The region to be managed (the western North Pacific) is divided into 22 sub-areas (see Fig. 1). Future surveys are unlikely to cover sub-areas 1, 2, 3, 4 and 13 (see Table 3) so these sub-areas are taken to be *Residual Areas* in the current trials (although allowance is made for future bycatches from some of these sub-areas *–* see section D). The term ‘stock’ refers to a group of whales from the same breeding ground.

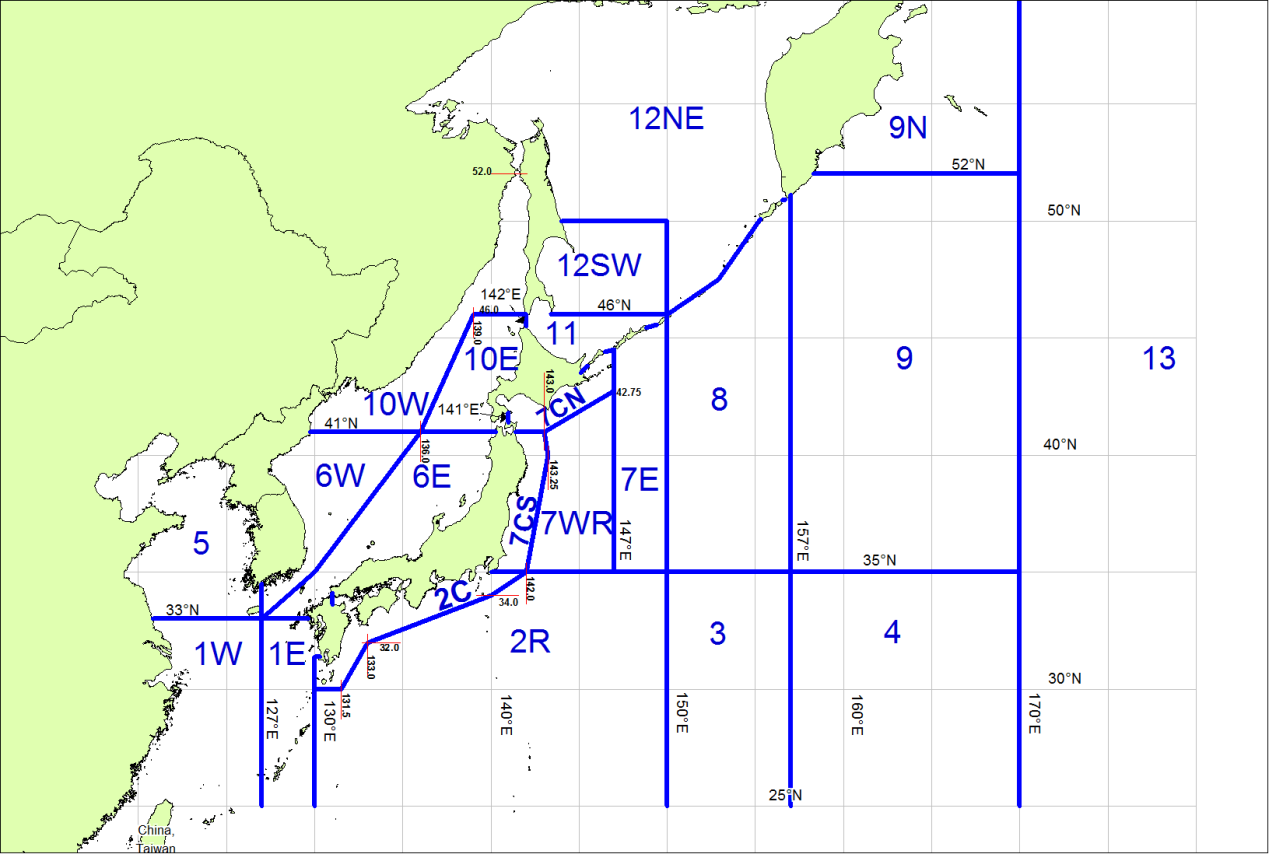


Fig. 1. The 22 sub-areas used for the *Implementation Simulation Trials* for North Pacific minke whales Note to Andrea: use the new map

Three fundamental hypotheses are considered to account for patterns observed in the results from the genetic analyses:

* 1. there is a single J-stock distributed in the Yellow Sea, Sea of Japan, and Pacific coast of Japan, and a single O-stock in sub-areas 7, 8, and 9 (referred to as hypothesis A);
  2. as for hypothesis (A), but there is a third stock (Y-stock) which resides in the Yellow Sea and overlaps with J-stock in the southern part of sub-area 6W (referred to as hypothesis B); and
  3. there are five stocks, referred to Y, JW, JE, OW, and OE, two of which (Y and JW) occur in the Sea of Japan, and three of which (JE, OW, and OE) are found to the east of Japan (referred to as hypothesis C).

## H. Management options

Two issues relate to specifying the management options: (a) the designation of *Areas* (*Small*, *Medium* and *Large*); and (b) the management procedure variants to consider.

1. *Small Areas* equal sub-areas. For this option, the *Small Areas* for which catch limits would be set are 5, 6W, 7CS, 7CN, 7WR, 7E, 8, 9\*, and 11.
2. 5, 6W, 7+8, 9\*, and 11 are *Small Areas* and catches are taken from sub-areas 5, 6W, 7CN, 9, and 11.
3. 5, 6W, 7+8, 9\*, and 11 are *Small Areas* and catches are taken from sub-areas 5, 6W, 7CS, 9, and 11.
4. 5, 6W, 7CS, 7CN, 7WR+7E+8, 9\* and 11 are *Small Areas* and catches are taken from sub-areas 5, 6W, 7CS, 7CN, 7WR, 9\* and 11.
5. 5 and 6W are *Small Areas* and catches are taken from sub-areas 5 and 6W. 7+8+9\*+11+12 is a combination area and catches are cascaded to the sub-areas within the combination area. The catch limits for sub-areas 12SW and 12NE are not taken.
6. 5, 6W, 7+8, 9\*, and 11 are *Small Areas* except that the catches from the 7+8 *Small Area* are taken from sub-areas 7CS and 7CN using the same method as for catch cascading to allocate the catch across the two sub-areas.
7. 5+6W+6E+10W+10E, 7+8+9\*+11 are *Small Areas*; catches from the 5+6W+6E+10W+10E *Small Area* are taken from sub-areas 5 and 6W using the same method as for catch cascading to allocate the catch across those two sub-areas, and catches from the Small Area 7+8+9+11 are taken in the sub-area 7CN.
8. 5, 6W, 7+8+9\*+11+12 are *Small Areas*; catches from the 7+8+9\*+11+12 *Small Area* are taken from sub-areas 8 and 9 using the same method as for catch cascading to allocate the catch across the two sub-areas.
9. 5, 6W, 7+8+9\*+11+12 are *Small Areas;* catches from the 7+8+9\*+11+12 *Small Area* are taken from sub-areas 7CS, 7CN, 7WR, 7E, 8 and 9 using the same method as for catch cascading to allocate the catch across the five sub-areas.
10. 5, 6W, 7+8+9\*+11+12 are *Small Areas;* catches from the 7+8+9\*+11+12 *Small Area* are taken from sub-areas 7CS, 7CN, 7WR, 7E, 8, 9 and 11 using the same method as for catch cascading to allocate the catch across the six sub-areas. The catch from sub-area 11 is taken in May and June.
11. 5, 6W, 7+8+9\*+11+12 are *Small Areas;* catches from the 7+8+9\*+11+12 *Small Area* are taken from sub-areas 7CS, 7CN, 7WR, 7E, 8 and 9 using the same method as for catch cascading to allocate the catch across the five sub-areas but the catch taken from sub-areas 7CS, 7CN, 7WR and 7E is reduced by 50% after first subtracting the bycatches in these sub-areas.

\*: 9\* refers to sub-area 9 alone (i.e. excluding 9N) in the definitions of the variants given above.

**Adjunct 2**

**Mixing Matrices**

An initial description of the information used to inform the parameters used is given in Allison and de Moor, SC/D10/NPM14.

**Hypothesis A Baseline**

**J Stock Baseline A (Matrix J-A)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Age/ | Mon |  |  |  |  |  |  |  |  |  | Sub - | Area |  |  |  |  |  |  |  |  |  |  |  |
| Sex |  | 1W | 1E | 2C | 2R | 3 | 4 | 5 | 6W | 6E | 7CS | 7CN | 7WR | 7E | 8 | 9 | 9N | 10W | 10E | 11 | 12SW | 12NE | 13 |
| Juv | J-M | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 429 | 21 | 24 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 |
|  | Apr | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 429 | 21 | 24 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 28 | 8 | 0 | 0 |
|  | May | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 429 | 2 | 24 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 28 | 8 | 0 | 0 |
|  | Jun | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 429 | 2 | 24 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 9 | 0 | 0 |
|  | Jul | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 429 | 2 | 25 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 9 | 0 | 0 |
|  | Aug | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 429 | 2 | 25 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 9 | 0 | 0 |
|  | Sep | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 429 | 2 | 25 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 9 | 0 | 0 |
|  | O-D | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 429 | 2 | 25 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 0 | 0 | 0 |
| Ad.M | J-M | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 4 | 429 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 229 | 41 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 8 | 8 | 0 | 0 |
|  | May | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 229 | 42 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 8 | 8 | 0 | 0 |
|  | Jun | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 229 | 3 | 44 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 9 | 9 | 0 | 0 |
|  | Jul | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 229 | 3 | 45 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 9 | 9 | 0 | 0 |
|  | Aug | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 229 | 3 | 45 | 0 | 0 | 0 | 0 | 0 | 6 | 7 |  |  | 0 | 0 |
|  | Sep | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 4 | 429 | 3 | 45 | 0 | 0 | 0 | 0 | 0 | 6 | 7 |  | 0 | 0 | 0 |
|  | O-D | 4 | 4 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 3 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Ad.F | J-M | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 4 | 429 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 229 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 10 | 10 | 0 | 0 |
|  | May | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 229 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 11 | 11 | 0 | 0 |
|  | Jun | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 229 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 12 | 12 | 0 | 0 |
|  | Jul | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 229 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 12 | 12 | 0 | 0 |
|  | Aug | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 229 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 12 | 12 | 0 | 0 |
|  | Sep | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 4 | 429 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 6 | 7 |  | 0 | 0 | 0 |
|  | O-D | 4 | 4 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |

**O Stock Baseline A (Matrix O-AB)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Age/ | Mon |  |  |  |  |  |  |  |  |  | Sub - | Area |  |  |  |  |  |  |  |  |  |  |  |
| Sex |  | 1W | 1E | 2C | 2R | 3 | 4 | 5 | 6W | 6E | 7CS | 7CN | 7WR | 7E | 8 | 9 | 9N | 10W | 10E | 11 | 12SW | 12NE | 13 |
| Juv | J-M | 0 | 0 |  | 4 | 4 | 4 | 0 | 0 | 0 | 4 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 8 | 16 | 17 | 18 | 19 | 20 | 0 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | May | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 8 | 16 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Jun | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 4 | 416 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Jul | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 4 | 416 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Aug | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 4 | 416 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Sep | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 4 | 416 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | O-D | 0 | 0 |  | 4 | 4 | 4 | 0 | 0 | 0 | 4 | 16 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ad.M | J-M | 0 | 0 |  | 4 | 4 | 4 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 16 | 417 | 418 | 419 | 420 | 0 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 417 | 418 | 419 | 420 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Jun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 417 | 418 | 419 | 420 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 417 | 418 | 419 | 420 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Aug | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 417 | 418 | 419 | 420 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 417 | 418 | 419 | 420 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | O-D | 0 | 0 |  | 4 | 4 | 4 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ad.F | J-M | 0 | 0 |  | 4 | 4 | 4 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 1 | 16 | 17 | 18 | 19 | 20 | 0 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 17 | 18 | 19 | 20 | 421 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Jun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 17 | 18 | 19 | 20 | 421 | 0 | 0 | 222 | 23 | 924 | 0 |
|  | Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 17 | 18 | 19 | 20 | 421 | 0 | 0 | 222 | 223 | 924 | 0 |
|  | Aug | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 17 | 18 | 19 | 20 | 421 | 0 | 0 | 222 | 223 | 924 | 0 |
|  | Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 17 | 18 | 19 | 20 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | O-D | 0 | 0 |  | 4 | 4 | 4 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Hypothesis B Baseline**

**Y Stock Baseline B (Matrix Y-BC)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Age/ | Mon |  |  |  |  |  |  |  |  |  | Sub - | Area |  |  |  |  |  |  |  |  |  |  |  |
| Sex |  | 1W | 1E | 2C | 2R | 3 | 4 | 5 | 6W | 6E | 7CS | 7CN | 7WR | 7E | 8 | 9 | 9N | 10W | 10E | 11 | 12SW | 12NE | 13 |
| Juv | J-M | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | May | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jun | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jul | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Aug | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Sep | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | O-D | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AdM | J-M | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | May | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jun | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jul | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Aug | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Sep | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | O-D | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AdF | J-M | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | May | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jun | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jul | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Aug | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Sep | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | O-D | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**J Stock Baseline B (Matrix J-B)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Age/ | Mon |  |  |  |  |  |  |  |  |  | Sub - | Area |  |  |  |  |  |  |  |  |  |  |  |
| Sex |  | 1W | 1E | 2C | 2R | 3 | 4 | 5 | 6W | 6E | 7CS | 7CN | 7WR | 7E | 8 | 9 | 9N | 10W | 10E | 11 | 12SW | 12NE | 13 |
| Juv | J-M | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 429 | 21 | 24 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 429 | 21 | 24 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 28 | 8 | 0 | 0 |
|  | May | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 429 | 2 | 24 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 28 | 8 | 0 | 0 |
|  | Jun | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 429 | 2 | 24 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 9 | 0 | 0 |
|  | Jul | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 429 | 2 | 25 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 9 | 0 | 0 |
|  | Aug | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 429 | 2 | 25 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 9 | 0 | 0 |
|  | Sep | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 429 | 2 | 25 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 9 | 0 | 0 |
|  | O-D | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 429 | 2 | 25 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 0 | 0 | 0 |
| Ad.M | J-M | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 4 | 429 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 229 | 41 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 8 | 8 | 0 | 0 |
|  | May | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 229 | 42 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 8 | 8 | 0 | 0 |
|  | Jun | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 229 | 3 | 44 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 9 | 9 | 0 | 0 |
|  | Jul | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 229 | 3 | 45 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 9 | 9 | 0 | 0 |
|  | Aug | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 229 | 3 | 45 | 0 | 0 | 0 | 0 | 0 | 6 | 7 |  |  | 0 | 0 |
|  | Sep | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 4 | 429 | 3 | 45 | 0 | 0 | 0 | 0 | 0 | 6 | 7 |  | 0 | 0 | 0 |
|  | O-D | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 3 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Ad.F | J-M | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 4 | 429 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 229 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 10 | 10 | 0 | 0 |
|  | May | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 229 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 11 | 11 | 0 | 0 |
|  | Jun | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 229 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 12 | 12 | 0 | 0 |
|  | Jul | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 229 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 12 | 12 | 0 | 0 |
|  | Aug | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 229 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 12 | 12 | 0 | 0 |
|  | Sep | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 4 | 429 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 6 | 7 |  | 0 | 0 | 0 |
|  | O-D | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |

**Hypothesis B Baseline contd.**

**O Stock Baseline B = O Stock Baseline A (Matrix O-AB)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Age/ | Mon |  |  |  |  |  |  |  |  |  | Sub - | Area |  |  |  |  |  |  |  |  |  |  |  |
| Sex |  | 1W | 1E | 2C | 2R | 3 | 4 | 5 | 6W | 6E | 7CS | 7CN | 7WR | 7E | 8 | 9 | 9N | 10W | 10E | 11 | 12SW | 12NE | 13 |
| Juv | J-M | 0 | 0 |  | 4 | 4 | 4 | 0 | 0 | 0 | 4 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 8 | 16 | 17 | 18 | 19 | 20 | 0 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | May | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 8 | 16 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Jun | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 4 | 416 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Jul | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 4 | 416 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Aug | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 4 | 416 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Sep | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 4 | 416 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | O-D | 0 | 0 |  | 4 | 4 | 4 | 0 | 0 | 0 | 4 | 16 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ad.M | J-M | 0 | 0 |  | 4 | 4 | 4 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 16 | 417 | 418 | 419 | 420 | 0 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 417 | 418 | 419 | 420 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Jun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 417 | 418 | 419 | 420 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 417 | 418 | 419 | 420 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Aug | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 417 | 418 | 419 | 420 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 417 | 418 | 419 | 420 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | O-D | 0 | 0 |  | 4 | 4 | 4 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ad.F | J-M | 0 | 0 |  | 4 | 4 | 4 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 |  | 2 | 2 | 2 | 0 | 0 | 0 | 1 | 16 | 17 | 18 | 19 | 20 | 0 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 17 | 18 | 19 | 20 | 421 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Jun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 17 | 18 | 19 | 20 | 421 | 0 | 0 | 222 | 23 | 924 | 0 |
|  | Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 17 | 18 | 19 | 20 | 421 | 0 | 0 | 222 | 223 | 924 | 0 |
|  | Aug | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 17 | 18 | 19 | 20 | 421 | 0 | 0 | 222 | 223 | 924 | 0 |
|  | Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 17 | 18 | 19 | 20 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | O-D | 0 | 0 |  | 4 | 4 | 4 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Hypothesis C Baseline**

**Y Stock Baseline C = Y Baseline B (Matrix Y-BC)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Age/ | Mon |  |  |  |  |  |  |  |  |  | Sub - | Area |  |  |  |  |  |  |  |  |  |  |  |
| Sex |  | 1W | 1E | 2C | 2R | 3 | 4 | 5 | 6W | 6E | 7CS | 7CN | 7WR | 7E | 8 | 9 | 9N | 10W | 10E | 11 | 12SW | 12NE | 13 |
| Juv | J-M | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | May | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jun | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jul | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Aug | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Sep | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | O-D | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AdM | J-M | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | May | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jun | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jul | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Aug | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Sep | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | O-D | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AdF | J-M | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | May | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jun | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jul | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Aug | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Sep | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | O-D | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Hypothesis C Baseline contd**

**JW Stock Baseline C (Matrix JW-C)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Age/ | Mon |  |  |  |  |  |  |  |  |  | Sub - | Area |  |  |  |  |  |  |  |  |  |  |  |
| Sex |  | 1W | 1E | 2C | 2R | 3 | 4 | 5 | 6W | 6E | 7CS | 7CN | 7WR | 7E | 8 | 9 | 9N | 10W | 10E | 11 | 12SW | 12NE | 13 |
| 0 | J-M | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 28 | 8 | 0 | 0 |
|  | May | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 28 | 8 | 0 | 0 |
|  | Jun | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 9 | 0 | 0 |
|  | Jul | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 9 | 0 | 0 |
|  | Aug | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 9 | 0 | 0 |
|  | Sep | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 9 | 0 | 0 |
|  | O-D | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 29 | 0 | 0 | 0 |
| Ad.M | J-M | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 27 | 8 | 8 | 0 | 0 |
|  | May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 27 | 8 | 8 | 0 | 0 |
|  | Jun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 27 | 9 | 9 | 0 | 0 |
|  | Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 9 | 9 | 0 | 0 |
|  | Aug | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 |  | 9 | 0 | 0 |
|  | Sep | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 |
|  | O-D | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Ad.F | J-M | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 27 | 10 | 10 | 0 | 0 |
|  | May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 27 | 11 | 11 | 0 | 0 |
|  | Jun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 27 | 12 | 12 | 0 | 0 |
|  | Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 |  | 12 | 0 | 0 |
|  | Aug | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 12 | 12 | 0 | 0 |
|  | Sep | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 12 | 0 | 0 | 0 |
|  | O-D | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |

**JE Stock Baseline C (Matrix JE-C)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Age/ | Mon |  |  |  |  |  |  |  |  |  | Sub - | Area |  |  |  |  |  |  |  |  |  |  |  |
| sex |  | 1W | 1E | 2C | 2R | 3 | 4 | 5 | 6W | 6E | 7CS | 7CN | 7WR | 7E | 8 | 9 | 9N | 10W | 10E | 11 | 12SW | 12NE | 13 |
| Juv | J-M | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 216 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 316 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | May | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |  | 316 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jun | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |  | 316 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jul | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |  | 616 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Aug | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |  | 616 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Sep | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 616 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | O-D | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |  | 216 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ad.M | J-M | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | May | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 431 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jun | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 816 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jul | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Aug | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Sep | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | O-D | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ad.F | J-M | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | May | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jun | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Jul | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Aug | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Sep | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | O-D | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Note 2 not used for Hypothesis III

**Hypothesis C Baseline contd**

**OW Stock Baseline C (Matrix OW-C)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Age/ | Mon |  |  |  |  |  |  |  |  |  | Sub - | Area |  |  |  |  |  |  |  |  |  |  |  |
| sex |  | 1W | 1E | 2C | 2R | 3 | 4 | 5 | 6W | 6E | 7CS | 7CN | 7WR | 7E | 8 | 9 | 9N | 10W | 10E | 11 | 12SW | 12NE | 13 |
| Juv | J-M | 0 | 0 |  | 4 | 0 | 0 | 0 | 0 | 0 | 41 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 |  | 2 | 0 | 0 | 0 | 0 | 0 | 81 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 |
|  | May | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 81 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 34 | 0 | 0 |
|  | Jun | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 24 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 34 | 0 | 0 |
|  | Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 25 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 34 | 0 | 0 |
|  | Aug | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 25 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 34 | 0 | 0 |
|  | Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 25 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 34 | 0 | 0 |
|  | O-D | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 43 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ad.M | J-M | 0 | 0 |  | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 |  | 2 | 0 | 0 | 0 | 0 | 0 | 21 | 4 | 432 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 |
|  | May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 4 | 432 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 34 | 0 | 0 |
|  | Jun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 24 | 432 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 34 | 0 | 0 |
|  | Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 25 | 432 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 34 | 0 | 0 |
|  | Aug | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 25 | 432 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 34 | 0 | 0 |
|  | Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 25 | 432 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 34 | 0 | 0 |
|  | O-D | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ad.F | J-M | 0 | 0 |  | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 |  | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 232 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 34 | 0 | 0 |
|  | May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 233 | 234 | 0 | 0 |
|  | Jun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 233 | 234 | 0 | 0 |
|  | Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 233 | 234 | 0 | 0 |
|  | Aug | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 233 | 234 | 0 | 0 |
|  | Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 34 | 0 | 0 |
|  | O-D | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**OE Stock Baseline C (Matrix OE-C)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Age/ | Mon |  |  |  |  |  |  |  |  |  | Sub - | Area |  |  |  |  |  |  |  |  |  |  |  |
| Sex |  | 1W | 1E | 2C | 2R | 3 | 4 | 5 | 6W | 6E | 7CS | 7CN | 7WR | 7E | 8 | 9 | 9N | 10W | 10E | 11 | 12SW | 12NE | 13 |
| Juv | J-M | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 17 | 18 | 19 | 20 | 0 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | May | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Jun | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Jul | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Aug | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Sep | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 17 | 18 | 19 | 20 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | O-D | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ad.M | J-M | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 417 | 418 | 419 | 420 | 0 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 417 | 418 | 419 | 420 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Jun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 417 | 418 | 419 | 420 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 417 | 418 | 419 | 420 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Aug | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 417 | 418 | 419 | 420 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 417 | 418 | 419 | 420 | 21 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | O-D | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ad.F | J-M | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Apr | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 17 | 18 | 19 | 20 | 0 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 18 | 19 | 20 | 421 | 0 | 0 | 22 | 223 | 924 | 0 |
|  | Jun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 18 | 19 | 20 | 421 | 0 | 0 | 222 | 223 | 924 | 0 |
|  | Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 18 | 19 | 20 | 421 | 0 | 0 | 222 | 223 | 924 | 0 |
|  | Aug | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 18 | 19 | 20 | 421 | 0 | 0 | 222 | 223 | 924 | 0 |
|  | Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 18 | 19 | 20 | 221 | 0 | 0 | 22 | 23 | 24 | 0 |
|  | O-D | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Note 15 not used in Hypothesis III.