SI Figure 1. Stream temperature at the upstream (inflow) and downstream (outflow) reach boundary limits (shown in Figure 1) for July 16-21, 2008 and 2010. Temperature values represent 5-minute temperature record.

SI Figure 2. Groundwater elevations across the floodplain including surface water elevation in the channel (point in the shaded area) showing gradual increase. Cross-sectional view is from river left to right when in downstream direction. Location of both cross-sections is shown on the map.

SI Figure 3. Stream temperature for above and below five beaver dams in the study reach (Figure 1) and at reach boundaries (PT515 and PT1252). Individual beaver dams cumulatively contribute to the downstream warming with temperature being the warmest above and below beaver dam 8. Temperature decreased at the downstream reach boundary (red solid line) likely due to old channel and groundwater influences.

SI Figure 4. A) B) Aerial imagery capturing stream conditions prior (2006) and 2 years after beaver colonization. More complex channel form can be observed from 2011 image where there are multiple beaver dams, beaver ponds and side channels present. The old channel was also reoccupied due to the beaver dam construction at the downstream and of the reach (BD 10). C) Stream temperature variability captured via aerial thermal imagery in May 2012 post beaver colonization. The temperatures range from 11°C to 18°C and show increased thermal heterogeneity and channel complexity in and around beaver ponds.

SI Figure 5. Snow water equivalent and precipitation accumulation from nearby SNOTEL site (Bug Lake, Utah) for 2008, 2009, and 2010. Although the snow water equivalent at its peak is smaller in 2010, precipitation accumulation for all three years is comparable at the end of the each water year (October). The graph was generated by the National Water and Climate Center, Natural Resources Conservation Service (website).