declined from over \$6.00 USD to \$4.65 USD in May. Currently, UB low price is \$5.45 USD, which is a decline from \$5.75 USD in Fall 2023.

D. Quality must be recognized in the price

34. It is well established that product characteristics impact price. From impacting the psychological reasoning process in product selection to the limiting the of product uses there is a clear line of causality between product quality and prices set in the market.
35. For this reason, quality variations have to be recognized in the price, particularly because in a turbulent market buyers seek to secure the highest product at the lowest price and their tolerance for lower returns is low.

E. Processors bear significantly higher operating costs

36. It is reasonable for the "cost of doing business" to be covered in the price, for efficient, well managed harvesters and producers. It is unreasonable, however, to expect that

inefficiency, poor management choices and bad decisions be excused and rewarded, whether by harvesters or producers.

37. The cost of operating a fish plant is much higher than operating a fishing vessel. Our research indicates that the cost of operating a plant, measured on a raw material pound, is about \$0.75 more than operating the average fishing vessel. Granted there is likely more variability amongst and within the various fishing fleet classes.
38. Once these costs are covered under our imposed pricing system, the decision on pricing must be based on risk and reward. At its simplest, one should expect a return that fairly compensates you for shouldering the risk of potential losses. In theory, the higher the risk the more you should receive, and the lower the risk the less you should receive, on average. At a general level, the financial risk to the harvester once his crab is landed is low. They are paid within 7 days under the existing terms with no financial risk, should the market not perform as predicted by a Panel.
39. By contrast, the risk to a processor is high. The producers typically are not paid until 30 days or more after product delivery or carry inventory for months before it is sold. Producers can lose money, due to any event which disrupts the market. Producers must cover all the costs related to transportation, storage and finance, and the possibility that the predicted price may not materialize. In addition, dockside grading at the expense of the processor is required by the Master Collective Agreement. The Master Collective Agreement makes quality control and enforcement a pure processor cost.
40. The decision as to how capital is directed is, as noted, imposed upon us. We have objected to this system while the FFAW has supported this system. This 'one price for all' is very disadvantageous to fish producers, as the differences in the value of the raw material can be quite large, to the point where some bear a loss while other raw material can be profitable to varying degrees.

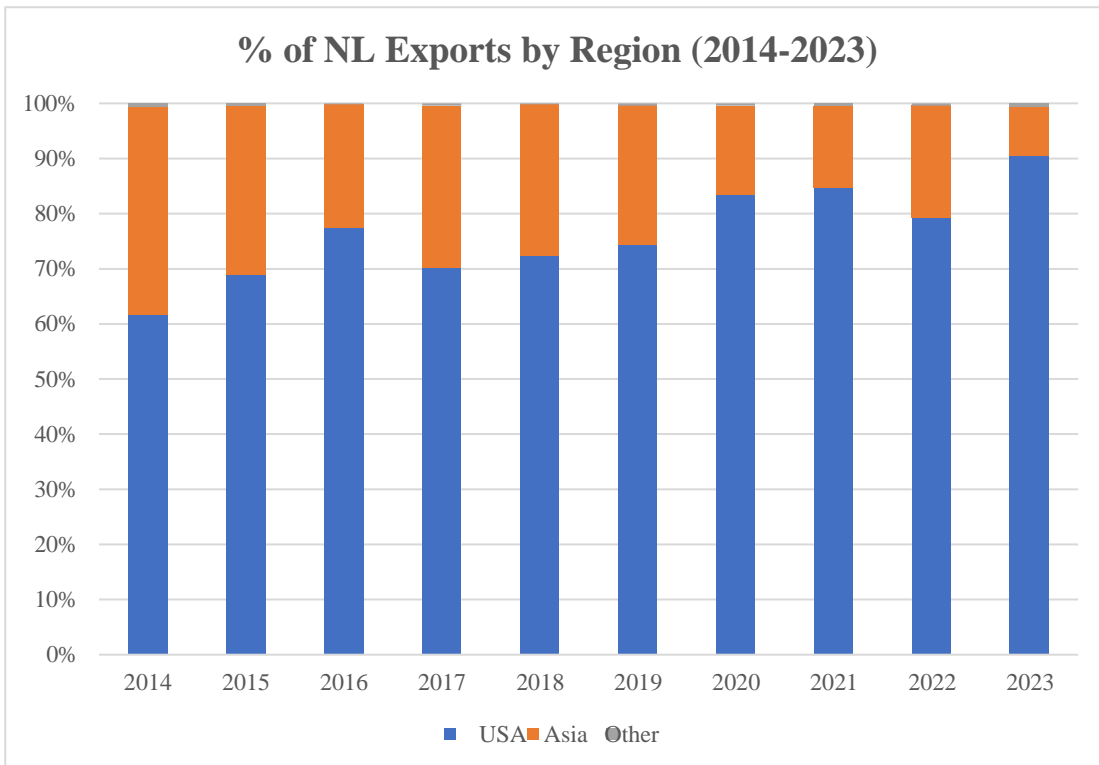
F. The best market intelligence suggest a stable and slowly improving market

41. The statutory basis of this Panel hearing provides for the provision of market intelligence from the Government of Newfoundland and Labrador (GNL), and parties are permitted to include relevant data in support of their submission. However, it is important to note that the data provided by GNL is not market intelligence simply because it was provided by the GNL. The Consultant reports are to be credited with value because they are expert

analyses secured by the GNL, but as noted in above comments on price predictability, no single data set has definitive predictive value - it is the combination and consistency across multiple sources of evidence that is the critical test.

i. The US markets suggest a stable crab price in the 2024 season

42. The United States market is the primary market for Newfoundland & Labrador snow crab and is a primary consideration when determining the appropriate pricing mechanism. From the Blackwood Report, the graph below identifies exports by region.



43.

44. In the 2024 Crab Market Review report prepared by John Sackton, Seafood Datasearch (“Sackton”), Sackton reports that prices in the US market have been stable since December and March of this year, which is a good indication that crab prices will behave normally over the rest of the year.¹⁰ This means that the wholesale price agreed on in late May will generally represent the lowest price of the year and prices will trend higher to cover the increased financing and holding costs.

¹⁰ [Sackton](#), Crab Market Review (March 14 2024) 9 (“Sackton”).

45. For the first time in 2 years, prices between December 2023 and March 2024 have remained stable and are giving an unambiguous signal that excess unsold inventory is not going to be a major problem this year.¹¹
 46. The outlook for snow crab this season is looking healthy because of a lack of inventory and an indication in the market that pricing might be stable.¹² Neither retail nor foodservice buyers are willing to accept price volatility on crab without an extreme reaction. Even though prices are low by historical standards, a period of price stability has historically often preceded a general increase in value.¹³
 47. Maintaining wholesale price stability, or adjusting cautiously to changes in supply can keep existing customers and strengthen crab for the longer term.¹⁴
 48. Price stability after a period of extreme volatility like we have seen will be necessary for buyers to become excited about crab again. A market clearing price and a second year without inventory build up will not only mean success in 2024, but it will set the stage for a gradual increase in value in 2025. If circumstances combine to lead to a rapid run-up in crab prices, it may turn out to be a false signal as many buyers are primed to walk away if they perceive the slightest risk.¹⁵
 49. Inventory should not be a significant problem in 2024. The disappearance model for inventories shows inventories on the same level as in 2019 when there was no significant inventory overhang.¹⁶
- ii. The Japanese market shows a decline in price and volume
50. In 2014, Asian Markets represented 37.7% of Newfoundland and Labrador crab exports. However, the trend has been a fairly steady decline to 2023, where to July 2023, only 9.0% of total Newfoundland and Labrador crab exports are to Asia.¹⁷

¹¹ Sackton at 49.

¹² Sackton at 55.

¹³ Sackton at 56.

¹⁴ Sackton at 56.

¹⁵ Sackton at 56.

¹⁶ Sackton at 5.

¹⁷ Blackwood at 10.

51. Japan has historically been a key market for Newfoundland and Labrador snow crab. With the recent US ban for Russian product, Japan and other Asian countries have been increasing their imports from Russia.
52. Japan purchases mainly raw snow crab products from Newfoundland and Labrador, which requires the highest quality crab available. Japanese buyers send technicians to local plants to select and inspect which landings of snow crab they want to purchase from. Technicians sort through available grading sheets and select crab that are not critically weak and that are without physical blemishes, such as barnacles and leech eggs.
53. Sackton mentions that Japanese purchases are increasing demand for raw crab, but Newfoundland shipments in 2023 of raw crab fell by 36%. This was likely the result of the delayed season, as Japanese buyers were able to purchase from New Brunswick producers¹⁸. Russia started producing raw for Japan for the first time in 2023 as well.
54. Japanese imports include both raw frozen and whole crab, as well as cooked sections for meat picking. Japan does not purchase snow crab for picking with direct imports, instead sending those purchases of brine frozen crab to Japanese owned meat picking plant in China, Vietnam, and Indonesia.
55. Sackton indicates that Russian crab will continue to compete with Canadian snow crab for Japanese meat picking and now for the raw market as well.¹⁹
56. According to the Japan's Snow Crab Market 2023 Update report prepared by Meros Consulting ("Meros"), more Russian snow crab volumes are being imported to Asian markets, including Japan, as a result of the embargo on Russian goods to the US.
57. The Japanese market experienced a positive turnaround for snow crab at retail. Canadian shipments experienced a 6% increase in volume. Crab meat imports increased in 2023, 50% over the previous year. This surge was not triggered by a specific increase in demand. It reflects the decline in the price of crab meat materials in 2023, which stimulated

¹⁸ Sackton at 25.

¹⁹ Sackton 28.

importers to purchase and process more. Canada was Japan's second largest supplier in 2023.

58. Japan experienced higher import volumes at the end of 2023, but prices plummeted by 40%. When the price of Russian crab dropped, Canada and US prices followed²⁰.

iii. Retail markets will not increase during the 2024 season

59. The Sackton Report confirmed that the retail market is not expected to improve throughout the 2024 season.

60. Prior to the Covid-19 pandemic, the majority of snow crab sales were through food service. Due to lockdowns, restaurant and buffet closures, and cruise cancellations during the pandemic, the industry quickly shifted to retail sales when consumers realized the ease of eating snow crab at home, as it is already cooked and just needs to be thawed.

61. When the demand skyrocketed in 2020 and 2021, pushing up high prices, the change in human behaviour following the pandemic left a huge retail inventory in 2022 and the beginning of 2023.

62. The big gain in sales happened when prices were first marked down in the spring of 2023. The monthly sales data for 2023 shows a declining sales volume, even as prices remained low. Initially there was a strong response to lower prices in terms of increased volumes. However, prices have continued to decline since August 2023 with no comparable increase in volume.

63. The data suggests that the consumer interest in lower priced crab is diminishing, and that it will be harder to achieve increased volume at retail by lowering prices.

64. At the same time, the diminished interest in discounts means that higher prices will have a significant impact to depress volume. The sales data does not leave retailers much room to expect any increase in margin from higher prices.

65. According to Sackton, the retail sector will continue to be cautious about crab purchases and will try and match their actual rate of sales rather than a projection about what may happen if prices go up or down. The fact that retailers are getting a lesser return from price

²⁰ Meros at 23.

reductions will act as a cautionary flag and make them reluctant to bid up prices, even if there is less overall product available.

- 66. The retail sector is more likely to maintain its current level of both sales and dollar volume rather than increase it in 2024.

iv. Inflation disproportionately impacts processors

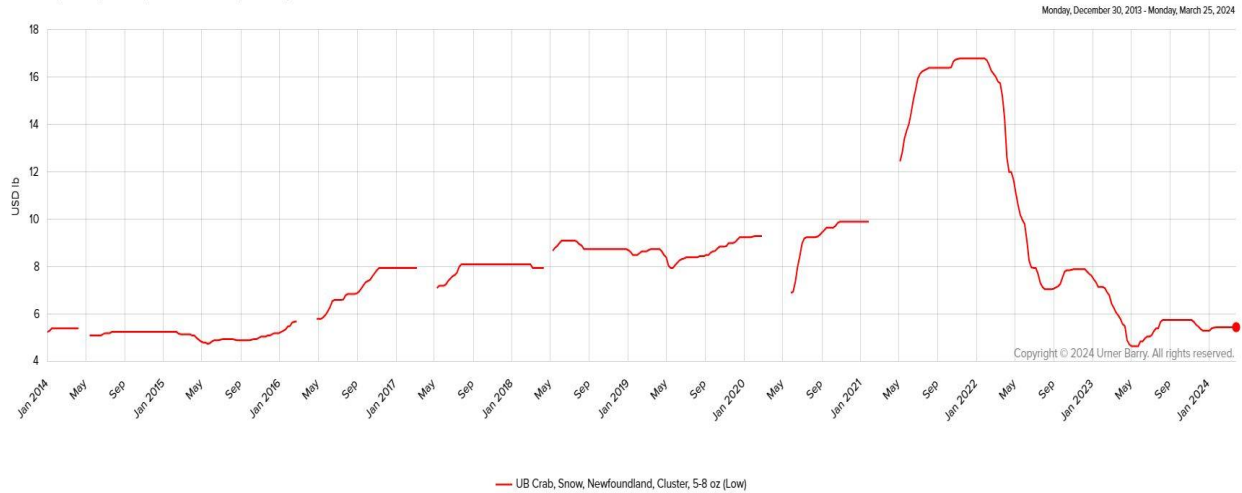
- 67. Wage inflation has increased costs for producers, in particular as it relates to snow crab production. First, anecdotally it can be acknowledged that wages/salaries have increased in Canada. However, **Employee wages by industry, annual** from Statistics Canada²¹ shows that in Newfoundland and Labrador average hourly wage rate in all industries are as follows from 2017 to 2023:

Average Hourly Wage Rate							
	2017	2018	2019	2020	2021	2022	2023
Total employees, all industries	25.37	26.18	26.5	27.6	28.41	29.35	30.95
Percentage increase Year over year		3.2%	1.2%	4.2%	2.9%	3.3%	5.5%

- 68. Unfortunately, wages specific to the fishing industry are not available. But the purpose of the above table is to demonstrate the overall increasing trend in wages, which is driven by overall inflationary pressure as wages need to increase to help families keep pace with the increase in the cost of consumer goods. When this inflationary wage increase is then compared to snow crab market prices, the disparity becomes obvious. In some sectors wage inflation can be mitigated by passing increased costs along to consumers. However, snow crab market prices have declined, as demonstrated in the graph below.

²¹ Employee Wages by Industry, Statistics Canada attached as Appendix 10, also found at: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410006401&pickMembers%5B0%5D=1.2&pickMembers%5B1%5D=2.2&pickMembers%5B2%5D=3.1&pickMembers%5B3%5D=5.1&pickMembers%5B4%5D=6.1&cubeTimeFrame.startYear=2015&cubeTimeFrame.endYear=2023&referencePeriods=20150101%2C20230101>.

UB Crab, Snow, Cluster, Newfoundland, 5-8 oz., Ex-Warehouse EC



69. Market prices are below 2017, which was approximately \$8.00 USD. If market prices had realized a 2% annual inflation compounded annually then the start of 2024 season would have realized approximately \$9.00 USD UB low price. However, currently UB low is \$5.45USD, which is 68.1% of \$9.00 USD. Therefore, producers are experiencing continued upward trend in wages, combined with a large decline in market prices. Market prices do not appear to be trending upward considering 2023 and 2024 market data.
70. For harvesters, wages are paid through a share mechanism. That is crewpersons receive a percentage share of the catch revenue; they are not paid an annual wage or salary. Therefore, the same inflationary pressure on costs is not present. This is not to say that harvesters do not experience pressure to increase shares to crewpersons or that crewpersons do not leave for other employment. Rather that irrespective of the hours actually worked, the crewperson is paid through a share mechanism. Whereas, plant employees are paid hourly, and in the case of 2023 to meet the demand from 6 week delay, overtime wages also impacted operating costs. This would equally apply across the supply chain of inputs that go into the processing of snow crab.
71. The Blackwood Report did not consider the disproportionate impact of inflation on processors versus harvesters. It assumes an equal impact but the reality is that processors have been impacted to a larger extent than harvesters.
72. While we have heard about the costs of quota licences increasing, the decision to purchase additional licence(s) is a business decision made by each enterprise in order to expand their capacity and revenue. Unfortunately, a dramatic turn in the market for any

industry can have adverse consequences for participants. In other words, these are expansion costs which incur the same risks for any business venture.

73. The RMP should not be affected by either the decisions of processors or harvesters that are internal to their businesses. Decisions are better made when it concerns and benefits the whole and not unique cases.

G. Evidence

74. Regarding evidence, while the Panel's process is intended to be comparatively informal and non-technical, with wide latitude given to the admissibility of evidence, the Panel should continue to be influenced by the rules of evidence in determining what should be admitted at the hearing and the weight that will be given to the evidence. While the strict rules of evidence are relaxed, the Panel is not relieved from its duty to only act on evidence that has cogency in law. For example, the Panel may admit evidence which would be inadmissible on the ground of irrelevancy were the rules of evidence strictly applied, however the Panel is not permitted to then act unreasonably by drawing inferences from wholly irrelevant evidence in its decision. "Cogency", it should be noted, is not the same as relevancy. Cogent evidence means evidence that is compelling and convincing. The evidence must be sufficiently compelling to support the decision.
75. The Panel must furthermore recognize that the evidence presented by the parties in support of their respective cases is predominantly opinion evidence in the form of market analyses and commercial projections. Where confronted with conflicting opinion evidence, the Panel may accept that which is more consistent with the preponderance of probabilities, and which seems more reasonable in the circumstances of the case. The opinion evidence may be accepted in whole, in part or not at all, and the Panel should be cautious in attaching weight to opinion that relies on underlying facts that are not proven.

3. INTEREST ARBITRATION: ASP'S PROPOSED TERMS OF SALE

76. ASP has set out two positions for the interest arbitration.
77. The first position is in the event that the Panel selects its formula in final offer selection. In that case, ASP seeks a deduction for smaller crab with a tolerance, a deduction to weight for barnacles, and obligations restating the regulatory requirements to minimize critically weak crab. It does not seek further quality deductions.

78. The second position in the event that the Panel selects the FFAW's formula in final offer selection. In that case, ASP seeks a deduction for smaller crab with a tolerance, a new methodology to be applied to deduction for barnacles, a deduction for overfilled pans, a deduction for leech eggs, a deduction for temperature, a 20% variance, the Urner Barry as a price proxy, and language on critical weak crab.

79. In either case, ASP seeks a deduction for smaller crab with a tolerance, a new methodology to be applied to deduction to weight for barnacles, and language restating the regulatory requirements to minimize critically weak crab.

A. If the Panel selects ASP's formula, ASP compromises on quality deductions

80. In the event the Panel selects ASP's formula for final offer selection, ASP's position for the terms and conditions of sale under the interest arbitration is as follows:

(a) A size deduction of \$0.30 on crab under 4" carapace, with a 5% tolerance for legal size crab <4" in each landing;

(b) A deduction of 24% of the weight at landing where there is 15 or greater barnacles **on the entire crab**;

(c) Obligations restating the regulatory requirements to minimize critically weak crab; and

(d) All other terms and conditions apply as set out in ASP's proposed 2024 Crab Schedule in the event that the Panel selects ASP's formula, attached as Appendix 11.

81. ASP does not seek deductions for quality in the event that the Panel selects its formula.

i. There needs to be an appropriate deduction for size

82. Historically, there has been a two-tiered price system for crab. "Premium" crab refers to at least 4" carapace. "Standard" crab refers to legal size crab between 3.75" to 3.99" carapace. The minimum price imposed by the Panel in the past was the minimum price of premium crab. Since 1997, there has been a deduction applied to standard crab.

83. In 1997, the FFAW and the Fisheries Association of Newfoundland and Labrador (FANL) agreed to a provision of \$0.20 less with a 5% tolerance. Various tolerances have been in

place over the years such that the deduction was not applied to the first agreed-upon percentage of less than 4" carapace in each landing.

84. In 1997, the tolerance was 5%. In 1998, Panel increased the tolerance to 20%, but also increased the deduction to \$0.30. Until the 2022 season, the parties have followed the 20% tolerance and the \$0.30 deduction.
85. Smaller crab is less valuable to the market and ultimately less profitable. Smaller sections (3-5oz) are usually heavily discounted²².
86. In recent years, the 20% tolerance has rendered the size deduction meaningless. Based on historical landing information, between 9% to 14% of crab landed is under 4" carapace as illustrated below²³:

Year	Percent of Pounds Graded - Snow Crab								Total Downgrade
	% Ice	Premium	Standard	Critical	Soft	Dead	<3.74"	Barnacle	
2023	1.48	80.96	9.77	5.74	0.02	0.67	0.27	2.57	9.28
2022	1.66	78.51	13.46	3.97	0.01	0.43	0.36	3.26	8.03
2021	1.79	76.07	14.06	4.46	0.02	0.35	0.40	4.64	9.87
2020	1.86	76.04	13.76	5.72	0.04	0.68	0.38	3.37	10.19
2019	2.13	80.89	13.11	4.40	0.06	0.46	0.30	0.78	6.00
2018	2.00	83.60	11.06	4.05	0.06	0.35	0.27	0.61	5.34
2017	2.05	84.45	9.38	4.61	0.05	0.4	0.26	0.85	6.17
2016	2.22	86.44	7.72	3.61	0.02	0.42	0.21	1.58	5.83
2015	2.08	85.11	7.55	4.54	0.02	0.52	0.25	2.01	7.34
2014	2.14	83.99	7.79	4.76	0.02	0.58	0.28	2.58	8.22
2013	2.02	83.48	8.43	4.98	0.01	0.45	0.27	2.39	8.10

87. There is no need for a tolerance beyond 5% if the average landing includes only 10.55% of standard crab.
88. The tolerance is applied on a per landing basis. This means that, while the average amount of standard crab was less than 20%, there could have been landings with more than 20% standard crab such that the size deduction was applied.

²² Rodney Weston, M.P. "Report on the Snow Crab Industry in the Atlantic Provinces and in Quebec (Oct. 2011): 9 [Appendix 12].

²³ IDG Report [Appendix 13]

89. However, the aggregate landing data suggests that, on average, the size deduction is not applied because harvesters do not land more than 20% standard crab per landing. The 20% tolerance renders the size deduction meaningless, which eliminates the mitigation of risk established by the size deduction.
90. The market conditions for standard crab has completely deteriorated. The market for < 4" is not available. Very little standard crab is sold in the US market.
91. Processors no longer have the same access to the Japanese markets where they historically sold standard size crab. Sackton points out that that Russia has entered the picked crab meat market, which was exclusively Newfoundland crab. He states "the cost of picked crab should fall in 2024".²⁴ This situation continues to worsen.
92. Further, market prices today are higher than when the \$0.30 differential was imposed. As such, the \$0.30 deduction is a much lower deduction in terms of the percentage of price being deducted for standard crab. This fact supports a larger deduction.
93. Most importantly, with little market, the response should be a larger mesh size, especially where there is an issue with smaller size crab.
94. While ASP is willing to compromise on the quality deductions for the purpose of interest arbitration in the event that its formula is selected in final offer selection, ASP nonetheless seeks a size deduction of \$0.30 on crab under 4" carapace, with a 5% tolerance for legal size crab <4" in each landing. This means that the first 5% of the legal size crab <4" in each landing will be paid at the price for greater than or equal to 4" crab. For all legal size crab <4" landed greater than 5% of the landing will be paid \$0.30 less than the formulated price.
95. ASP's position more fairly allocates risk. The 5% tolerance protects against bad actors while meeting the policy objectives to prevent high-grading.
96. Noteworthy, too, is that if you combine standard crab with downgraded crab, processors are paying for between 15-20%, or more in some years, for crab of significantly less value.

²⁴ Sackton at 26.

ii. The formula must deduct the weight of barnacles

97. If processors are paying harvesters per pound per landing, then it only makes sense to deduct the weight of barnacles. Barnacles add worthless weight to a harvester's pan. Processors do not receive any value for barnacles at the market. Without a deduction, processors are effectively paying for useless product. Not only that, processors then must pay additional costs to remove barnacles because plant workers require additional time to remove the barnacles. This slows down production and can result in increased costs of \$0.40 per lb and higher.
98. Crab with removed barnacles is worth less at the market than crab with no barnacles. In 2006, Independent Dockside Grading ("IDG") performed a study²⁵ for ASP to determine the effects of barnacles on the weight of crab landings. The study revealed the following:
- (a) Heavy scarring following barnacle removal has implications in marketing crab relative to the Maritimes where the crab is relatively free of barnacles. Higher prices are achieved in the Maritimes, as reported by Urner Barry; and
 - (b) Moderate breakage from barnacles results in the lower yield which producers achieve.²⁶
99. Scarring and breakage are quality issues, but weight deductions are not. The proposed deduction for the weight of barnacles does not take into consideration the quality concerns related to the presence of barnacles. ASP is willing to compromise on the scarring and breakage quality issues in lieu of the proposed formula that includes a deduction for the weight of barnacles.
100. Originally, the weight of barnacles was accounted towards the total allowable catch ("TAC") and harvester catch statistics, and processors were paying for the full weight of the crab, including the weight of the barnacles. In 2001, the FFAW and FANL conducted a pilot project to allow for the weight of barnacles to be deducted from landings, such that a harvester would not lose weight from their Individual Quota (IQ) and processors would not pay for the weight. Initially, the crab deemed to be heavily invested (>15 barnacles on

²⁵ IDG "Barnacle Study Newfoundland and Labrador Snow Crab" (Sept. 2006) [Appendix 14]

²⁶ The study did not consider the prevalence of leech eggs which adds additional removal costs at the plant.

the right side of the crab) had the weight reduced by 0.08 times. The 2006 IDG study resulted in subjecting the barnacle rejects to a 24% weight reduction.

101. Table 1 in the study compares the percentage of barnacles determined at dockside versus the percentage of barnacles as determined by 100% removal at the processing plant of crab with greater than 15 barnacles on the right side. Percentages determined at dockside averaged 2.19% by weight compared to 6.33% by weight after 100% removal at the process plant indicates that the grading a dockside only accounted for about one-third of all barnacles present on the crab.
102. While the weight deduction was then 8%, the experiment that the effective formula percentage to use was 23.12%.²⁷
103. Table 3 measured barnacles and tubeworms by weight and percentage where there were less than 15 barnacles on the right side of the crab. The average weight of barnacles was 5.79% after total barnacle removal, with more than half (roughly 75%) total weight being on the back of the crab.
104. The appropriate formula to use at dockside should account for the prevalence of barnacles on the whole crab. There is currently no deduction for landings where there is less than 15 barnacles on the right side of the crab, although the overall percentage of barnacles on the crab when < 15 barnacles was only slightly lower than instances when there were > 15 barnacles on the right side, as the majority of barnacle weight is on the back of the crab.
105. ASP does not seek to change the percentage of the previous barnacle weight deduction of 24%. ASP simply seeks to change how the deduction is applied. ASP proposes that a deduction of 24% of the weight be applied where there is 15 or greater barnacles **on the entire crab**. This does not result in unfairness to harvesters with respect to their IQ. The DFO does not deduct for the weigh-back of barnacles from a harvester's IQ.

iii. Obligations to prevent critically weak crab

106. The best quality raw material results in the best price from the market. It is beneficial to both harvesters and processors to maximize the quality to crab. Lively crab stored properly

²⁷ See Table 1 in the 2006 IDG Study

and held at the proper temperature results in the highest quality once processed. Poor quality crab results in higher processing costs, lower value final product, and an inferior quality.

107. Critically weak and dead crab is a problem in some areas, with the percentage increasing as the temperature increases. IDG is required to notify the province's fish inspection service if any landing has > 20% critically weak or more than 4% dead or decomposed, in which case that load is "subject to production".
108. IDG determines the liveliness of crab by holding the crab level by the carapace. The legs of a lively crab become very active and exhibit no signs of drooping, and the maxillipeds when pulled down with gauge until there is resistance, retract quickly and remain tightly pressed against the body.
109. A critically weak crab's legs will droop with no sign of physical movement, and the maxillipeds will have pronounced drooping. When pulled down the gauge until there is resistance, they will show slight movement and may partially retract.
110. Crab handled properly and according to the *Fish Inspection Operations Regulations*²⁸ require that, in reference to crab:

24. (1) Where fish intended for processing or marketing for human consumption is

(a) on board a vehicle;

(b) being transported; or

(c) being held

(i) in a holding area or chill room, or

(ii) preparatory to entering the production line,

fish shall be:

(d) protected from physical damage, contamination and weather at all times;

²⁸ *Fish Inspection Operations Regulations*, NLR 76/07 [Appendix 15].

(e) stowed in a container so that the depth of fish and ice does not exceed 90 centimetres but in any event so that the minimum distance between the fish and ice and the top of the container is 4 centimetres;

(f) in the case of fish other than shrimp, iced or chilled in a manner so as to maintain the temperature of the fish below 4°C.

(h) in the case of crab, stored in 70-litre capacity stackable tote pans not to exceed 23 kilograms per tote pan; and

(2) A container referred to in paragraph (1)(e) may be placed on top of another container provided no pressure is, as a result, exerted on fish in the container on which it is placed.

111. To lessen the amount of critically weak crab, ASP proposes that the Panel impose the following terms and conditions of sale:

(a) Harvesters shall ensure that crab is:

Properly iced at sea; or

Held in a Refrigerated Sea Water (RSW) system or Recirculating Sea Water System

such that the crab is maintained at a temperature below 4°C as per section 24(1)(f) of the *Fish Inspection Operations Regulations*; and

(b) Harvesters are required to store crab in 70-litre capacity stackable tote pans not to exceed 23 kilograms per tote pan, as stipulated in Section 24(1)(h) of the *Fish Inspection Operations Regulations*.

B. If the Panel selects the Blackwood Formula, it must impose quality deductions

112. In the event the panel selects the FFAW's Blackwood-style formula for final offer selection, ASP's alternative position for the terms and conditions of sale under the interest arbitration is as follows:

(a) A size deduction of \$0.30 on crab under 4" carapace, with a 5% tolerance for legal size crab <4" in each landing;

(b) A deduction of 24% of the weight where there is 15 or greater barnacles **on the entire crab**;

- (c) A deduction of \$0.25/lb for landings that are not cooled at 4°C or less;
 - (d) A deduction of \$0.035/lb for landings with overfilled pans (in excess of 23 kgs/50.6lbs);
 - (e) A deduction for the presence of leech eggs;
 - (f) 20% variance;
 - (g) Urner Barry price proxy; and
 - (h) Obligations restating the regulatory requirements to minimize critically weak crab; and
 - (i) All other terms and conditions apply as set out in the attached Crab Schedule.
113. ASP's position with respect to the size deduction and tolerance, barnacle deduction, and procedure to prevent critically weak crab is consistent with its position on those issues in the event that the Panel selects ASP's offer.

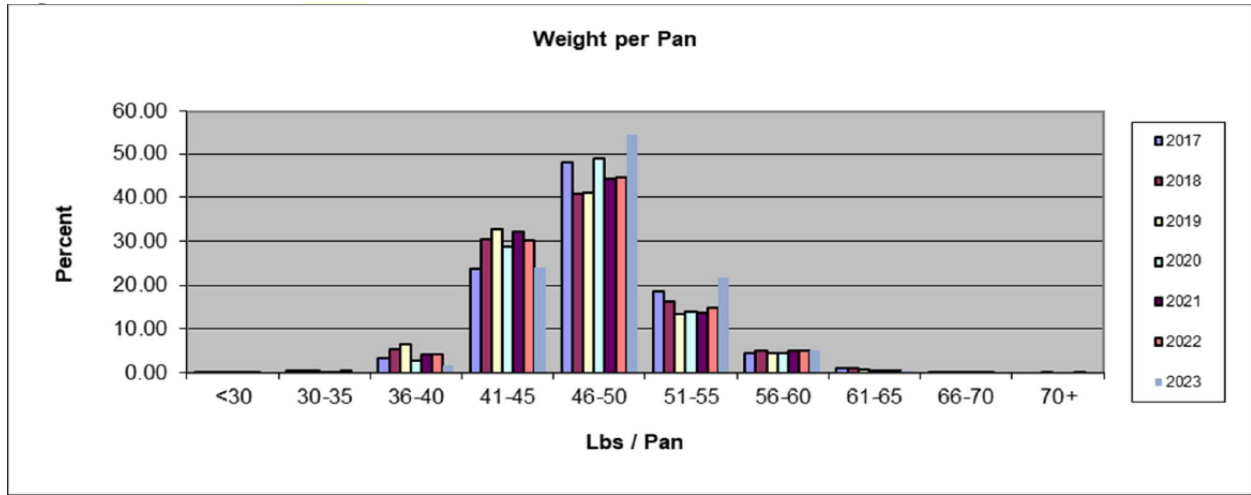
i. Overfilled pans reduce the quality of crab

114. Pans overfilled by harvesters have a significant negative impact on the quality of crab. Overfilled pans leave little room for ice, cause breakage and limb loss to the crab. This increases number of crab that become critically weak or die during transit.²⁹
115. Pans must weigh no more than 23 kilograms (50.6 pounds) in accordance with Section 24(1)(h) of the *Fish Inspection Operation Regulations*. Pans weighing more than 23 kilograms (50.6 pounds) are referred to as overfilled pans.
116. During the 2023 crab season, pan weights exceeding 50 pounds accounted for 27.55% of landings. This increased from 20.49% in 2022.³⁰ These figures are represented in the graph below, which represents the composite of crab landed after being boxed at sea and bulk crab which is boxed after the vessel is landed. In the case of the latter, the fisher

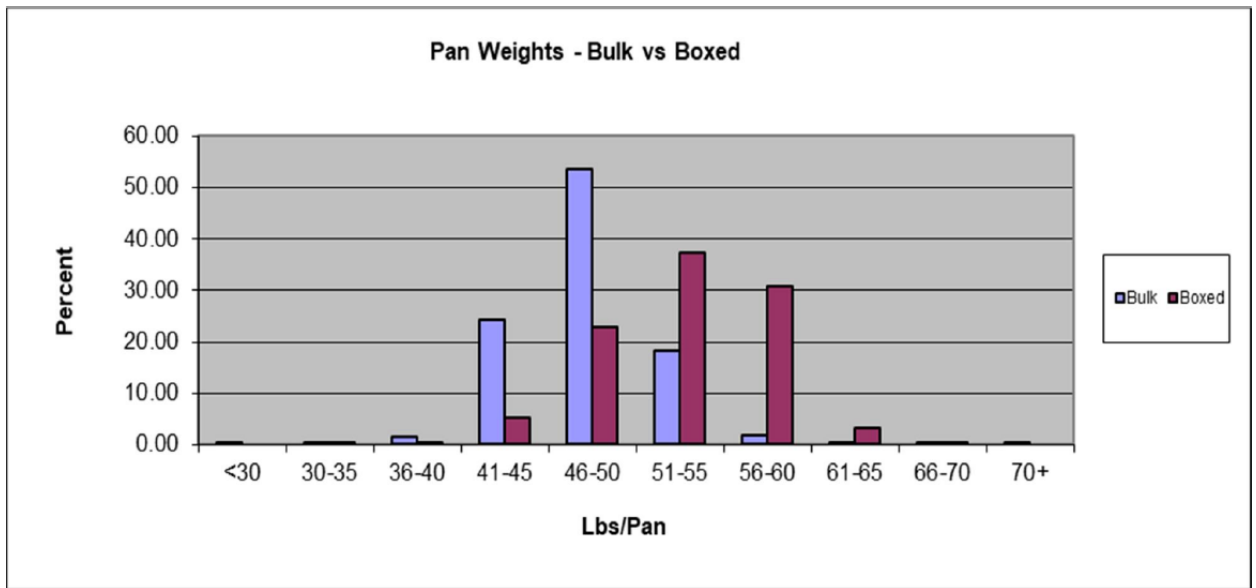
²⁹ IDG Report.

³⁰ IDG Report.

either contracts a third party to offload his vessel or the crew does the offloading themselves.



117. The figure below represents pan weights for both crab landed after being boxed at sea and bulk crab which is boxed after the vessel is landed for 2023. For crab boxed at sea, an incredulous 71.48% of landings exceeded 50 pounds. For bulk crab, 20.22% exceeded 50 pounds, which increased from 15.12% in 2022.



118. ASP tracks the average weight of pans per landing dating back to 2014. Since 2014, the percentage of pans weighing more than 50% is as follows:

Year	Percentage of Pans >50 pounds
2014	21.10%
2015	25.57%
2016	24.71%
2017	24.71%
2018	22.74%
2019	18.67%
2020	19.28%
2021	19.23%
2022	20.49%
2023	27.55%

119. While the delayed 2023 season resulted in increased capacity in a condensed season, which could contribute to the higher than average number of pans weighing more than 50 pounds, there is a well-established history of non-compliance with the pan weight requirements that significantly reduces the quality of the crab. The average percentage of pans weighing more than 50 pounds from 2014 to 2023 is 22.37%.
120. This data shows that the quality of a significant portion of the crab landed is impacted by the harvesters' own behaviour of overfilling pans.
121. ASP proposes a deduction of \$0.035/lb for landings where there are overfilled pans in excess of 23kgs/50.6lbs should the Panel select a Blackwood Formula

ii. Improper cooling reduces the quality of crab

122. As noted above, when crab are not kept at less than 4°C there is a serious risk that the crab will become critically weak. IDG is required to notify the province's fish inspection service if any landing has > 20% critically weak or more than 4% dead or decomposed, in which case that load is "subject to production".
123. Temperature is a significant problem that reduces the quality of crab. This is a factor that is within the harvesters control, as they are ultimately responsible to ensure the crab are adequately cooled during transport.

124. ASP proposes a deduction of \$0.25/lb for landings that are not cooled at 4°C or less should the Panel accept a Blackwood Formula.

iii. Leech eggs reduce the quality of crab

125. Leech eggs are small black seed-like blemishes that are generally on the underside of the crab legs. While harmless to the crab and add minimal weight at landing, they are a deterrent for consumers and very labour intensive to remove. The amount of leech eggs in a landing can vary by fishing area, and a heavy presence of leech eggs can add significant time and cost to processing for their removal.

126. ASP proposes the following deduction for the presence of leech eggs should the Panel select a Blackwood Formula.

The presence of leech eggs will be recorded, on a present or not present basis, for all crab through the season.

- (a) If the prevalence of leech eggs across all landings is between >0.1%-2% a \$0.05 deduction will be applied against the settlement price.
- (b) If the prevalence of leech eggs across all landings is between 2%-5% a \$0.10 deduction will be applied against the settlement price.
- (c) If the prevalence of leech eggs across all landings is between 5%-10% a \$0.15 deduction will be applied against the settlement price.
- (d) If the prevalence of leech eggs across all landings is between 10%-100% a \$0.25 deduction will be applied against the settlement price.

4. THE BLACKWOOD FORMULA IS NOT THE BASELINE POSITION

127. On October 31, 2023, the Blackwood Report, which recommended formula price-setting mechanism in lieu of final offer selection of a minimum price.³¹

128. The Blackwood Report recommended a quadratic equation as an option to be considered for computing the price of crab (“Blackwood Formula”). Specifically, the Blackwood Report states that the Blackwood Formula “***is an option provided to the parties for their consideration***”.³² It was not recommended as *the* formula to be used by the parties.

³¹ See Blackwood Report.

³² Blackwood Report at 59.

A. The new Regulation requires the Panel to consider quality

129. The new regulatory regime under FICBA, as promulgated on the evening of March 26, 2024, introduces a mixed process whereby the parties must present final offers on a formula pricing model for ultimate selection by the Panel, yet the Panel “shall” decide other conditions of sale for the supply of fish by way of interest arbitration.
130. Price and quality are not distinct concepts.
131. The statutory purpose underpinning the provisions governing the Panel is to ensure a timely start to the fishing season by reaching an objective determination on price and other conditions of sale where the parties are unable to agree. In determining an objective determination on price, the Panel necessarily decides the value of the raw material in export markets, the respective parties’ risk profiles in realizing that value, and potential inputs to that value.
132. The quality of the product, i.e. a critical aspect of the intrinsic value of the raw material, is now a fundamental aspect of the Panel’s determination of which final offer to select in terms of a formula, and how quality should be addressed in the residual conditions of sale.

B. The Blackwood Formula requires a reflection of the marketplace

133. The Blackwood Report recommended a quadratic equation to compute the price of crab . The Blackwood Formula is based on a common set of elements, including:
- (a) a reliable independent market price index that is reflective of the market for the products produced in Newfoundland and Labrador for any given species (i.e the market value);
 - (b) the exchange rate risk is a variable for all species that are traded in export markets;
 - (c) a starting harvester price needs to be established that varies based on market and exchange rate changes;
 - (d) an advance payment system is required whereby the risks during the harvest season is shared between harvesters and processors; and

- (e) a settlement price mechanism is established to average the market returns and harvester final price on a periodic basis.³³
134. The Blackwood Formula was recommended on the basis that “*the parties adopt and modify as necessary to reach an agreement that should form the pricing for snow crab*”.³⁴
135. The Blackwood Formula contemplates various aspects that ultimately determine the price, including:
- (a) The percent advance that shall be set for the season as initial payment is a critical component to be considered;
 - (b) The period (weeks) of the season that average market pricing will be monitored to settle final harvester prices for the season is a critical component to be considered; and
 - (c) Any modification or adjustments to the schedule governing the terms and conditions of sale are critical components to be considered, which critically includes quality of the crab.³⁵
136. Further, the Blackwood Formula necessarily relies on the Urner Barry low market price for 5 to 8 ounce Newfoundland and Labrador crab, as there is no other appropriate proxy.
137. There are three important components of the Blackwood Report: (1) harvesters will get premium price for crab, where they harvest premium crab, but producers will not be required to pay premium price for inferior crab; (2) processors will holdback 20% of each landing, to be adjusted based on market fluctuations; and (3) the Urner Barry low is to be the proxy market price.
138. The reason the GNL did not impose the suggested Blackwood quadratic equation is because they could not without imposing a 20% holdback and a proxy based on NL 5/8 Urner Barry low.

³³ Blackwood Report at 3

³⁴ Blackwood Report at 4.

³⁵ Blackwood Report at 59-61.

139. One larger criticism of the regression formula approach is that it does not yield a formula on the basis of its ability to help the industry or to fairly compensate market participants, but rather on the basis of what happened to be done in the past. Since history is not a good predictor of the present or the future they should have considered costs, investment and especially risk. They did however acknowledge that all the risk is with the processor after the crab is landed but did not make any allowance for such an important variable

C. The Blackwood Formula is inequitable without the 20% variance

140. The Blackwood Formula contemplates a settlement price mechanism to average the market returns and harvester final price on a periodic basis. This is achieved with a 20% variance, which is a holdback on the price paid to harvesters. Harvesters would be paid 80% initially, and then the remainder of the prices would be settled in accordance with market price fluctuations.
141. The 20% variance is inherent to the Blackwood Formula and without it the formula does not work equitably for all parties.
142. If the entire crab season was one week and final settlement was only based the Urner Barry low price, then final settlement and the week's price would be the same and a variance would not required.
143. However, since the season spans many weeks and the Urner Barry low price fluctuates, the final settlement will not correspond to what every harvester was paid through the season. The 20% variance is meant to account for a downward price movement, thereby providing some risk mitigation for the producer.
144. For example, without a variance if the Urner Barry low price converted to CAD is \$7.71 in week 3 a harvester would be paid \$3.00. If the market price moves upward so that the average market price at the settlement date is \$3.30, then the producer will pay an additional \$0.30/LB to the harvester. However, if the average market price declines and is calculated to be \$6.65, then a harvester would be entitled to \$2.50, not the \$3.00 originally paid. Producers will have no way to recoup this money for overpayment. A 20% variance would mean the harvester who landed crab in week 3 would instead be paid \$2.40 and receive an additional \$0.10 to bring them to the \$2.50 settlement price.

145. The variance is meant to account for volatility in market prices, and not penalize one party at the expense of another. The risk is meant to be shared under the Blackwood formula, both to the upside and the downside. If one party only benefits in upward price movement but refuses to accept downward price movements then it is disproportionately moving risk to one party over another. Therefore, altering the 20% variance breaks the Blackwood Formula as presented in the Blackwood Report, especially at prices currently realized in the market.
146. The Urner Barry low price is currently \$5.45 USD, which translates to approximately \$7.40 CAD. The Blackwood Formula results in a harvester price of \$2.85 and an initial payment of \$2.28. Since there is no guarantee that the market will increase, or remain the same, any decline in the market price over the season will result in producers overpaying at least some harvesters for raw material. The \$2.85 is without any quality deductions.
147. The Blackwood Formula is meant to provide equitable sharing for all harvesters, regardless of: (1) when they land crab; and (2) market price for that specific timeframe. A harvester need not try and time the market price to maximize value. This is similar to the stock market in which investors are attempting to pick when a stock is at its highest in order to sell. Without a variance, competition amongst harvesters is promoted to land a catch at what they may perceive as the best time for price, thus adding chaos to the season.
- D. The Blackwood Formula does not work unless Urner Barry Newfoundland low 5-8oz cluster is the price proxy**
148. Urner Barry is a market intelligence company which provides comprehensive market coverage across all major center-of-the-plate proteins in the United States. It provides coverage of 5-8 oz crab clusters, with this product being a reliable price proxy for all crab products. It can, from time to time, overstate the price as it reports on Case-Load sales, or Less-Than-Load sales, whereas the Newfoundland product is generally sold in truckload quantities.
149. Urner Barry Newfoundland low 5-8oz cluster is the only appropriate proxy.

E. Newfoundland and Labrador’s market position requires quality considerations

150. Market value is one of the three critical elements of the Blackwood Formula. Market value is driven by size and quality.³⁶ The Blackwood Report specifically acknowledges the need to adjust price for size and quality to reflect the market value of each crab. Specifically, the “*price should reflect the value of what is being traded just as it does in the marketplace*”.³⁷
151. The Blackwood Report confirms that the market price of snow crab is dependent on size, presence of barnacles, colour, full shape, leech eggs, and other defects.³⁸ As stated in the Blackwood Report, “[t]he reality is that all the crab are not worth the same price”.³⁹
152. Market value is a particularly important aspect of the Blackwood Formula given Newfoundland’s position in the international crab market and ongoing historically low prices of snow crab.
153. In its simplest form, the Blackwood Formula contemplates paying harvesters a premium price. However, 20% of that premium price would be held back by processors until, among other things, quality issues are determined. Where there are adverse quality conditions, the Blackwood Formula contemplates a deduction on price.
154. The Blackwood Formula must adjust for size and quality issues. If it does not, the price is completely out of step with other jurisdictions. Newfoundland snow crab is less desirable at the market than other crab in other jurisdictions – particularly the Gulf of St. Lawrence. Thus, the price of Newfoundland snow crab has historically been lower than other jurisdictions as discussed above.
155. The Blackwood Formula must take into account size and quality issues to ensure that the price of snow crab reflects the realities of the marketplace.

5. THE FFAW’S OFFER IS ANTITHETICAL TO THE BLACKWOOD REPORT

156. The FFAW’s anticipated offer is not in keeping with the spirit of the Blackwood Report. In light of its previous offers, ASP expects that the FFAW’s offer will be a Blackwood Formula

³⁶ Blackwood Report at 5.

³⁷ Blackwood Report at 51.

³⁸ Blackwood Report at 34, 51.

³⁹ Blackwood Report at 51.

without a 20% variance or quality consideration, and possibly with a price proxy other than the Urner Barry.

157. The FFAW and its constituent members' eyes have widened at the prospect of a premium price. Meanwhile, they cannot convince their members to accept the prospect of an appropriate holdback on the purchase price in contemplation of quality deductions.
158. The FFAW's 2024 offers⁴⁰ consist of the following framework:
- (a) a Blackwood-style formula;
 - (b) a minimal or non-existent holdback;
 - (c) a settlement price; and
 - (d) a \$0.30 deduction for less than 4 " carapace after the first 20% of less than 4 " carapace in each landing.
- A. The FFAW wants premium price without reference to quality**
159. FICBA, its underlying regulations, as well as the Blackwood Report, dictate that the FFAW cannot have it both ways. If producers are to bear the risk on quality issues, then any resulting formula must properly account for that risk in order to be reasonable.
160. The FFAW's offers do not include any deductions for quality, such as deductions for:
- (a) Critically weak crab;
 - (b) Overfilled pans;
 - (c) Crab not kept at or below the regulation/Improperly iced crab;
 - (d) Presence of leech eggs; and
 - (e) Proper weight deduction for barnacles.
161. To accept the FFAW's offer would impose a premium price for crab on all crab – regardless of quality.

⁴⁰ The FFAW's 2024 offers are attached as [Appendix 16-19](#).

162. The FFAW wants premium price without any deduction for quality. As noted in the Blackwood Report, this does not reflect the market because all crab are not worth the same price.⁴¹
163. The FFAW is effectively asking processors to pay the premium price on substandard crab that will: (1) cost more money to make market-ready; and (2) sell below the market price of premium crab. This is not a sustainable pricing model and unfairly places all risk on the processors.
164. The FFAW is only concerned with securing a high raw materials price. The FFAW is not interested in working towards a risk-sharing model that is fair to harvesters and processors.

B. The FFAW wants the ability to manipulate timing of landings

165. The Blackwood Formula is unworkable without the 20% variance because it does not share the risk. The purpose of the Blackwood Formula is to have a holdback mechanism that sustainably distributes market fluctuations throughout the season.
166. The FFAW's proposal ignores this essential part of the Blackwood Formula.
167. The FFAW has not proposed a variance, because it wants to the ability maximize harvester price by landing during market highs. This is unfair to processors who have no control on the timing of the purchase of landings and no control on the market price once the landing is processed and sold to the market.

C. The Panel cannot accept the FFAW's position

168. It is inappropriate for the Panel or the FFAW to essentially cherry-pick pieces of the Blackwood Report such that its proposal is not representative of the Blackwood Formula. Without deductions for quality, the use of of Urner Barry Newfoundland low 5-8oz cluster as the proxy and a 20% variance, the FFAW's proposal (if it proposes the Blackwood or anything close) is not in line with the Blackwood Report and disproportionately attributes all the risk on to the processors.
169. Accepting the FFAW's proposal is contrary to the principles of the Blackwood Report.

⁴¹ See Blackwood Report at 51.

170. In order to implement a sustainable pricing mechanism that is in the spirit of the Blackwood Report, the Panel must:
- (a) Impose the Blackwood Formula with a 20% variance and quality deductions; or
 - (b) Impose a formula that better reflects the market conditions of Newfoundland and Labrador snow crab without imposing quality deductions or a variance.

6. PROCEDURAL FAIRNESS

171. ASP maintains its position that this process is proceeding in a procedurally unfair fashion and repeats its reservation of rights set out in its March 26, 2024, correspondence. While ASP recognizes the limits of the Panel's discretion to control its own procedures in these extraordinary circumstances, it bears repeating that a nearly \$1 billion-dollar industry in Newfoundland and Labrador has suffered from unprecedented regulatory disruption, with a paradigmatic shift in the price-setting process mandated by the Province just days ago.
172. As a result, the Panel has a momentous task in front of it to produce a reasonable and procedurally fair decision. ASP intends in these submissions to make its best effort at assisting the Panel in this task.

7. CONCLUSION

173. The Panel has been presented with conflicting final offer positions on the formula and interest arbitration positions on the conditions for sale of snow crab in 2024.
174. ASP's formula best reflects:
- (a) a fair balance of proportional risk borne by harvesters and producers;
 - (b) the price point where producers can break even on harvesters' supplying lowest quality live crab;
 - (c) a price point that allows producers to absorb declines in the market;
 - (d) yield and supply considerations;
 - (e) market considerations, including ongoing inflationary pressures, consumer spending, and production costs;
 - (f) expert market analysis and intelligence; and
 - (g) consistency across this collection of evidence.

175. With respect to interest arbitration on the terms and conditions of sale, ASP's offer if the Panel chooses its formula:
- (a) Fairly distributes risk with respect to size, that allows harvesters with larger crab to benefit while still preventing high-grading;
 - (b) Fairly distributes risk with respect to worthless barnacles; and
 - (c) Re-enforces the existing regulatory requirements to prevent critically weak crab.
176. With respect to interest arbitration on the terms and conditions of sale, ASP's offer if the Panel chooses the FFAW's formula:
- (a) Fairly distributes risk with respect to size, that allows harvesters with larger crab to benefit while still preventing high-grading;
 - (b) Fairly distributes risk with respect to worthless barnacles; and
 - (c) Re-enforces the existing regulatory requirements to prevent critically weak crab;
 - (d) Fairly considers quality issues, such as leech eggs and overfilled pans;
 - (e) Fairly distributes risk of market fluctuations; and
 - (f) Relies on the most reliable price proxy available.
177. ASP submits that the preponderance of cogent evidence presented at this hearing favours the Panel selecting ASP's position in final offer selection and interest arbitration over that of the FFAW. ASP therefore asks that the Panel decide this arbitration in accordance with ASP's final offer position on price and ASP's position for interest arbitration on the conditions of sale.

All of which is respectfully submitted,

Association of Seafood Producers

2024 Crab Schedule

The prices and related terms and conditions for crab for 2024 are set out in this Schedule.

The parties agree that this Schedule and the Master Collective Agreement dated September 17, 2020 (or any replacement Master Collective Agreement thereto) together constitute a Crab Collective Agreement between the parties for the purposes of the Fishing Industry Collective Bargaining Act.

1. The following formula will take effect for the duration of the 2024 snow crab season.

The guaranteed minimum price will be \$2.60 per pound, subject to Appendix A.

Once the Urner Barry low price (UB Crab, Snow, Newfoundland, Cluster, 5-8oz) reaches \$7.43CAD/lb, then the raw material price per pound for harvesters will be determined through a formula of:

$$y = \min (0.13x^2 - 1.4x + 5.83, 0.37x)$$

Where y is the raw material price, and x is the average of the Tuesday and Thursday Urner Barry low price (UB Crab, Snow, Newfoundland, Cluster, 5-8oz) for the prior week, converted to CAD\$. The exchange rate used will be an average of the prior week, Sunday to Saturday.

Should Urner Barry provide a listing on Tuesday or Thursday, but not both, that listing shall be used for the basis of the calculation. Should no Urner Barry listing be provided during the week, the most recent prior Urner Barry listing shall be the basis of the calculation.

Example:

UB 5-8oz low price for the respective week is \$5.50/lb USD\$.

Exchange rate average for the prior week is 1.36.

UB price converted to CAD\$ is \$7.48/lb.

$$y = \min (0.13(7.48)^2 - 1.4(7.48) + 5.83, 0.3(7.48)$$

$y = \$2.63/\text{lb}$ for premium size crab (>4" carapace).

2. There will be a 5% tolerance for legal size crab <4" in each landing. This means that the first 5% of <4" crab in each landing will be paid at the price for greater than or equal to 4" crab. For all legal size crab <4" landed that exceed the 5% tolerance, will be paid \$0.30/lb less than the formulated price from Article 1.
3. Prices are based on legal size crab (at least 3¾").
4. Harvesters shall ensure that crab is properly iced at sea or held in a Refrigerated Sea Water (RSW) system, or Recirculating Sea Water System that maintains the crab at a temperature below 4°C as per section 24(1)(f) of the *Fish Inspection Operations Regulations*.
5. The companies will ensure adequate quantities of ice are available to fish harvesters.

May 1 – May 31 50,000 lbs per week

June 1 to End of Season 60,000 lbs per week

3L Small Supplementary

May 1 to May 31 30,000 lbs per week– Single Enterprises
30,000 lbs per trip, 50,000 lbs per week –
Combined/Buddy Up

June 1 to End of Season 30,000 lbs per trip

3Ps

May 1 to End of Season 25,000 lbs per trip

10. Barnacle Provision

A crab will be deemed to be “heavily infested” if the number of barnacles from the entire crab is 15 or greater. The weight of each shipment will be reduced by .24 times the percentage of the total shipment which is heavily infested. The amount for which the harvester is receipted and paid and the amount charged against the harvester’s IQ will be the net of the deduction for heavily infested crab. Incidence of barnacles does not affect the grading results.

11. Overfilled Pan Provision

Harvesters are required to store crab in 70-litre capacity stackable tote pans not to exceed 23 kilograms per tote pan. As stipulated in Section 24(1)(h) of the *Fish Inspection Operations Regulations*.

12. The parties to this Agreement undertake to implement the provisions of the attached Discharge/Trucking/Handling Protocol.

13. This Schedule will be in effect to the end of the 2024 crab fishery.

14. Fish Harvesters’ Resource Centre (FHRC) will be the exclusive dockside monitoring company for the crab fishery and the exclusive dockside grading company shall be Independent Dockside Grading (IDG).

15. The terms and conditions of this Agreement may be amended by mutual consent.

DATED at St. John’s, Newfoundland & Labrador this _____ day of _____, 2024.

Signed on behalf of the

Fish, Food and Allied Workers
FFAW-Unifor:

Witness

Greg Pretty
Fish, Food and Allied Workers
FFAW-Unifor

DATED at St. John's, Newfoundland & Labrador this _____ day of _____, 2024.

Signed on behalf of the
Association of Seafood Producers
ASP:

Witness

Jeff Loder
Association of Seafood Producers
ASP

Discharge/Trucking/Handling Protocol – Crab

The following protocols for crab discharge, handling and trucking provide processors, dischargers and transporters with a results based action plan for ensuring that crab is maintained at the proper temperatures and holding conditions required to maximize quality. These protocols are in accordance with the management plan, the task force report and the Department of Fisheries and Aquaculture's *Fish Inspection Regulations*. Processors have the responsibility to ensure that these protocols are adhered to and are responsible for ensuring that their shore agents and truckers abide by these protocols.

Requirements (as per the Fish Inspection Operations Regulations: 76/07)

- Maintenance of crab at a temperature of 0 to 4 degrees Celsius from the vessel through processing;
- Maintenance of crab in an enclosure or area of containment in which the relative humidity is greater than 75%;
- Protection of crab from physical damage, contamination and weather at all times;
- Stowage of crab in a container so that the depth of crab and ice does not exceed 90 centimetres but in any event so that the minimum distance between the crab and ice and the top of the container is 4 centimetres; and
- The utilization of handling practices that minimize the downgrading of crab from the boat through processing.

Prerequisites

- Adherence by harvesters to established protocols and regulations on: temperature, box weight and handling.
- Crab landings not meeting established guidelines, i.e., where grading samples exceed 4% dead or 20% critically weak, will be immediately reported to DFFA for inspection and harvesters notified.

Protocols

Unloading and Transport

- Unloading will occur at a suitable storage area which is conducive to maintaining crab at temperature of 0 to 4 degrees Celsius;
- Acceptable truck loading facilities must be available at the wharf. Required to eliminate crab trauma caused by throwing pans aboard the truck;
- Transport methods and handling must be conducive to maintaining the temperature at 0 to 4 degrees Celsius;
- Boxes must be stowed "so that the depth of fish (crab) and ice does not exceed 90 centimetres but in any event so that the minimum distance between the fish and ice and the top of the container is 4 centimetres . . . A container . . . may be placed on top of another container provided no pressure is, as a result, exerted on fish (crab) in the container on which it is placed" (*Fish Inspection Operations Regulations: 76/07 s24 (1)(e) and (2)*);
- Prior to departure from the dock, truck operators must obtain a record detailing: time(s) and location(s) of loading, weight per lot, temperature records at the time of loading and should develop a loading plan identifying each load. Temperatures must be checked and recorded prior to discharge.

Plant Holding

- Crab should be stored in lots in a CFIA approved holding area;
- Temperatures and box stowage must be maintained within established guidelines during holding;
- Records detailing the arrival time of the crab, its temperature and box weights at arrival, holding room temperatures, and lot locations must be maintained.

APPENDIX A

Currency Provision to be in effect for 2024 crab fishing season and only applies to raw material price not calculated by the formula:

The parties agree to establish a base currency exchange based on the average for the week ending Saturday, April 6, 2024 and thereafter, to monitor week to week, with the weekly average shall be set by 12 noon on Monday for week starting the previous day (Sunday). Any change in either direction of \$0.025 CAD from the base rate at the time of calculating the average would adjust the price by \$0.07 cents.

Example:

If the base rate for the USD to CAD is established at \$1.300 in the week ending April 6, 2024, the exchange would have to either go above 1.325 or below 1.275, to trigger the price change.

The average exchange rate would have to go to an average of > \$1.350 in a given week (Sunday to Saturday) during the crab fishing season to trigger another change upward of 7 cents/lb in minimum pricing. Each additional \$0.025 would add a further \$0.07 adjustment to the minimum price. The same process is followed in a decrease from the exchange rate base.

Appendix B

Market Price CAD\$	RMP
\$7.43	\$2.60
\$7.44	\$2.61
\$7.45	\$2.62
\$7.46	\$2.62
\$7.47	\$2.63
\$7.48	\$2.63
\$7.49	\$2.64
\$7.50	\$2.64
\$7.51	\$2.65
\$7.52	\$2.65
\$7.53	\$2.66
\$7.54	\$2.66
\$7.55	\$2.67
\$7.56	\$2.68
\$7.57	\$2.68
\$7.58	\$2.69
\$7.59	\$2.69
\$7.60	\$2.70
\$7.61	\$2.70
\$7.62	\$2.71
\$7.63	\$2.72
\$7.64	\$2.72
\$7.65	\$2.73
\$7.66	\$2.73
\$7.67	\$2.74
\$7.68	\$2.75
\$7.69	\$2.75
\$7.70	\$2.76
\$7.71	\$2.76
\$7.72	\$2.77
\$7.73	\$2.78
\$7.74	\$2.78
\$7.75	\$2.79
\$7.76	\$2.79

\$7.77	\$2.80
\$7.78	\$2.81
\$7.79	\$2.81
\$7.80	\$2.82
\$7.81	\$2.83
\$7.82	\$2.83
\$7.83	\$2.84
\$7.84	\$2.84
\$7.85	\$2.85
\$7.86	\$2.86
\$7.87	\$2.86
\$7.88	\$2.87
\$7.89	\$2.88
\$7.90	\$2.88
\$7.91	\$2.89
\$7.92	\$2.90
\$7.93	\$2.90
\$7.94	\$2.91
\$7.95	\$2.92
\$7.96	\$2.92
\$7.97	\$2.93
\$7.98	\$2.94
\$7.99	\$2.94
\$8.00	\$2.95
\$8.01	\$2.96
\$8.02	\$2.96
\$8.03	\$2.97
\$8.04	\$2.97
\$8.05	\$2.98
\$8.06	\$2.98
\$8.07	\$2.99
\$8.08	\$2.99
\$8.09	\$2.99
\$8.10	\$3.00
\$8.11	\$3.00
\$8.12	\$3.00
\$8.13	\$3.01
\$8.14	\$3.01
\$8.15	\$3.02
\$8.16	\$3.02
\$8.17	\$3.02
\$8.18	\$3.03
\$8.19	\$3.03

\$8.20	\$3.03
\$8.21	\$3.04
\$8.22	\$3.04
\$8.23	\$3.05
\$8.24	\$3.05
\$8.25	\$3.05
\$8.26	\$3.06
\$8.27	\$3.06
\$8.28	\$3.06
\$8.29	\$3.07
\$8.30	\$3.07
\$8.31	\$3.07
\$8.32	\$3.08
\$8.33	\$3.08
\$8.34	\$3.09
\$8.35	\$3.09
\$8.36	\$3.09
\$8.37	\$3.10
\$8.38	\$3.10
\$8.39	\$3.10
\$8.40	\$3.11
\$8.41	\$3.11
\$8.42	\$3.12
\$8.43	\$3.12
\$8.44	\$3.12
\$8.45	\$3.13
\$8.46	\$3.13
\$8.47	\$3.13
\$8.48	\$3.14
\$8.49	\$3.14
\$8.50	\$3.14
\$8.51	\$3.15
\$8.52	\$3.15
\$8.53	\$3.16
\$8.54	\$3.16
\$8.55	\$3.16
\$8.56	\$3.17
\$8.57	\$3.17
\$8.58	\$3.17
\$8.59	\$3.18
\$8.60	\$3.18

\$8.61	\$3.19
\$8.62	\$3.19
\$8.63	\$3.19
\$8.64	\$3.20
\$8.65	\$3.20
\$8.66	\$3.20
\$8.67	\$3.21
\$8.68	\$3.21
\$8.69	\$3.22
\$8.70	\$3.22
\$8.71	\$3.22
\$8.72	\$3.23
\$8.73	\$3.23
\$8.74	\$3.23
\$8.75	\$3.24
\$8.76	\$3.24
\$8.77	\$3.24
\$8.78	\$3.25
\$8.79	\$3.25
\$8.80	\$3.26
\$8.81	\$3.26
\$8.82	\$3.26
\$8.83	\$3.27
\$8.84	\$3.27
\$8.85	\$3.27
\$8.86	\$3.28
\$8.87	\$3.28
\$8.88	\$3.29
\$8.89	\$3.29
\$8.90	\$3.29
\$8.91	\$3.30
\$8.92	\$3.30
\$8.93	\$3.30
\$8.94	\$3.31
\$8.95	\$3.31
\$8.96	\$3.32
\$8.97	\$3.32
\$8.98	\$3.32
\$8.99	\$3.33

\$9.00	\$3.33
\$9.01	\$3.33
\$9.02	\$3.34
\$9.03	\$3.34
\$9.04	\$3.34
\$9.05	\$3.35
\$9.06	\$3.35
\$9.07	\$3.36
\$9.08	\$3.36
\$9.09	\$3.36
\$9.10	\$3.37
\$9.11	\$3.37
\$9.12	\$3.37
\$9.13	\$3.38
\$9.14	\$3.38
\$9.15	\$3.39
\$9.16	\$3.39
\$9.17	\$3.39
\$9.18	\$3.40
\$9.19	\$3.40
\$9.20	\$3.40
\$9.21	\$3.41
\$9.22	\$3.41
\$9.23	\$3.42
\$9.24	\$3.42
\$9.25	\$3.42
\$9.26	\$3.43
\$9.27	\$3.43
\$9.28	\$3.43
\$9.29	\$3.44
\$9.30	\$3.44
\$9.31	\$3.44
\$9.32	\$3.45
\$9.33	\$3.45
\$9.34	\$3.46
\$9.35	\$3.46
\$9.36	\$3.46
\$9.37	\$3.47
\$9.38	\$3.47

\$9.39	\$3.47
\$9.40	\$3.48
\$9.41	\$3.48
\$9.42	\$3.49
\$9.43	\$3.49
\$9.44	\$3.49
\$9.45	\$3.50
\$9.46	\$3.50
\$9.47	\$3.50
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\$9.60	\$3.55
\$9.61	\$3.56
\$9.62	\$3.56
\$9.63	\$3.56
\$9.64	\$3.57
\$9.65	\$3.57
\$9.66	\$3.57
\$9.67	\$3.58
\$9.68	\$3.58
\$9.69	\$3.59
\$9.70	\$3.59
\$9.71	\$3.59
\$9.72	\$3.60
\$9.73	\$3.60
\$9.74	\$3.60
\$9.75	\$3.61
\$9.76	\$3.61
\$9.77	\$3.61

\$9.78	\$3.62
\$9.79	\$3.62
\$9.80	\$3.63
\$9.81	\$3.63
\$9.82	\$3.63
\$9.83	\$3.64
\$9.84	\$3.64
\$9.85	\$3.64
\$9.86	\$3.65
\$9.87	\$3.65
\$9.88	\$3.66
\$9.89	\$3.66
\$9.90	\$3.66
\$9.91	\$3.67
\$9.92	\$3.67
\$9.93	\$3.67
\$9.94	\$3.68
\$9.95	\$3.68
\$9.96	\$3.69
\$9.97	\$3.69
\$9.98	\$3.69
\$9.99	\$3.70
\$10.00	\$3.70
\$10.01	\$3.70
\$10.02	\$3.71
\$10.03	\$3.71
\$10.04	\$3.71
\$10.05	\$3.72
\$10.06	\$3.72
\$10.07	\$3.73
\$10.08	\$3.73
\$10.09	\$3.73
\$10.10	\$3.74
\$10.11	\$3.74
\$10.12	\$3.74
\$10.13	\$3.75
\$10.14	\$3.75
\$10.15	\$3.76
\$10.16	\$3.76

\$10.17	\$3.76
\$10.18	\$3.77
\$10.19	\$3.77
\$10.20	\$3.77
\$10.21	\$3.78
\$10.22	\$3.78
\$10.23	\$3.79
\$10.24	\$3.79
\$10.25	\$3.79
\$10.26	\$3.80
\$10.27	\$3.80
\$10.28	\$3.80
\$10.29	\$3.81
\$10.30	\$3.81
\$10.31	\$3.81
\$10.32	\$3.82
\$10.33	\$3.82
\$10.34	\$3.83
\$10.35	\$3.83
\$10.36	\$3.83
\$10.37	\$3.84
\$10.38	\$3.84
\$10.39	\$3.84
\$10.40	\$3.85
\$10.41	\$3.85
\$10.42	\$3.86
\$10.43	\$3.86
\$10.44	\$3.86
\$10.45	\$3.87
\$10.46	\$3.87
\$10.47	\$3.87
\$10.48	\$3.88
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\$10.58	\$3.91
\$10.59	\$3.92
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\$10.64	\$3.94
\$10.65	\$3.94
\$10.66	\$3.94
\$10.67	\$3.95
\$10.68	\$3.95
\$10.69	\$3.96
\$10.70	\$3.96
\$10.71	\$3.96
\$10.72	\$3.97
\$10.73	\$3.97
\$10.74	\$3.97
\$10.75	\$3.98
\$10.76	\$3.98
\$10.77	\$3.98
\$10.78	\$3.99
\$10.79	\$3.99
\$10.80	\$4.00
\$10.81	\$4.00
\$10.82	\$4.00
\$10.83	\$4.01
\$10.84	\$4.01
\$10.85	\$4.01
\$10.86	\$4.02
\$10.87	\$4.02
\$10.88	\$4.03
\$10.89	\$4.03
\$10.90	\$4.03
\$10.91	\$4.04
\$10.92	\$4.04
\$10.93	\$4.04
\$10.94	\$4.05

\$10.95	\$4.05
\$10.96	\$4.06
\$10.97	\$4.06
\$10.98	\$4.06
\$10.99	\$4.07
\$11.00	\$4.07
\$11.01	\$4.07
\$11.02	\$4.08
\$11.03	\$4.08
\$11.04	\$4.08
\$11.05	\$4.09
\$11.06	\$4.09
\$11.07	\$4.10
\$11.08	\$4.10
\$11.09	\$4.10
\$11.10	\$4.11
\$11.11	\$4.11
\$11.12	\$4.11
\$11.13	\$4.12
\$11.14	\$4.12
\$11.15	\$4.13
\$11.16	\$4.13
\$11.17	\$4.13
\$11.18	\$4.14
\$11.19	\$4.14
\$11.20	\$4.14
\$11.21	\$4.15
\$11.22	\$4.15
\$11.23	\$4.16
\$11.24	\$4.16
\$11.25	\$4.16
\$11.26	\$4.17
\$11.27	\$4.17
\$11.28	\$4.17
\$11.29	\$4.18
\$11.30	\$4.18
\$11.31	\$4.18
\$11.32	\$4.19
\$11.33	\$4.19

\$11.34	\$4.20
\$11.35	\$4.20
\$11.36	\$4.20
\$11.37	\$4.21
\$11.38	\$4.21
\$11.39	\$4.21
\$11.40	\$4.22
\$11.41	\$4.22
\$11.42	\$4.23
\$11.43	\$4.23
\$11.44	\$4.23
\$11.45	\$4.24
\$11.46	\$4.24
\$11.47	\$4.24
\$11.48	\$4.25
\$11.49	\$4.25
\$11.50	\$4.25
\$11.51	\$4.26
\$11.52	\$4.26
\$11.53	\$4.27
\$11.54	\$4.27
\$11.55	\$4.27
\$11.56	\$4.28
\$11.57	\$4.28
\$11.58	\$4.28
\$11.59	\$4.29
\$11.60	\$4.29
\$11.61	\$4.30
\$11.62	\$4.30
\$11.63	\$4.30
\$11.64	\$4.31
\$11.65	\$4.31
\$11.66	\$4.31
\$11.67	\$4.32
\$11.68	\$4.32
\$11.69	\$4.33
\$11.70	\$4.33
\$11.71	\$4.33
\$11.72	\$4.34

\$11.73	\$4.34
\$11.74	\$4.34
\$11.75	\$4.35
\$11.76	\$4.35
\$11.77	\$4.35
\$11.78	\$4.36
\$11.79	\$4.36
\$11.80	\$4.37
\$11.81	\$4.37
\$11.82	\$4.37
\$11.83	\$4.38
\$11.84	\$4.38
\$11.85	\$4.38
\$11.86	\$4.39
\$11.87	\$4.39
\$11.88	\$4.40
\$11.89	\$4.40
\$11.90	\$4.40
\$11.91	\$4.41
\$11.92	\$4.41
\$11.93	\$4.41
\$11.94	\$4.42
\$11.95	\$4.42
\$11.96	\$4.43
\$11.97	\$4.43
\$11.98	\$4.43
\$11.99	\$4.44
\$12.00	\$4.44
\$12.01	\$4.44
\$12.02	\$4.45
\$12.03	\$4.45
\$12.04	\$4.45
\$12.05	\$4.46
\$12.06	\$4.46
\$12.07	\$4.47
\$12.08	\$4.47
\$12.09	\$4.47
\$12.10	\$4.48
\$12.11	\$4.48

\$12.12	\$4.48
\$12.13	\$4.49
\$12.14	\$4.49
\$12.15	\$4.50

--- End of Schedule ---

Appendix 1

Market Price CAD\$	RMP	Yield 65% Raw Material Cost	Harvester Share of Market Price
\$7.43	\$2.60	\$4.01	53.9%
\$7.44	\$2.61	\$4.02	54.0%
\$7.45	\$2.62	\$4.02	54.0%
\$7.46	\$2.62	\$4.03	54.0%
\$7.47	\$2.63	\$4.04	54.1%
\$7.48	\$2.63	\$4.05	54.1%
\$7.49	\$2.64	\$4.06	54.2%
\$7.50	\$2.64	\$4.07	54.2%
\$7.51	\$2.65	\$4.07	54.2%
\$7.52	\$2.65	\$4.08	54.3%
\$7.53	\$2.66	\$4.09	54.3%
\$7.54	\$2.66	\$4.10	54.4%
\$7.55	\$2.67	\$4.11	54.4%
\$7.56	\$2.68	\$4.12	54.5%
\$7.57	\$2.68	\$4.13	54.5%
\$7.58	\$2.69	\$4.13	54.5%
\$7.59	\$2.69	\$4.14	54.6%
\$7.60	\$2.70	\$4.15	54.6%
\$7.61	\$2.70	\$4.16	54.7%
\$7.62	\$2.71	\$4.17	54.7%
\$7.63	\$2.72	\$4.18	54.8%
\$7.64	\$2.72	\$4.19	54.8%
\$7.65	\$2.73	\$4.20	54.9%
\$7.66	\$2.73	\$4.21	54.9%
\$7.67	\$2.74	\$4.22	55.0%
\$7.68	\$2.75	\$4.22	55.0%
\$7.69	\$2.75	\$4.23	55.1%
\$7.70	\$2.76	\$4.24	55.1%
\$7.71	\$2.76	\$4.25	55.1%
\$7.72	\$2.77	\$4.26	55.2%
\$7.73	\$2.78	\$4.27	55.2%
\$7.74	\$2.78	\$4.28	55.3%

\$7.75	\$2.79	\$4.29	55.3%
\$7.76	\$2.79	\$4.30	55.4%
\$7.77	\$2.80	\$4.31	55.4%
\$7.78	\$2.81	\$4.32	55.5%
\$7.79	\$2.81	\$4.33	55.6%
\$7.80	\$2.82	\$4.34	55.6%
\$7.81	\$2.83	\$4.35	55.7%
\$7.82	\$2.83	\$4.36	55.7%
\$7.83	\$2.84	\$4.37	55.8%
\$7.84	\$2.84	\$4.38	55.8%
\$7.85	\$2.85	\$4.39	55.9%
\$7.86	\$2.86	\$4.40	55.9%
\$7.87	\$2.86	\$4.41	56.0%
\$7.88	\$2.87	\$4.42	56.0%
\$7.89	\$2.88	\$4.43	56.1%
\$7.90	\$2.88	\$4.44	56.1%
\$7.91	\$2.89	\$4.45	56.2%
\$7.92	\$2.90	\$4.46	56.3%
\$7.93	\$2.90	\$4.47	56.3%
\$7.94	\$2.91	\$4.48	56.4%
\$7.95	\$2.92	\$4.49	56.4%
\$7.96	\$2.92	\$4.50	56.5%
\$7.97	\$2.93	\$4.51	56.6%
\$7.98	\$2.94	\$4.52	56.6%
\$7.99	\$2.94	\$4.53	56.7%
\$8.00	\$2.95	\$4.54	56.7%
\$8.01	\$2.96	\$4.55	56.8%
\$8.02	\$2.96	\$4.56	56.9%
\$8.03	\$2.97	\$4.57	56.9%
\$8.04	\$2.97	\$4.58	56.9%
\$8.05	\$2.98	\$4.58	56.9%
\$8.06	\$2.98	\$4.59	56.9%
\$8.07	\$2.99	\$4.59	56.9%
\$8.08	\$2.99	\$4.60	56.9%
\$8.09	\$2.99	\$4.61	56.9%
\$8.10	\$3.00	\$4.61	56.9%
\$8.11	\$3.00	\$4.62	56.9%
\$8.12	\$3.00	\$4.62	56.9%
\$8.13	\$3.01	\$4.63	56.9%
\$8.14	\$3.01	\$4.63	56.9%
\$8.15	\$3.02	\$4.64	56.9%
\$8.16	\$3.02	\$4.64	56.9%
\$8.17	\$3.02	\$4.65	56.9%

\$8.18	\$3.03	\$4.66	56.9%
\$8.19	\$3.03	\$4.66	56.9%
\$8.20	\$3.03	\$4.67	56.9%
\$8.21	\$3.04	\$4.67	56.9%
\$8.22	\$3.04	\$4.68	56.9%
\$8.23	\$3.05	\$4.68	56.9%
\$8.24	\$3.05	\$4.69	56.9%
\$8.25	\$3.05	\$4.70	56.9%
\$8.26	\$3.06	\$4.70	56.9%
\$8.27	\$3.06	\$4.71	56.9%
\$8.28	\$3.06	\$4.71	56.9%
\$8.29	\$3.07	\$4.72	56.9%
\$8.30	\$3.07	\$4.72	56.9%
\$8.31	\$3.07	\$4.73	56.9%
\$8.32	\$3.08	\$4.74	56.9%
\$8.33	\$3.08	\$4.74	56.9%
\$8.34	\$3.09	\$4.75	56.9%
\$8.35	\$3.09	\$4.75	56.9%
\$8.36	\$3.09	\$4.76	56.9%
\$8.37	\$3.10	\$4.76	56.9%
\$8.38	\$3.10	\$4.77	56.9%
\$8.39	\$3.10	\$4.78	56.9%
\$8.40	\$3.11	\$4.78	56.9%
\$8.41	\$3.11	\$4.79	56.9%
\$8.42	\$3.12	\$4.79	56.9%
\$8.43	\$3.12	\$4.80	56.9%
\$8.44	\$3.12	\$4.80	56.9%
\$8.45	\$3.13	\$4.81	56.9%
\$8.46	\$3.13	\$4.82	56.9%
\$8.47	\$3.13	\$4.82	56.9%
\$8.48	\$3.14	\$4.83	56.9%
\$8.49	\$3.14	\$4.83	56.9%
\$8.50	\$3.14	\$4.84	56.9%
\$8.51	\$3.15	\$4.84	56.9%
\$8.52	\$3.15	\$4.85	56.9%
\$8.53	\$3.16	\$4.86	56.9%
\$8.54	\$3.16	\$4.86	56.9%
\$8.55	\$3.16	\$4.87	56.9%
\$8.56	\$3.17	\$4.87	56.9%
\$8.57	\$3.17	\$4.88	56.9%
\$8.58	\$3.17	\$4.88	56.9%

\$8.59	\$3.18	\$4.89	56.9%
\$8.60	\$3.18	\$4.90	56.9%
\$8.61	\$3.19	\$4.90	56.9%
\$8.62	\$3.19	\$4.91	56.9%
\$8.63	\$3.19	\$4.91	56.9%
\$8.64	\$3.20	\$4.92	56.9%
\$8.65	\$3.20	\$4.92	56.9%
\$8.66	\$3.20	\$4.93	56.9%
\$8.67	\$3.21	\$4.94	56.9%
\$8.68	\$3.21	\$4.94	56.9%
\$8.69	\$3.22	\$4.95	56.9%
\$8.70	\$3.22	\$4.95	56.9%
\$8.71	\$3.22	\$4.96	56.9%
\$8.72	\$3.23	\$4.96	56.9%
\$8.73	\$3.23	\$4.97	56.9%
\$8.74	\$3.23	\$4.98	56.9%
\$8.75	\$3.24	\$4.98	56.9%
\$8.76	\$3.24	\$4.99	56.9%
\$8.77	\$3.24	\$4.99	56.9%
\$8.78	\$3.25	\$5.00	56.9%
\$8.79	\$3.25	\$5.00	56.9%
\$8.80	\$3.26	\$5.01	56.9%
\$8.81	\$3.26	\$5.01	56.9%
\$8.82	\$3.26	\$5.02	56.9%
\$8.83	\$3.27	\$5.03	56.9%
\$8.84	\$3.27	\$5.03	56.9%
\$8.85	\$3.27	\$5.04	56.9%
\$8.86	\$3.28	\$5.04	56.9%
\$8.87	\$3.28	\$5.05	56.9%
\$8.88	\$3.29	\$5.05	56.9%
\$8.89	\$3.29	\$5.06	56.9%
\$8.90	\$3.29	\$5.07	56.9%
\$8.91	\$3.30	\$5.07	56.9%
\$8.92	\$3.30	\$5.08	56.9%
\$8.93	\$3.30	\$5.08	56.9%
\$8.94	\$3.31	\$5.09	56.9%
\$8.95	\$3.31	\$5.09	56.9%
\$8.96	\$3.32	\$5.10	56.9%
\$8.97	\$3.32	\$5.11	56.9%

\$8.98	\$3.32	\$5.11	56.9%
\$8.99	\$3.33	\$5.12	56.9%
\$9.00	\$3.33	\$5.12	56.9%
\$9.01	\$3.33	\$5.13	56.9%
\$9.02	\$3.34	\$5.13	56.9%
\$9.03	\$3.34	\$5.14	56.9%
\$9.04	\$3.34	\$5.15	56.9%
\$9.05	\$3.35	\$5.15	56.9%
\$9.06	\$3.35	\$5.16	56.9%
\$9.07	\$3.36	\$5.16	56.9%
\$9.08	\$3.36	\$5.17	56.9%
\$9.09	\$3.36	\$5.17	56.9%
\$9.10	\$3.37	\$5.18	56.9%
\$9.11	\$3.37	\$5.19	56.9%
\$9.12	\$3.37	\$5.19	56.9%
\$9.13	\$3.38	\$5.20	56.9%
\$9.14	\$3.38	\$5.20	56.9%
\$9.15	\$3.39	\$5.21	56.9%
\$9.16	\$3.39	\$5.21	56.9%
\$9.17	\$3.39	\$5.22	56.9%
\$9.18	\$3.40	\$5.23	56.9%
\$9.19	\$3.40	\$5.23	56.9%
\$9.20	\$3.40	\$5.24	56.9%
\$9.21	\$3.41	\$5.24	56.9%
\$9.22	\$3.41	\$5.25	56.9%
\$9.23	\$3.42	\$5.25	56.9%
\$9.24	\$3.42	\$5.26	56.9%
\$9.25	\$3.42	\$5.27	56.9%
\$9.26	\$3.43	\$5.27	56.9%
\$9.27	\$3.43	\$5.28	56.9%
\$9.28	\$3.43	\$5.28	56.9%
\$9.29	\$3.44	\$5.29	56.9%
\$9.30	\$3.44	\$5.29	56.9%
\$9.31	\$3.44	\$5.30	56.9%
\$9.32	\$3.45	\$5.31	56.9%
\$9.33	\$3.45	\$5.31	56.9%
\$9.34	\$3.46	\$5.32	56.9%
\$9.35	\$3.46	\$5.32	56.9%
\$9.36	\$3.46	\$5.33	56.9%

\$9.37	\$3.47	\$5.33	56.9%
\$9.38	\$3.47	\$5.34	56.9%
\$9.39	\$3.47	\$5.35	56.9%
\$9.40	\$3.48	\$5.35	56.9%
\$9.41	\$3.48	\$5.36	56.9%
\$9.42	\$3.49	\$5.36	56.9%
\$9.43	\$3.49	\$5.37	56.9%
\$9.44	\$3.49	\$5.37	56.9%
\$9.45	\$3.50	\$5.38	56.9%
\$9.46	\$3.50	\$5.38	56.9%
\$9.47	\$3.50	\$5.39	56.9%
\$9.48	\$3.51	\$5.40	56.9%
\$9.49	\$3.51	\$5.40	56.9%
\$9.50	\$3.51	\$5.41	56.9%
\$9.51	\$3.52	\$5.41	56.9%
\$9.52	\$3.52	\$5.42	56.9%
\$9.53	\$3.53	\$5.42	56.9%
\$9.54	\$3.53	\$5.43	56.9%
\$9.55	\$3.53	\$5.44	56.9%
\$9.56	\$3.54	\$5.44	56.9%
\$9.57	\$3.54	\$5.45	56.9%
\$9.58	\$3.54	\$5.45	56.9%
\$9.59	\$3.55	\$5.46	56.9%
\$9.60	\$3.55	\$5.46	56.9%
\$9.61	\$3.56	\$5.47	56.9%
\$9.62	\$3.56	\$5.48	56.9%
\$9.63	\$3.56	\$5.48	56.9%
\$9.64	\$3.57	\$5.49	56.9%
\$9.65	\$3.57	\$5.49	56.9%
\$9.66	\$3.57	\$5.50	56.9%
\$9.67	\$3.58	\$5.50	56.9%
\$9.68	\$3.58	\$5.51	56.9%
\$9.69	\$3.59	\$5.52	56.9%
\$9.70	\$3.59	\$5.52	56.9%
\$9.71	\$3.59	\$5.53	56.9%
\$9.72	\$3.60	\$5.53	56.9%
\$9.73	\$3.60	\$5.54	56.9%
\$9.74	\$3.60	\$5.54	56.9%
\$9.75	\$3.61	\$5.55	56.9%

\$9.76	\$3.61	\$5.56	56.9%
\$9.77	\$3.61	\$5.56	56.9%
\$9.78	\$3.62	\$5.57	56.9%
\$9.79	\$3.62	\$5.57	56.9%
\$9.80	\$3.63	\$5.58	56.9%
\$9.81	\$3.63	\$5.58	56.9%
\$9.82	\$3.63	\$5.59	56.9%
\$9.83	\$3.64	\$5.60	56.9%
\$9.84	\$3.64	\$5.60	56.9%
\$9.85	\$3.64	\$5.61	56.9%
\$9.86	\$3.65	\$5.61	56.9%
\$9.87	\$3.65	\$5.62	56.9%
\$9.88	\$3.66	\$5.62	56.9%
\$9.89	\$3.66	\$5.63	56.9%
\$9.90	\$3.66	\$5.64	56.9%
\$9.91	\$3.67	\$5.64	56.9%
\$9.92	\$3.67	\$5.65	56.9%
\$9.93	\$3.67	\$5.65	56.9%
\$9.94	\$3.68	\$5.66	56.9%
\$9.95	\$3.68	\$5.66	56.9%
\$9.96	\$3.69	\$5.67	56.9%
\$9.97	\$3.69	\$5.68	56.9%
\$9.98	\$3.69	\$5.68	56.9%
\$9.99	\$3.70	\$5.69	56.9%
\$10.00	\$3.70	\$5.69	56.9%
\$10.01	\$3.70	\$5.70	56.9%
\$10.02	\$3.71	\$5.70	56.9%
\$10.03	\$3.71	\$5.71	56.9%
\$10.04	\$3.71	\$5.72	56.9%
\$10.05	\$3.72	\$5.72	56.9%
\$10.06	\$3.72	\$5.73	56.9%
\$10.07	\$3.73	\$5.73	56.9%
\$10.08	\$3.73	\$5.74	56.9%
\$10.09	\$3.73	\$5.74	56.9%
\$10.10	\$3.74	\$5.75	56.9%
\$10.11	\$3.74	\$5.75	56.9%
\$10.12	\$3.74	\$5.76	56.9%
\$10.13	\$3.75	\$5.77	56.9%
\$10.14	\$3.75	\$5.77	56.9%

\$10.15	\$3.76	\$5.78	56.9%
\$10.16	\$3.76	\$5.78	56.9%
\$10.17	\$3.76	\$5.79	56.9%
\$10.18	\$3.77	\$5.79	56.9%
\$10.19	\$3.77	\$5.80	56.9%
\$10.20	\$3.77	\$5.81	56.9%
\$10.21	\$3.78	\$5.81	56.9%
\$10.22	\$3.78	\$5.82	56.9%
\$10.23	\$3.79	\$5.82	56.9%
\$10.24	\$3.79	\$5.83	56.9%
\$10.25	\$3.79	\$5.83	56.9%
\$10.26	\$3.80	\$5.84	56.9%
\$10.27	\$3.80	\$5.85	56.9%
\$10.28	\$3.80	\$5.85	56.9%
\$10.29	\$3.81	\$5.86	56.9%
\$10.30	\$3.81	\$5.86	56.9%
\$10.31	\$3.81	\$5.87	56.9%
\$10.32	\$3.82	\$5.87	56.9%
\$10.33	\$3.82	\$5.88	56.9%
\$10.34	\$3.83	\$5.89	56.9%
\$10.35	\$3.83	\$5.89	56.9%
\$10.36	\$3.83	\$5.90	56.9%
\$10.37	\$3.84	\$5.90	56.9%
\$10.38	\$3.84	\$5.91	56.9%
\$10.39	\$3.84	\$5.91	56.9%
\$10.40	\$3.85	\$5.92	56.9%
\$10.41	\$3.85	\$5.93	56.9%
\$10.42	\$3.86	\$5.93	56.9%
\$10.43	\$3.86	\$5.94	56.9%
\$10.44	\$3.86	\$5.94	56.9%
\$10.45	\$3.87	\$5.95	56.9%
\$10.46	\$3.87	\$5.95	56.9%
\$10.47	\$3.87	\$5.96	56.9%
\$10.48	\$3.88	\$5.97	56.9%
\$10.49	\$3.88	\$5.97	56.9%
\$10.50	\$3.88	\$5.98	56.9%
\$10.51	\$3.89	\$5.98	56.9%
\$10.52	\$3.89	\$5.99	56.9%
\$10.53	\$3.90	\$5.99	56.9%

\$10.54	\$3.90	\$6.00	56.9%
\$10.55	\$3.90	\$6.01	56.9%
\$10.56	\$3.91	\$6.01	56.9%
\$10.57	\$3.91	\$6.02	56.9%
\$10.58	\$3.91	\$6.02	56.9%
\$10.59	\$3.92	\$6.03	56.9%
\$10.60	\$3.92	\$6.03	56.9%
\$10.61	\$3.93	\$6.04	56.9%
\$10.62	\$3.93	\$6.05	56.9%
\$10.63	\$3.93	\$6.05	56.9%
\$10.64	\$3.94	\$6.06	56.9%
\$10.65	\$3.94	\$6.06	56.9%
\$10.66	\$3.94	\$6.07	56.9%
\$10.67	\$3.95	\$6.07	56.9%
\$10.68	\$3.95	\$6.08	56.9%
\$10.69	\$3.96	\$6.09	56.9%
\$10.70	\$3.96	\$6.09	56.9%
\$10.71	\$3.96	\$6.10	56.9%
\$10.72	\$3.97	\$6.10	56.9%
\$10.73	\$3.97	\$6.11	56.9%
\$10.74	\$3.97	\$6.11	56.9%
\$10.75	\$3.98	\$6.12	56.9%
\$10.76	\$3.98	\$6.12	56.9%
\$10.77	\$3.98	\$6.13	56.9%
\$10.78	\$3.99	\$6.14	56.9%
\$10.79	\$3.99	\$6.14	56.9%
\$10.80	\$4.00	\$6.15	56.9%
\$10.81	\$4.00	\$6.15	56.9%
\$10.82	\$4.00	\$6.16	56.9%
\$10.83	\$4.01	\$6.16	56.9%
\$10.84	\$4.01	\$6.17	56.9%
\$10.85	\$4.01	\$6.18	56.9%
\$10.86	\$4.02	\$6.18	56.9%
\$10.87	\$4.02	\$6.19	56.9%
\$10.88	\$4.03	\$6.19	56.9%
\$10.89	\$4.03	\$6.20	56.9%
\$10.90	\$4.03	\$6.20	56.9%
\$10.91	\$4.04	\$6.21	56.9%
\$10.92	\$4.04	\$6.22	56.9%

\$10.93	\$4.04	\$6.22	56.9%
\$10.94	\$4.05	\$6.23	56.9%
\$10.95	\$4.05	\$6.23	56.9%
\$10.96	\$4.06	\$6.24	56.9%
\$10.97	\$4.06	\$6.24	56.9%
\$10.98	\$4.06	\$6.25	56.9%
\$10.99	\$4.07	\$6.26	56.9%
\$11.00	\$4.07	\$6.26	56.9%
\$11.01	\$4.07	\$6.27	56.9%
\$11.02	\$4.08	\$6.27	56.9%
\$11.03	\$4.08	\$6.28	56.9%
\$11.04	\$4.08	\$6.28	56.9%
\$11.05	\$4.09	\$6.29	56.9%
\$11.06	\$4.09	\$6.30	56.9%
\$11.07	\$4.10	\$6.30	56.9%
\$11.08	\$4.10	\$6.31	56.9%
\$11.09	\$4.10	\$6.31	56.9%
\$11.10	\$4.11	\$6.32	56.9%
\$11.11	\$4.11	\$6.32	56.9%
\$11.12	\$4.11	\$6.33	56.9%
\$11.13	\$4.12	\$6.34	56.9%
\$11.14	\$4.12	\$6.34	56.9%
\$11.15	\$4.13	\$6.35	56.9%
\$11.16	\$4.13	\$6.35	56.9%
\$11.17	\$4.13	\$6.36	56.9%
\$11.18	\$4.14	\$6.36	56.9%
\$11.19	\$4.14	\$6.37	56.9%
\$11.20	\$4.14	\$6.38	56.9%
\$11.21	\$4.15	\$6.38	56.9%
\$11.22	\$4.15	\$6.39	56.9%
\$11.23	\$4.16	\$6.39	56.9%
\$11.24	\$4.16	\$6.40	56.9%
\$11.25	\$4.16	\$6.40	56.9%
\$11.26	\$4.17	\$6.41	56.9%
\$11.27	\$4.17	\$6.42	56.9%
\$11.28	\$4.17	\$6.42	56.9%
\$11.29	\$4.18	\$6.43	56.9%
\$11.30	\$4.18	\$6.43	56.9%
\$11.31	\$4.18	\$6.44	56.9%

\$11.32	\$4.19	\$6.44	56.9%
\$11.33	\$4.19	\$6.45	56.9%
\$11.34	\$4.20	\$6.46	56.9%
\$11.35	\$4.20	\$6.46	56.9%
\$11.36	\$4.20	\$6.47	56.9%
\$11.37	\$4.21	\$6.47	56.9%
\$11.38	\$4.21	\$6.48	56.9%
\$11.39	\$4.21	\$6.48	56.9%
\$11.40	\$4.22	\$6.49	56.9%
\$11.41	\$4.22	\$6.49	56.9%
\$11.42	\$4.23	\$6.50	56.9%
\$11.43	\$4.23	\$6.51	56.9%
\$11.44	\$4.23	\$6.51	56.9%
\$11.45	\$4.24	\$6.52	56.9%
\$11.46	\$4.24	\$6.52	56.9%
\$11.47	\$4.24	\$6.53	56.9%
\$11.48	\$4.25	\$6.53	56.9%
\$11.49	\$4.25	\$6.54	56.9%
\$11.50	\$4.25	\$6.55	56.9%
\$11.51	\$4.26	\$6.55	56.9%
\$11.52	\$4.26	\$6.56	56.9%
\$11.53	\$4.27	\$6.56	56.9%
\$11.54	\$4.27	\$6.57	56.9%
\$11.55	\$4.27	\$6.57	56.9%
\$11.56	\$4.28	\$6.58	56.9%
\$11.57	\$4.28	\$6.59	56.9%
\$11.58	\$4.28	\$6.59	56.9%
\$11.59	\$4.29	\$6.60	56.9%
\$11.60	\$4.29	\$6.60	56.9%
\$11.61	\$4.30	\$6.61	56.9%
\$11.62	\$4.30	\$6.61	56.9%
\$11.63	\$4.30	\$6.62	56.9%
\$11.64	\$4.31	\$6.63	56.9%
\$11.65	\$4.31	\$6.63	56.9%
\$11.66	\$4.31	\$6.64	56.9%
\$11.67	\$4.32	\$6.64	56.9%
\$11.68	\$4.32	\$6.65	56.9%
\$11.69	\$4.33	\$6.65	56.9%
\$11.70	\$4.33	\$6.66	56.9%

\$11.71	\$4.33	\$6.67	56.9%
\$11.72	\$4.34	\$6.67	56.9%
\$11.73	\$4.34	\$6.68	56.9%
\$11.74	\$4.34	\$6.68	56.9%
\$11.75	\$4.35	\$6.69	56.9%
\$11.76	\$4.35	\$6.69	56.9%
\$11.77	\$4.35	\$6.70	56.9%
\$11.78	\$4.36	\$6.71	56.9%
\$11.79	\$4.36	\$6.71	56.9%
\$11.80	\$4.37	\$6.72	56.9%
\$11.81	\$4.37	\$6.72	56.9%
\$11.82	\$4.37	\$6.73	56.9%
\$11.83	\$4.38	\$6.73	56.9%
\$11.84	\$4.38	\$6.74	56.9%
\$11.85	\$4.38	\$6.75	56.9%
\$11.86	\$4.39	\$6.75	56.9%
\$11.87	\$4.39	\$6.76	56.9%
\$11.88	\$4.40	\$6.76	56.9%
\$11.89	\$4.40	\$6.77	56.9%
\$11.90	\$4.40	\$6.77	56.9%
\$11.91	\$4.41	\$6.78	56.9%
\$11.92	\$4.41	\$6.79	56.9%
\$11.93	\$4.41	\$6.79	56.9%
\$11.94	\$4.42	\$6.80	56.9%
\$11.95	\$4.42	\$6.80	56.9%
\$11.96	\$4.43	\$6.81	56.9%
\$11.97	\$4.43	\$6.81	56.9%
\$11.98	\$4.43	\$6.82	56.9%
\$11.99	\$4.44	\$6.83	56.9%
\$12.00	\$4.44	\$6.83	56.9%
\$12.01	\$4.44	\$6.84	56.9%
\$12.02	\$4.45	\$6.84	56.9%
\$12.03	\$4.45	\$6.85	56.9%
\$12.04	\$4.45	\$6.85	56.9%
\$12.05	\$4.46	\$6.86	56.9%
\$12.06	\$4.46	\$6.86	56.9%
\$12.07	\$4.47	\$6.87	56.9%
\$12.08	\$4.47	\$6.88	56.9%
\$12.09	\$4.47	\$6.88	56.9%

\$12.10	\$4.48	\$6.89	56.9%
\$12.11	\$4.48	\$6.89	56.9%
\$12.12	\$4.48	\$6.90	56.9%
\$12.13	\$4.49	\$6.90	56.9%
\$12.14	\$4.49	\$6.91	56.9%
\$12.15	\$4.50	\$6.92	56.9%