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Recovery of the Threatened Lahontan Cutthroat Trout in a Desert Terminal Lake

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Walker Lake is the terminus of the Walker River watershed and southernmost arm of the Pleistocene Lake Lahontan. Due primarily to upstream diversion, Walker Lake's volume has declined considerably, resulting in a current total dissolved solid measurement of near 16 g/l. Lacustrine populations of Lahontan cutthroat trout (LCT), native to Walker Lake, have been extirpated from most of their lake habitats. The primary goal of this effort is to improve LCT survival in Walker Lake and study the lake ecosystem's response to changing total dissolved solids (TDS) levels. To improve our understanding of the fishery, we have been conducting research to determine LCT survival, population abundance and distribution, and refinement of stocking techniques to increase immediate stocking survival. Netting and creel surveys indicate that some post-stocking survival occurs and that the average growth rate is 18 mm/month for stocked fish. The most effective means of improving stocking survival is allowing LCT to self-acclimate to the high TDS in Walker Lake by stocking them in the river/lake confluence. We sampled with trap and trammel nets and angling in 2006, 2007 and 2008, and captured 9, 164 and 73 LCT, respectively, although our most intensive sampling occurred during 2008. To date our most effective recapture method of tagged fish has been through the creel surveys. This method's biggest drawback is that these fish are not returned to the population, thereby ending our ability to determine long-term survival of LCT. Future efforts of this study are to increase the number of fish returned to the population by anglers, increase the number of fish captured by net and troll sampling, and determine the influence of TDS on the long-term survival of LCT in Walker Lake.

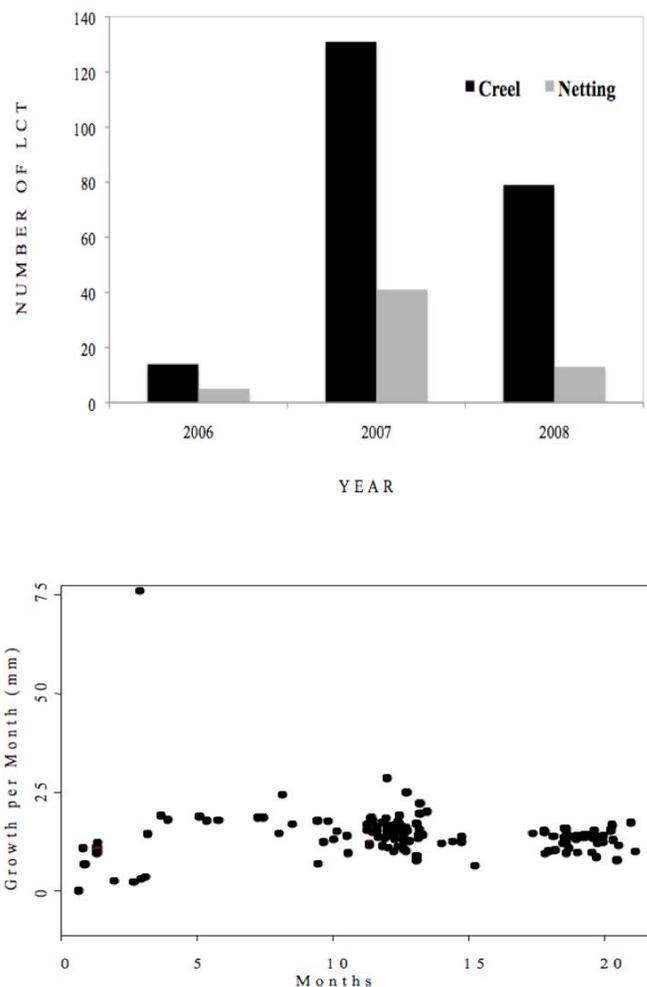


Figure 1—The number of Lahontan cutthroat trout (LCT) caught by creel and netting (top) from 2006 through 2008 and their growth in millimeters (bottom).