**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) | ReservoirTrap Line | Factor – Cougar, Lookout Point, Fall CreekFactor |
| Season-level covariates(*yearlySiteCovs*) | Season = month(Covariates that change between months) | Trap depthWater temperature - at trapWater clarity LightThermocline – trap above or belowMoon Outflow | Numerical (continuous)Numerical (continuous) –smoothed curve of temp profileNumerical (continuous) – light extinction coefficientNumerical (continuous) – surface light proportionBinary (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 sizeLight on/off*Leptodora* countFish countFish presence/absenceTotal zooplankton abundanceZooplankton abundance by broad taxaCopepodid removal | Binary (1=75mm, 0=60mm)Binary (1=on, 0=off)Numerical (continuous) – Leptodora abundance in trapNumerical (continuous) – sculpin abundance in trapSculpin in trap, binary (1=present, 0=absent)Numerical (continuous)Numerical (continuous)Binary (1=removed during sample 1, 0=not removed) |



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.