**Appendix A and Supplemental Figure 1**

to accompany

**Environmental conditions influencing the abundance of the Salmonid Ectoparasite Salmincola californiensis across upper Willamette River Reservoirs, Oregon**

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**Appendix A. Covariate types, definitions, and descriptions of covariates tested**

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| Variable Type | Definition | Covariate | Covariate Format |
| Response Variables |  | Copepodid detection and counts in light traps | Detection history, binary (1=detection, 0=not detected)  Counts (continuous) |
| Site-level covariates  (*siteCovs*) | Site = individual trap  (Covariates that change between traps only) | Reservoir  Trap Line | Factor – Cougar, Lookout Point, Fall Creek  Factor |
| Season-level covariates  (*yearlySiteCovs*) | Season = month  (Covariates that change between months) | Trap depth  Water temperature - at trap  Water clarity  Light  Thermocline – trap above or below  Moon  Outflow | Numerical (continuous)  Numerical (continuous) –smoothed curve of temp profile  Numerical (continuous) – light extinction coefficient  Numerical (continuous) – surface light proportion  Binary (0=above, 1=below)  Numerical (continuous) - % fullness  Numerical (continuous) – at dam |
| Observation-level covariates  (*obsCovs*) | Observation event = sampling event  (Covariates that change between sampling events) | Funnel size  Light on/off  *Leptodora* count  Fish count  Fish presence/absence  Total zooplankton abundance  Zooplankton abundance by broad taxa  Copepodid removal | Binary (1=75mm, 0=60mm)  Binary (1=on, 0=off)  Numerical (continuous) – Leptodora abundance in trap  Numerical (continuous) – sculpin abundance in trap  Sculpin in trap, binary (1=present, 0=absent)  Numerical (continuous)  Numerical (continuous)  Binary (1=removed during sample 1, 0=not removed) |

A close-up of a trap entrance

Description automatically generated

Supplemental Figure 1. Photos of a light trap depicting (counterclockwise from top left) the funnel and trap entrance, the LED light used to attract *Salmincola californiensis* copepodids, and the outside body of the trap with rope harness for attaching to an anchored line. Photos C.A. Murphy.