**Table 1.** Model selection results of the temporal and ice condition variables influencing the daily nest survival of Spectacled Eiders nests on Kigigak Island (1994-2015, 2019, and 2021) and Utqiaġvik (2010-2019). Models are ranked by the highest weight (Weight). K = Parameter count, AICc = model fit value, ΔAICc = difference in AICc relative to the samples AICc, Weight = Akaike weight a measure of relative support for each model, Deviance = measure of fit of the model to the data.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model Selection Stage | Models | K | AICc | ΔAICc | Weight | Deviance |
| Temporal | -1 + Site:Year | 34 | 4035.75 | 0.00 | 1.00 | 3964.69 |
|  | Site + Year | 28 | 4046.70 | 13.95 | 0.00 | 3990.66 |
|  | Site + Init + NestAge | 4 | 4245.73 | 212.99 | 0.00 | 4237.73 |
|  | Site + Init | 3 | 4248.67 | 215.93 | 0.00 | 4242.67 |
|  | Site + Init + Site\*Init | 4 | 4249.38 | 216.63 | 0.00 | 4241.38 |
|  | Site + NestAge | 3 | 4274.84 | 242.10 | 0.00 | 4268.84 |
|  | Site + NestAge + Site\*NestAge | 4 | 4276.32 | 243.57 | 0.00 | 4268.32 |
|  |  |  |  |  |  |  |
| Ice Conditions | Site + Win\_Lo + Win\_Lo2 + Site\*Win\_Lo + Site\*Win\_Lo2 | 6 | 4004.19 | 0.00 | 1.00 | 3992.19 |
|  | Site + Win\_Hi + Win\_Hi2 + Site\*Win\_Hi + Site\*Win\_Hi2 | 6 | 4075.28 | 71.08 | 0.00 | 4063.28 |
|  | Site + Win\_Lo | 3 | 4075.56 | 71.36 | 0.00 | 4069.56 |
|  | Site + Win\_Lo + Win\_Lo2 | 4 | 4076.83 | 72.64 | 0.00 | 4068.83 |
|  | Site + Win\_Hi + Win\_Hi2 | 4 | 4089.82 | 85.62 | 0.00 | 4081.82 |
|  | Site + Win\_Hi | 3 | 4095.83 | 91.64 | 0.00 | 4089.83 |
|  | Site + Spr\_Lo + Spr\_Lo2 + Site\*Spr\_Lo + Site\*Spr\_Lo2 | 6 | 4108.57 | 104.37 | 0.00 | 4096.57 |
|  | Site + Spr\_Lo + Spr\_Lo2 | 4 | 4115.96 | 111.76 | 0.00 | 4107.96 |
|  | Site + Spr\_Lo | 3 | 4139.05 | 134.86 | 0.00 | 4133.05 |
|  | Site + Spr\_Hi + Spr\_Hi2 | 4 | 4146.51 | 142.31 | 0.00 | 4138.50 |
|  | Site + Spr\_Hi + Spr\_Hi2 + Site\*Spr\_Hi + Site\*Spr\_Hi2 | 6 | 4147.19 | 142.99 | 0.00 | 4135.19 |
|  | Site + Spr\_Hi | 3 | 4149.43 | 145.23 | 0.00 | 4143.43 |

**Table 2.** Model selection results including the most supported models from temporal and ice condition variables influencing the daily nest survival of Spectacled Eider nests on Kigigak Island (1994-2015, 2019 and Utqiaġvik (2010-2019). Models are ranked by the highest weight (Weight). K = Parameter count, AICc = model fit value, ΔAICc = difference in AICc relative to the samples AICc, Weight = Akaike weight a measure of relative support for each model, Deviance = measure of fit of the model to the data.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model Selection Stage | Models | K | AICc | ΔAICc | Weight | Deviance |
| Temporal + Ice | -1 + Site:Year | 33 | 3906.57 | 0.00 | 1.00 | 3840.52 |
|  | Site + Win\_Lo + Win\_Lo2 + Site\*Win\_Lo + Site\*Win\_Lo2 | 6 | 4004.19 | 97.66 | 0.00 | 3992.19 |