# Results for modelN1

| effect | group | term | estimate | std.error | statistic | df | p.value | BIC |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| fixed | NA | (Intercept) | 0.11579479 | 0.0168118285 | 6.887697 | 41.37315 | 2.268734e-08 | -8216.31 |
| fixed | NA | OC\_perc | 0.04083706 | 0.0004521058 | 90.326323 | 4654.17078 | 0.000000e+00 | -8216.31 |
| fixed | NA | Habitatmarsh | -0.06132116 | 0.0115162439 | -5.324753 | 2556.01023 | 1.098926e-07 | -8216.31 |
| fixed | NA | OC\_perc:Habitatmarsh | 0.01663862 | 0.0005826301 | 28.557771 | 5805.89835 | 5.810606e-168 | -8216.31 |
| ran\_pars | core\_id:(site\_id:study\_id) | sd\_\_(Intercept) | 0.06436608 | NA | NA | NA | NA | -8216.31 |
| ran\_pars | site\_id:study\_id | sd\_\_(Intercept) | 0.08801959 | NA | NA | NA | NA | -8216.31 |
| ran\_pars | study\_id | sd\_\_(Intercept) | 0.06267353 | NA | NA | NA | NA | -8216.31 |
| ran\_pars | Residual | sd\_\_Observation | 0.13324671 | NA | NA | NA | NA | -8216.31 |

# Results for modelN2

| effect | group | term | estimate | std.error | statistic | df | p.value | BIC |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| fixed | NA | (Intercept) | 0.15642783 | 0.0157162138 | 9.953277 | 43.64579 | 8.438633e-13 | -8438.712 |
| fixed | NA | OC\_perc | 0.03939399 | 0.0004550513 | 86.570420 | 4291.36718 | 0.000000e+00 | -8438.712 |
| fixed | NA | Habitatmarsh | -0.05716321 | 0.0112742283 | -5.070255 | 1937.36100 | 4.351439e-07 | -8438.712 |
| fixed | NA | centerdepth | -0.12211478 | 0.0078167749 | -15.622143 | 7465.95514 | 3.681900e-54 | -8438.712 |
| fixed | NA | OC\_perc:Habitatmarsh | 0.01658684 | 0.0005748315 | 28.855132 | 5734.18331 | 4.462058e-171 | -8438.712 |
| ran\_pars | core\_id:(site\_id:study\_id) | sd\_\_(Intercept) | 0.06375360 | NA | NA | NA | NA | -8438.712 |
| ran\_pars | site\_id:study\_id | sd\_\_(Intercept) | 0.09160833 | NA | NA | NA | NA | -8438.712 |
| ran\_pars | study\_id | sd\_\_(Intercept) | 0.05270292 | NA | NA | NA | NA | -8438.712 |
| ran\_pars | Residual | sd\_\_Observation | 0.13112052 | NA | NA | NA | NA | -8438.712 |

# Results for modelCN1

| effect | group | term | estimate | std.error | statistic | df | p.value | BIC |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| fixed | NA | (Intercept) | 16.757712 | 0.8125094 | 20.6246368 | 33.90769 | 9.145767e-21 | 49216.37 |
| fixed | NA | Habitatmarsh | -0.401508 | 0.4192492 | -0.9576833 | 4444.77628 | 3.382746e-01 | 49216.37 |
| ran\_pars | core\_id:(site\_id:study\_id) | sd\_\_(Intercept) | 2.568110 | NA | NA | NA | NA | 49216.37 |
| ran\_pars | site\_id:study\_id | sd\_\_(Intercept) | 3.283240 | NA | NA | NA | NA | 49216.37 |
| ran\_pars | study\_id | sd\_\_(Intercept) | 3.682989 | NA | NA | NA | NA | 49216.37 |
| ran\_pars | Residual | sd\_\_Observation | 4.779686 | NA | NA | NA | NA | 49216.37 |

# Results for modelCN2

| effect | group | term | estimate | std.error | statistic | df | p.value | BIC |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| fixed | NA | (Intercept) | 18.749546 | 0.8367465 | 22.407677 | 34.62242 | 3.432460e-22 | 48601.01 |
| fixed | NA | BDclassBD>0.5 | -2.558955 | 0.3240021 | -7.897959 | 6648.76401 | 3.293988e-15 | 48601.01 |
| fixed | NA | Habitatmarsh | -2.456320 | 0.5079320 | -4.835923 | 4521.18095 | 1.369315e-06 | 48601.01 |
| fixed | NA | BDclassBD>0.5:Habitatmarsh | 2.597385 | 0.3780528 | 6.870429 | 7234.15491 | 6.933230e-12 | 48601.01 |
| ran\_pars | core\_id:(site\_id:study\_id) | sd\_\_(Intercept) | 2.266188 | NA | NA | NA | NA | 48601.01 |
| ran\_pars | site\_id:study\_id | sd\_\_(Intercept) | 2.971733 | NA | NA | NA | NA | 48601.01 |
| ran\_pars | study\_id | sd\_\_(Intercept) | 3.572587 | NA | NA | NA | NA | 48601.01 |
| ran\_pars | Residual | sd\_\_Observation | 4.732564 | NA | NA | NA | NA | 48601.01 |

# Results for modelCN3

| effect | group | term | estimate | std.error | statistic | df | p.value | BIC |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| fixed | NA | (Intercept) | 18.200131 | 0.8060907 | 22.578266 | 34.48686 | 3.041218e-22 | 48438.91 |
| fixed | NA | BDclassBD>0.5 | -3.091365 | 0.3230926 | -9.568045 | 6583.84534 | 1.503612e-21 | 48438.91 |
| fixed | NA | Habitatmarsh | -2.489425 | 0.5018461 | -4.960534 | 4255.49768 | 7.304241e-07 | 48438.91 |
| fixed | NA | centerdepth | 3.639713 | 0.2761394 | 13.180710 | 7412.05800 | 3.123594e-39 | 48438.91 |
| fixed | NA | BDclassBD>0.5:Habitatmarsh | 2.475037 | 0.3741379 | 6.615307 | 7247.85907 | 3.971783e-11 | 48438.91 |
| ran\_pars | core\_id:(site\_id:study\_id) | sd\_\_(Intercept) | 2.245688 | NA | NA | NA | NA | 48438.91 |
| ran\_pars | site\_id:study\_id | sd\_\_(Intercept) | 2.948707 | NA | NA | NA | NA | 48438.91 |
| ran\_pars | study\_id | sd\_\_(Intercept) | 3.385814 | NA | NA | NA | NA | 48438.91 |
| ran\_pars | Residual | sd\_\_Observation | 4.681877 | NA | NA | NA | NA | 48438.91 |

# Results for modelNdensity

| effect | group | term | estimate | std.error | statistic | df | p.value | BIC |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| fixed | NA | (Intercept) | 1.939443127 | 0.18913435 | 10.25431473 | 24.47496 | 2.428133e-10 | 19764.58 |
| fixed | NA | Habitatmarsh | 0.006878045 | 0.06930846 | 0.09923817 | 6133.89849 | 9.209524e-01 | 19764.58 |
| ran\_pars | core\_id:(site\_id:study\_id) | sd\_\_(Intercept) | 0.496910232 | NA | NA | NA | NA | 19764.58 |
| ran\_pars | site\_id:study\_id | sd\_\_(Intercept) | 0.746109991 | NA | NA | NA | NA | 19764.58 |
| ran\_pars | study\_id | sd\_\_(Intercept) | 0.865117596 | NA | NA | NA | NA | 19764.58 |
| ran\_pars | Residual | sd\_\_Observation | 0.751222673 | NA | NA | NA | NA | 19764.58 |

# Results for modelNdensity2

| effect | group | term | estimate | std.error | statistic | df | p.value | BIC |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| fixed | NA | (Intercept) | 2.13308172 | 0.18409579 | 11.5868035 | 23.99275 | 2.582571e-11 | 19420.14 |
| fixed | NA | Habitatmarsh | 0.02205385 | 0.06950347 | 0.3173057 | 6233.01161 | 7.510223e-01 | 19420.14 |
| fixed | NA | centerdepth | -0.89772413 | 0.06863373 | -13.0799263 | 7064.39854 | 1.202852e-38 | 19420.14 |
| fixed | NA | Habitatmarsh:centerdepth | 0.13688245 | 0.08616130 | 1.5886768 | 7090.34011 | 1.121780e-01 | 19420.14 |
| ran\_pars | core\_id:(site\_id:study\_id) | sd\_\_(Intercept) | 0.49813355 | NA | NA | NA | NA | 19420.14 |
| ran\_pars | site\_id:study\_id | sd\_\_(Intercept) | 0.74282251 | NA | NA | NA | NA | 19420.14 |
| ran\_pars | study\_id | sd\_\_(Intercept) | 0.83416295 | NA | NA | NA | NA | 19420.14 |
| ran\_pars | Residual | sd\_\_Observation | 0.73238271 | NA | NA | NA | NA | 19420.14 |