Table 1. Summary statistics from GAMs of population size over time for Colorado butterfly plant (*Oenothera coloradensis*) at F.E. Warren Air Force Base, Wyoming, 1989-2022. Shown are data from models using data for the base-wide population, creek populations, and creek segment sub-populations. *P*-value for the smoothed effect of year indicates if trends are significantly curvilinear compared to linear; effective degrees of freedom for the smoothed effect of year (edf) indicates the complexity of the curvilinear trend in a model; and the percent deviance explained (% *d*) is a measure of effect size similar to *r*2 in linear models. ‘k’ indicates the number of mesh points that were used in the smoothed effect of year in each model.

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| **Data included in Model** | ***P*-value for the smoothed effect of Year** | **edf** | **%*d*** | **k** |
| Base-wide | 0.09 | 4.7 | 31.4 | 15 |
| Crow Creek | <0.001 | 3.5 | 70.3 | 7 |
| Diamond Creek | 0.01 | 5.03 | 37.8 | 9 |
| Unnamed Creek | <0.001 | 2.2 | 38.4 | 6 |
| Crow Creek - Segment C1 | <0.001 | 5.5 | 71.8 | 13 |
| Crow Creek - Segment C2 | <0.001 | 2.4 | 40.5 | 12 |
| Crow Creek - Segment C3 | <0.001 | 2.5 | 72.7 | 16 |
| Crow Creek - Segment C4 | <0.001 | 1.9 | 68.8 | 5 |
| Crow Creek - Segment C5 | <0.001 | 1.8 | 68.8 | 7 |
| Crow Creek - Segment C6 | 0.17 | 3.4 | 25.9 | 8 |
| Crow Creek – Segment C7 | 0.01 | 2.4 | 40.0 | 8 |
| Crow Creek – Segment C8 | 0.11 | 1.0 | 90.2 | 3 |
| Diamond Creek - Segment D1 | 0.04 | 1.0 | 10.7 | 5 |
| Diamond Creek - Segment D2 | 0.01 | 4.9 | 34.8 | 13 |
| Diamond Creek - Segment D3 | <0.01 | 2.8 | 29.7 | 13 |
| Diamond Creek - Segment D4 | <0.001 | 6.9 | 63.9 | 14 |
| Diamond Creek - Segment D5 | <0.01 | 1.6 | 19.5 | 3 |
| Unnamed Creek - Segment U1 | 0.09 | 2.3 | 18.8 | 5 |
| Unnamed Creek - Segment U2 | <0.005 | 2.2 | 28.8 | 15 |