



Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: American Lobster Management Board

FROM: American Lobster Technical Committee

DATE: July 25, 2016

SUBJECT: Effect of Gauge Changes on Exploitation, SSB, Reference Abundance, and Catch

The following analysis looks at the effect of gauge size changes on egg production, exploitation, spawning stock biomass (SSB), reference abundance, and catch. This work is intended to provide a holistic view of stock and fishery changes that may result from alterations to the minimum and maximum gauge size. Table 1 summarizes scenarios in which a 20% or 60% increase in egg production is achieved, per the motion of the Board at the May 2016 meeting. Tables 2-6 look at all combinations of gauge changes in regards to egg production, exploitation, SSB, reference abundance, and catch.

Table 1. Minimum and maximum size window necessary to achieve a 20% and 60% increase in egg production respectively. Includes % change in exploitation, spawning stock biomass, reference abundance, and catch associated with the size windows presented. *Assumes changes in gauge size from the current 86 mm minimum and 133 mm maximum size inshore, and an 89 mm minimum size and a 171 mm maximum size offshore. English unit conversions are approximate.

| | Min | Max | Egg Production | Exploitation | Spawning Stock Biomass | Reference Abundance | Catch |
|----------|---|---|----------------|--------------|------------------------|---------------------|-------|
| Inshore | 88 mm (3 ¹⁵ / ₃₂ ") | 105 mm (4 ¹ / ₈ ") | 20% | -18% | 20% | 9% | -11% |
| | 91 mm (3 ⁹ / ₁₆ ") | 115 mm (4 ¹ / ₂ ") | 18% | -22% | 22% | 11% | -14% |
| | 92 mm (3 ⁵ / ₈ ") | 165 mm (6 ¹ / ₂ ") | 20% | -27% | 25% | 13% | -17% |
| Offshore | 91 mm (3 ⁹ / ₁₆ ") | 105 mm (4 ¹ / ₈ ") | 22% | -21% | 22% | 9% | -13% |
| | 94 mm (3 ¹¹ / ₁₆ ") | 115 mm (4 ¹ / ₂ ") | 20% | -26% | 24% | 12% | -17% |
| | 95 mm (3 ³ / ₄ ") | 165 mm (6 ¹ / ₂ ") | 21% | -28% | 26% | 13% | -19% |
| Inshore | 99 mm (3 ⁷ / ₈ ") | 115 mm (4 ¹ / ₂ ") | 60% | -56% | 71% | 32% | -42% |
| | 101 mm (3 ²⁹ / ₃₂ ") | 165 mm (6 ¹ / ₂ ") | 59% | -59% | 76% | 35% | -45% |
| Offshore | 102 mm (4") | 115 mm (4 ¹ / ₂ ") | 62% | -60% | 71% | 31% | -47% |
| | 103 mm (4 ¹ / ₁₆ ") | 165 mm (6 ¹ / ₂ ") | 63% | -63% | 75% | 34% | -50% |

Table 2. Inshore and offshore minimum/maximum gauge change scenarios and corresponding egg production changes from the current gauge sizes. Egg production is expressed as percent increases from the current conditions.

Inshore; Min=86, Max=133

| Min Size | Max size | | | | | | |
|----------|----------|-----|------|------|------|------|------|
| | 105 | 115 | 125 | 135 | 145 | 155 | 165 |
| 82 | 2% | -7% | -8% | -8% | -8% | -8% | -8% |
| 83 | 3% | -6% | -7% | -7% | -7% | -7% | -7% |
| 84 | 5% | -4% | -5% | -5% | -5% | -5% | -5% |
| 85 | 8% | -1% | -3% | -3% | -3% | -3% | -3% |
| 86 | 12% | 1% | 0% | 0% | 0% | 0% | 0% |
| 87 | 15% | 5% | 3% | 3% | 3% | 3% | 3% |
| 88 | 20% | 8% | 6% | 6% | 6% | 6% | 6% |
| 89 | 23% | 11% | 9% | 9% | 9% | 9% | 9% |
| 90 | 27% | 14% | 12% | 12% | 12% | 12% | 12% |
| 91 | 33% | 18% | 16% | 16% | 16% | 16% | 16% |
| 92 | 39% | 22% | 20% | 20% | 20% | 20% | 20% |
| 93 | 46% | 28% | 26% | 25% | 25% | 25% | 25% |
| 94 | 51% | 31% | 29% | 28% | 28% | 28% | 28% |
| 95 | NA | 35% | 32% | 32% | 32% | 32% | 32% |
| 96 | NA | 40% | 37% | 37% | 37% | 37% | 37% |
| 97 | NA | 47% | 43% | 43% | 43% | 43% | 43% |
| 98 | NA | 56% | 51% | 51% | 51% | 51% | 51% |
| 99 | NA | 59% | 54% | 54% | 54% | 54% | 54% |
| 100 | NA | 63% | 58% | 57% | 57% | 57% | 57% |
| 101 | NA | 69% | 63% | 62% | 62% | 62% | 62% |
| 102 | NA | 76% | 70% | 69% | 69% | 69% | 69% |
| 103 | NA | 87% | 79% | 78% | 78% | 78% | 78% |
| 104 | NA | 91% | 82% | 81% | 81% | 81% | 81% |
| 105 | NA | NA | 85% | 84% | 84% | 84% | 84% |
| 106 | NA | NA | 90% | 89% | 89% | 89% | 89% |
| 107 | NA | NA | 97% | 96% | 95% | 95% | 95% |
| 108 | NA | NA | 107% | 105% | 105% | 105% | 105% |
| 109 | NA | NA | 110% | 108% | 107% | 107% | 107% |
| 110 | NA | NA | 113% | 111% | 110% | 110% | 110% |

Offshore; Min=89, Max=171

| Min Size | Max size | | | | | | |
|----------|----------|------|------|------|------|------|------|
| | 105 | 115 | 125 | 135 | 145 | 155 | 165 |
| 82 | -7% | -14% | -15% | -16% | -16% | -16% | -16% |
| 83 | -6% | -14% | -15% | -15% | -15% | -15% | -15% |
| 84 | -3% | -12% | -13% | -13% | -13% | -13% | -13% |
| 85 | 0% | -9% | -10% | -11% | -11% | -11% | -11% |
| 86 | 3% | -7% | -8% | -8% | -8% | -8% | -8% |
| 87 | 6% | -4% | -5% | -5% | -5% | -5% | -5% |
| 88 | 10% | -1% | -2% | -2% | -2% | -2% | -2% |
| 89 | 13% | 2% | 0% | 0% | 0% | 0% | 0% |
| 90 | 17% | 5% | 3% | 3% | 3% | 3% | 3% |
| 91 | 22% | 8% | 6% | 6% | 6% | 6% | 6% |
| 92 | 27% | 12% | 11% | 10% | 10% | 10% | 10% |
| 93 | 34% | 18% | 15% | 15% | 15% | 15% | 15% |
| 94 | 39% | 20% | 18% | 18% | 18% | 18% | 18% |
| 95 | NA | 24% | 22% | 21% | 21% | 21% | 21% |
| 96 | NA | 29% | 26% | 26% | 25% | 25% | 25% |
| 97 | NA | 35% | 32% | 31% | 31% | 31% | 31% |
| 98 | NA | 43% | 39% | 39% | 39% | 39% | 39% |
| 99 | NA | 46% | 42% | 41% | 41% | 41% | 41% |
| 100 | NA | 50% | 45% | 45% | 45% | 45% | 45% |
| 101 | NA | 55% | 50% | 49% | 49% | 49% | 49% |
| 102 | NA | 62% | 56% | 55% | 55% | 55% | 55% |
| 103 | NA | 72% | 64% | 64% | 63% | 63% | 63% |
| 104 | NA | 75% | 67% | 66% | 66% | 66% | 66% |
| 105 | NA | NA | 70% | 69% | 69% | 69% | 69% |
| 106 | NA | NA | 75% | 74% | 73% | 73% | 73% |
| 107 | NA | NA | 81% | 80% | 79% | 79% | 79% |
| 108 | NA | NA | 90% | 89% | 88% | 88% | 88% |
| 109 | NA | NA | 92% | 91% | 90% | 90% | 90% |
| 110 | NA | NA | 95% | 93% | 93% | 93% | 93% |

Table 3. Inshore and offshore minimum/maximum gauge change scenarios and corresponding exploitation changes from the current gauge sizes. Exploitation is expressed as percent increases from the current conditions.

Inshore; Min=86, Max=133

| | Max size | | | | | | |
|-----|----------|------|------|------|------|------|------|
| | 105 | 115 | 125 | 135 | 145 | 155 | 165 |
| 82 | 7% | 14% | 14% | 14% | 14% | 14% | 14% |
| 83 | 5% | 12% | 13% | 13% | 13% | 13% | 13% |
| 84 | 1% | 8% | 9% | 9% | 9% | 9% | 9% |
| 85 | -4% | 4% | 4% | 4% | 5% | 5% | 5% |
| 86 | -8% | -1% | 0% | 0% | 0% | 0% | 0% |
| 87 | -13% | -6% | -5% | -5% | -5% | -5% | -5% |
| 88 | -18% | -11% | -10% | -10% | -10% | -10% | -10% |
| 89 | -22% | -14% | -13% | -13% | -13% | -13% | -13% |
| 90 | -26% | -18% | -17% | -17% | -17% | -17% | -17% |
| 91 | -31% | -22% | -22% | -21% | -21% | -21% | -21% |
| 92 | -37% | -28% | -27% | -27% | -27% | -27% | -27% |
| 93 | -43% | -33% | -32% | -32% | -32% | -32% | -32% |
| 94 | -46% | -36% | -35% | -35% | -35% | -35% | -35% |
| 95 | NA | -39% | -38% | -38% | -38% | -38% | -38% |
| 96 | NA | -43% | -42% | -42% | -42% | -42% | -42% |
| 97 | NA | -48% | -46% | -46% | -46% | -46% | -46% |
| 98 | NA | -54% | -53% | -53% | -52% | -52% | -52% |
| 99 | NA | -56% | -54% | -54% | -54% | -54% | -54% |
| 100 | NA | -58% | -56% | -56% | -56% | -56% | -56% |
| 101 | NA | -61% | -59% | -59% | -59% | -59% | -59% |
| 102 | NA | -65% | -63% | -63% | -63% | -63% | -63% |
| 103 | NA | -71% | -68% | -68% | -68% | -68% | -68% |
| 104 | NA | -72% | -69% | -69% | -69% | -69% | -69% |
| 105 | NA | NA | -71% | -70% | -70% | -70% | -70% |
| 106 | NA | NA | -73% | -72% | -72% | -72% | -72% |
| 107 | NA | NA | -75% | -75% | -75% | -75% | -75% |
| 108 | NA | NA | -80% | -79% | -79% | -79% | -79% |
| 109 | NA | NA | -81% | -80% | -80% | -80% | -80% |
| 110 | NA | NA | -81% | -81% | -81% | -81% | -81% |

Offshore; Min=89, Max=171

| | Max size | | | | | | |
|-----|----------|------|------|------|------|------|------|
| | 105 | 115 | 125 | 135 | 145 | 155 | 165 |
| 82 | 23% | 31% | 32% | 32% | 32% | 32% | 32% |
| 83 | 21% | 29% | 30% | 30% | 30% | 30% | 30% |
| 84 | 16% | 24% | 25% | 25% | 25% | 25% | 25% |
| 85 | 11% | 20% | 20% | 21% | 21% | 21% | 21% |
| 86 | 6% | 14% | 15% | 15% | 15% | 15% | 15% |
| 87 | 0% | 9% | 10% | 10% | 10% | 10% | 10% |
| 88 | -6% | 3% | 4% | 4% | 4% | 4% | 4% |
| 89 | -10% | -1% | 0% | 0% | 0% | 0% | 0% |
| 90 | -15% | -5% | -4% | -4% | -4% | -4% | -4% |
| 91 | -21% | -11% | -10% | -9% | -9% | -9% | -9% |
| 92 | -27% | -16% | -15% | -15% | -15% | -15% | -15% |
| 93 | -34% | -23% | -22% | -22% | -22% | -22% | -22% |
| 94 | -38% | -26% | -25% | -25% | -25% | -25% | -25% |
| 95 | NA | -30% | -28% | -28% | -28% | -28% | -28% |
| 96 | NA | -34% | -33% | -33% | -33% | -33% | -33% |
| 97 | NA | -40% | -38% | -38% | -38% | -38% | -38% |
| 98 | NA | -47% | -45% | -45% | -45% | -45% | -45% |
| 99 | NA | -49% | -47% | -47% | -47% | -47% | -47% |
| 100 | NA | -52% | -50% | -50% | -49% | -49% | -49% |
| 101 | NA | -55% | -53% | -53% | -53% | -53% | -53% |
| 102 | NA | -60% | -57% | -57% | -57% | -57% | -57% |
| 103 | NA | -66% | -63% | -63% | -63% | -63% | -63% |
| 104 | NA | -68% | -64% | -64% | -64% | -64% | -64% |
| 105 | NA | NA | -66% | -66% | -66% | -66% | -66% |
| 106 | NA | NA | -68% | -68% | -68% | -68% | -68% |
| 107 | NA | NA | -72% | -71% | -71% | -71% | -71% |
| 108 | NA | NA | -77% | -76% | -76% | -76% | -76% |
| 109 | NA | NA | -78% | -77% | -77% | -77% | -77% |
| 110 | NA | NA | -79% | -78% | -78% | -78% | -78% |

Table 4. Inshore and offshore minimum/maximum gauge change scenarios and corresponding spawning stock biomass (SSB) changes from the current gauge sizes. SSB is expressed as percent increases from the current conditions.

Inshore; Min=86, Max=133

| | Max size → | | | | | | |
|-----|------------|------|------|------|------|------|------|
| | 105 | 115 | 125 | 135 | 145 | 155 | 165 |
| 82 | -1% | -9% | -10% | -10% | -10% | -10% | -10% |
| 83 | 0% | -8% | -9% | -9% | -9% | -9% | -9% |
| 84 | 4% | -5% | -6% | -6% | -6% | -6% | -6% |
| 85 | 7% | -2% | -3% | -3% | -3% | -3% | -3% |
| 86 | 11% | 1% | 0% | 0% | 0% | 0% | 0% |
| 87 | 16% | 5% | 4% | 4% | 4% | 4% | 4% |
| 88 | 20% | 9% | 8% | 8% | 8% | 8% | 8% |
| 89 | 25% | 13% | 11% | 11% | 11% | 11% | 11% |
| 90 | 30% | 17% | 15% | 15% | 15% | 15% | 15% |
| 91 | 36% | 22% | 20% | 20% | 20% | 20% | 20% |
| 92 | 43% | 27% | 26% | 25% | 25% | 25% | 25% |
| 93 | 51% | 34% | 32% | 32% | 32% | 32% | 32% |
| 94 | 57% | 38% | 36% | 36% | 36% | 35% | 35% |
| 95 | NA | 43% | 40% | 40% | 40% | 40% | 40% |
| 96 | NA | 49% | 46% | 46% | 46% | 46% | 46% |
| 97 | NA | 57% | 54% | 53% | 53% | 53% | 53% |
| 98 | NA | 67% | 63% | 63% | 63% | 63% | 63% |
| 99 | NA | 71% | 67% | 66% | 66% | 66% | 66% |
| 100 | NA | 76% | 71% | 71% | 71% | 71% | 71% |
| 101 | NA | 82% | 77% | 76% | 76% | 76% | 76% |
| 102 | NA | 90% | 84% | 84% | 84% | 84% | 84% |
| 103 | NA | 102% | 95% | 94% | 94% | 94% | 94% |
| 104 | NA | 106% | 98% | 97% | 97% | 97% | 97% |
| 105 | NA | NA | 102% | 101% | 101% | 101% | 101% |
| 106 | NA | NA | 107% | 106% | 106% | 106% | 106% |
| 107 | NA | NA | 115% | 113% | 113% | 113% | 113% |
| 108 | NA | NA | 125% | 124% | 124% | 124% | 124% |
| 109 | NA | NA | 128% | 126% | 126% | 126% | 126% |
| 110 | NA | NA | 131% | 129% | 129% | 129% | 129% |

Offshore; Min=89, Max=171

| | Max size → | | | | | | |
|-----|------------|------|------|------|------|------|------|
| | 105 | 115 | 125 | 135 | 145 | 155 | 165 |
| 82 | -11% | -18% | -19% | -19% | -19% | -19% | -19% |
| 83 | -10% | -17% | -18% | -18% | -18% | -18% | -18% |
| 84 | -7% | -15% | -16% | -16% | -16% | -16% | -16% |
| 85 | -4% | -12% | -13% | -13% | -13% | -13% | -13% |
| 86 | 0% | -9% | -10% | -10% | -10% | -10% | -10% |
| 87 | 4% | -6% | -7% | -7% | -7% | -7% | -7% |
| 88 | 8% | -2% | -3% | -3% | -3% | -3% | -3% |
| 89 | 12% | 1% | 0% | 0% | 0% | 0% | 0% |
| 90 | 17% | 5% | 4% | 4% | 4% | 4% | 4% |
| 91 | 22% | 9% | 8% | 8% | 8% | 8% | 8% |
| 92 | 29% | 15% | 13% | 13% | 13% | 13% | 13% |
| 93 | 36% | 21% | 19% | 19% | 19% | 19% | 19% |
| 94 | 41% | 24% | 22% | 22% | 22% | 22% | 22% |
| 95 | NA | 28% | 26% | 26% | 26% | 26% | 26% |
| 96 | NA | 34% | 31% | 31% | 31% | 31% | 31% |
| 97 | NA | 41% | 38% | 38% | 38% | 38% | 38% |
| 98 | NA | 50% | 47% | 46% | 46% | 46% | 46% |
| 99 | NA | 54% | 50% | 50% | 49% | 49% | 49% |
| 100 | NA | 58% | 54% | 53% | 53% | 53% | 53% |
| 101 | NA | 64% | 59% | 59% | 59% | 59% | 59% |
| 102 | NA | 71% | 66% | 65% | 65% | 65% | 65% |
| 103 | NA | 82% | 75% | 75% | 75% | 75% | 75% |
| 104 | NA | 85% | 78% | 77% | 77% | 77% | 77% |
| 105 | NA | NA | 82% | 81% | 81% | 81% | 81% |
| 106 | NA | NA | 87% | 86% | 85% | 85% | 85% |
| 107 | NA | NA | 93% | 92% | 92% | 92% | 92% |
| 108 | NA | NA | 103% | 101% | 101% | 101% | 101% |
| 109 | NA | NA | 105% | 103% | 103% | 103% | 103% |
| 110 | NA | NA | 108% | 106% | 106% | 106% | 106% |

Table 5. Inshore and offshore minimum/maximum gauge change scenarios and corresponding reference abundance changes from the current gauge sizes. Reference abundance is expressed as percent increases from the current conditions.

Inshore; Min=86, Max=133

| | | Max size → | | | | | | |
|---------------|----|---|-----|-----|-----|-----|-----|-----|
| | | 105 | 115 | 125 | 135 | 145 | 155 | 165 |
| Min Size ↓ | 82 | -3% | -6% | -6% | -6% | -6% | -6% | -6% |
| | 83 | -2% | -5% | -5% | -5% | -5% | -5% | -5% |
| | 84 | 0% | -3% | -4% | -4% | -4% | -4% | -4% |
| | 85 | 2% | -2% | -2% | -2% | -2% | -2% | -2% |
| | 86 | 4% | 0% | 0% | 0% | 0% | 0% | 0% |
| | 87 | 6% | 3% | 2% | 2% | 2% | 2% | 2% |
| | 88 | 9% | 5% | 5% | 5% | 5% | 5% | 5% |
| | 89 | 11% | 7% | 6% | 6% | 6% | 6% | 6% |
| | 90 | 13% | 9% | 8% | 8% | 8% | 8% | 8% |
| | 91 | 16% | 11% | 10% | 10% | 10% | 10% | 10% |
| | 92 | 19% | 14% | 13% | 13% | 13% | 13% | 13% |
| | 93 | 23% | 17% | 16% | 16% | 16% | 16% | 16% |
| | 94 | 25% | 19% | 18% | 18% | 18% | 18% | 18% |
| | 95 | NA | | 21% | 20% | 20% | 20% | 20% |
| 96 | NA | | 23% | 22% | 22% | 22% | 22% | 22% |
| 97 | NA | | 26% | 25% | 25% | 25% | 25% | 25% |
| 98 | NA | | 31% | 30% | 30% | 30% | 30% | 30% |
| 99 | NA | | 32% | 31% | 31% | 31% | 31% | 31% |
| 100 | NA | | 34% | 33% | 33% | 33% | 33% | 33% |
| 101 | NA | | 36% | 35% | 35% | 35% | 35% | 35% |
| 102 | NA | | 40% | 38% | 38% | 38% | 38% | 38% |
| 103 | NA | | 45% | 42% | 42% | 42% | 42% | 42% |
| 104 | NA | | 46% | 43% | 43% | 43% | 43% | 43% |
| 105 | NA | NA | | 45% | 44% | 44% | 44% | 44% |
| 106 | NA | NA | | 46% | 46% | 46% | 46% | 46% |
| 107 | NA | NA | | 49% | 49% | 49% | 49% | 49% |
| 108 | NA | NA | | 53% | 53% | 53% | 53% | 53% |
| 109 | NA | NA | | 54% | 54% | 54% | 54% | 54% |
| 110 | NA | NA | | 55% | 55% | 55% | 55% | 55% |

Offshore; Min=89, Max=171

| | | Max size → | | | | | | |
|---------------|----|---|------|------|------|------|------|------|
| | | 105 | 115 | 125 | 135 | 145 | 155 | 165 |
| Min Size ↓ | 82 | -8% | -11% | -11% | -11% | -11% | -11% | -11% |
| | 83 | -8% | -10% | -11% | -11% | -11% | -11% | -11% |
| | 84 | -6% | -9% | -9% | -9% | -9% | -9% | -9% |
| | 85 | -4% | -7% | -8% | -8% | -8% | -8% | -8% |
| | 86 | -2% | -5% | -6% | -6% | -6% | -6% | -6% |
| | 87 | 0% | -3% | -4% | -4% | -4% | -4% | -4% |
| | 88 | 2% | -1% | -1% | -2% | -2% | -2% | -2% |
| | 89 | 4% | 0% | 0% | 0% | 0% | 0% | 0% |
| | 90 | 6% | 2% | 2% | 2% | 2% | 2% | 2% |
| | 91 | 9% | 4% | 4% | 4% | 4% | 4% | 4% |
| | 92 | 12% | 7% | 7% | 7% | 6% | 6% | 6% |
| | 93 | 16% | 10% | 10% | 10% | 10% | 10% | 10% |
| | 94 | 18% | 12% | 11% | 11% | 11% | 11% | 11% |
| | 95 | NA | | 14% | 13% | 13% | 13% | 13% |
| 96 | NA | | 16% | 15% | 15% | 15% | 15% | 15% |
| 97 | NA | | 19% | 18% | 18% | 18% | 18% | 18% |
| 98 | NA | | 23% | 22% | 22% | 22% | 22% | 22% |
| 99 | NA | | 25% | 23% | 23% | 23% | 23% | 23% |
| 100 | NA | | 26% | 25% | 25% | 25% | 25% | 25% |
| 101 | NA | | 28% | 27% | 27% | 27% | 27% | 27% |
| 102 | NA | | 31% | 30% | 30% | 30% | 30% | 30% |
| 103 | NA | | 36% | 34% | 34% | 34% | 34% | 34% |
| 104 | NA | | 37% | 35% | 35% | 35% | 35% | 35% |
| 105 | NA | NA | | 36% | 36% | 36% | 36% | 36% |
| 106 | NA | NA | | 38% | 38% | 38% | 38% | 38% |
| 107 | NA | NA | | 40% | 40% | 40% | 40% | 40% |
| 108 | NA | NA | | 44% | 44% | 44% | 44% | 44% |
| 109 | NA | NA | | 45% | 45% | 45% | 45% | 45% |
| 110 | NA | NA | | 46% | 46% | 46% | 46% | 46% |

Table 6. Inshore and offshore minimum/maximum gauge change scenarios and corresponding catch changes from the current gauge sizes. Catch is expressed as percent increases from the current conditions.

Inshore; Min=86, Max=133

| | Max size → | | | | | | |
|-----|------------|------|------|------|------|------|------|
| | 105 | 115 | 125 | 135 | 145 | 155 | 165 |
| 82 | 4% | 7% | 8% | 8% | 8% | 8% | 8% |
| 83 | 3% | 6% | 7% | 7% | 7% | 7% | 7% |
| 84 | 0% | 4% | 5% | 5% | 5% | 5% | 5% |
| 85 | -2% | 2% | 2% | 2% | 2% | 2% | 2% |
| 86 | -5% | 0% | 0% | 0% | 0% | 0% | 0% |
| 87 | -8% | -3% | -3% | -3% | -3% | -3% | -3% |
| 88 | -11% | -6% | -6% | -6% | -6% | -6% | -6% |
| 89 | -14% | -9% | -8% | -8% | -8% | -8% | -8% |
| 90 | -17% | -11% | -10% | -10% | -10% | -10% | -10% |
| 91 | -20% | -14% | -13% | -13% | -13% | -13% | -13% |
| 92 | -25% | -18% | -17% | -17% | -17% | -17% | -17% |
| 93 | -30% | -22% | -21% | -21% | -21% | -21% | -21% |
| 94 | -33% | -24% | -23% | -23% | -23% | -23% | -23% |
| 95 | NA | -27% | -26% | -26% | -26% | -26% | -26% |
| 96 | NA | -30% | -29% | -29% | -29% | -29% | -29% |
| 97 | NA | -34% | -33% | -33% | -33% | -33% | -33% |
| 98 | NA | -40% | -39% | -38% | -38% | -38% | -38% |
| 99 | NA | -42% | -40% | -40% | -40% | -40% | -40% |
| 100 | NA | -44% | -42% | -42% | -42% | -42% | -42% |
| 101 | NA | -47% | -45% | -45% | -45% | -45% | -45% |
| 102 | NA | -51% | -49% | -49% | -49% | -49% | -49% |
| 103 | NA | -58% | -55% | -54% | -54% | -54% | -54% |
| 104 | NA | -59% | -56% | -56% | -56% | -56% | -56% |
| 105 | NA | NA | -58% | -57% | -57% | -57% | -57% |
| 106 | NA | NA | -60% | -60% | -60% | -59% | -59% |
| 107 | NA | NA | -63% | -63% | -63% | -63% | -63% |
| 108 | NA | NA | -69% | -68% | -68% | -68% | -68% |
| 109 | NA | NA | -70% | -69% | -69% | -69% | -69% |
| 110 | NA | NA | -71% | -71% | -71% | -71% | -71% |

Offshore; Min=89, Max=171

| | Max size → | | | | | | |
|-----|------------|------|------|------|------|------|------|
| | 105 | 115 | 125 | 135 | 145 | 155 | 165 |
| 82 | 13% | 17% | 17% | 17% | 17% | 17% | 17% |
| 83 | 12% | 16% | 16% | 16% | 16% | 16% | 16% |
| 84 | 9% | 13% | 14% | 14% | 14% | 14% | 14% |
| 85 | 6% | 11% | 11% | 11% | 11% | 11% | 11% |
| 86 | 3% | 8% | 9% | 9% | 9% | 9% | 9% |
| 87 | 0% | 5% | 6% | 6% | 6% | 6% | 6% |
| 88 | -4% | 2% | 2% | 2% | 2% | 2% | 2% |
| 89 | -6% | -1% | 0% | 0% | 0% | 0% | 0% |
| 90 | -10% | -3% | -3% | -3% | -3% | -3% | -3% |
| 91 | -13% | -7% | -6% | -6% | -6% | -6% | -6% |
| 92 | -18% | -11% | -10% | -10% | -10% | -10% | -10% |
| 93 | -24% | -15% | -14% | -14% | -14% | -14% | -14% |
| 94 | -27% | -17% | -17% | -16% | -16% | -16% | -16% |
| 95 | NA | -20% | -19% | -19% | -19% | -19% | -19% |
| 96 | NA | -24% | -23% | -22% | -22% | -22% | -22% |
| 97 | NA | -28% | -27% | -27% | -27% | -27% | -27% |
| 98 | NA | -35% | -33% | -33% | -33% | -33% | -33% |
| 99 | NA | -37% | -35% | -35% | -35% | -35% | -35% |
| 100 | NA | -39% | -37% | -37% | -37% | -37% | -37% |
| 101 | NA | -42% | -40% | -40% | -40% | -40% | -40% |
| 102 | NA | -47% | -44% | -44% | -44% | -44% | -44% |
| 103 | NA | -54% | -51% | -50% | -50% | -50% | -50% |
| 104 | NA | -56% | -52% | -52% | -52% | -52% | -52% |
| 105 | NA | NA | -54% | -54% | -53% | -53% | -53% |
| 106 | NA | NA | -56% | -56% | -56% | -56% | -56% |
| 107 | NA | NA | -60% | -60% | -60% | -60% | -60% |
| 108 | NA | NA | -66% | -66% | -66% | -66% | -66% |
| 109 | NA | NA | -67% | -67% | -67% | -67% | -67% |
| 110 | NA | NA | -69% | -68% | -68% | -68% | -68% |