**Table A1**. Spring-vents that were monitored for *Gammarus desperatus* in the Rio Hondo spring system, Bitter Lake National Wildlife Refuge, New Mexico. Y, *G. desperatus* were detected in at least one of the three samples taken at the spring-vent; N, no *G. desperatus* were detected in any of the three samples.

**Table A2**. Spring-vents that were monitored for springsnails in the Rio Hondo spring system, Bitter Lake National Wildlife Refuge, New Mexico. Y, springsnails were detected in at least one of the three samples taken at the spring-vent; N, no springsnails were detected in any of the three samples.

**Table A3**. Midstream sites that were monitored for *G. desperatus* at Bitter Lake National Wildlife Refuge, New Mexico. Sample location Midstream 1 is the upstream most location and Midstream 6 is the downstream most location. Y, *G. desperatus* were detected in at least one of the three samples taken at the monitoring site; N, no *G. desperatus* were detected in any of the three samples.

**Table A4**. Midstream sites that were monitored for springsnails at Bitter Lake National Wildlife Refuge, New Mexico. Sample location Midstream 1 is the upstream most location and Midstream 6 is the downstream most location. Y, springsnails were detected in at least one of the three samples taken at the monitoring site; N, no springsnails were detected in any of the three samples.

**Table B1**. An evaluation of the trend in invertebrate numbers in Rio Hondo *spring-vents* from 2014–2021, accounting for a likely season effect and sample effects. Sample location (individual spring-vents) was included in the model as a random effect and the model took into account a trap size change in 2015. Seasons were summer and winter. Sample positions were vent, mid-run and end-run.

**Table B2**. An evaluation of the trend in springsnail numbers in the Rio Hondo *midstream* area from 2014–2021, accounting for a likely season effect and sample effects. Sample location (or sample site) was included in the model as a random effect and the model took into account a trap size change in 2015. Seasons were summer and winter. Sample positions were bank, quarter and centre.

**Table B3**. Comparison of springsnail abundance across spring systems for 2020 and 2021. Spring systems include Bitter Lake, Rio Hondo (both spring-vents and midstream), Sago Springs and Snail Unit. A Poisson distribution was assumed (Poisson (log)). Purpose of analysis was to see if springsnail abundance in Rio Hondo spring system were comparable to those in the three reference spring systems. Sample location was included in model as a random effect. Summer and winter data were analysed separately.

**Table B4**. Evaluation of Rio Hondo *midstream* water quality variables through time, accounting for a likely season effect and allowing for a non-linear trend/response. Response variables are water temperature (°C), dissolved oxygen (mg/L), pH, salinity (part per thousand) and water depth (cm).

**Table B5**. Evaluation of Rio Hondo *spring-vent* water quality variables through time, accounting for a likely season effect and allowing for either a linear or non-linear trend/response. Response variables are water temperature (°C), dissolved oxygen (mg/L), pH, salinity (parts per thousand), water depth (cm) and pH.

**Table B6**. Relationship of *summer* water parameters to spring systems, including Rio Hondo and three reference systems. Purpose of analyses were to compare parameters in Rio Hondo (both midstream and stream-vents) to those in Bitter Creek, Sago Springs and Snail Unit. Response variables were water temperature (°C), dissolved oxygen (mg/L), pH, salinity (parts per thousand) and water depth (cm).

**Table B7**. Relationship of *winter* water parameters to spring systems, including Rio Hondo and three reference systems. Purpose of analyses were to compare parameters in Rio Hondo (both midstream and stream-vents) to those in Bitter Creek, Sago Springs and Snail Unit. Response variables were water temperature (°C), dissolved oxygen (mg/L), pH, salinity (parts per thousand) and water depth (cm).

**Figure C1**. Trends in water parameters, by season, in the Rio Hondo midstream from 2015–2021. Trends are modelled as linear or quadratic based on the AICc selected model.

**Figure C2**. Trends in water parameters, by season, in Rio Hondo spring-vents from 2014–2021. Trends are modelled as linear or quadratic based on the AICc selected model.