Wisconsin recreational inland fisheries are socially and economically important. Walleye (*Sander vitreus*) is a coolwater species that is experiencing reduced productivity as a result of the combined effects of climate change, shoreline development, aquatic invasive species, overharvest, and competition with warmwater species. The state has heavily invested in stocking to resist the loss of this highly popular target species, with limited success. The benefits of this continued financial investment in terms of angler welfare are unclear. We have developed an integrated social ecological systems model of the Wisconsin inland lake fishery to evaluate the effects of climate change on the distribution of fishing effort targeting three of the most popular inland target species: walleye, largemouth bass, and bluegill. Increasing water temperatures influenced the simulated growth and natural mortality of each of these species in age and size structured population models. An angler decision sub-model chooses fishing sites, catches, and harvests fish. The decision model is parameterized by a discrete choice experiment, angler diary data, and a DNR survey of walleye anglers. As heterogeneous simulated anglers shift their fishing activity to compensate for changing fishing conditions, we observed the emergent effects of walleye decline under different climate scenarios. Future work will investigate the effects of different management strategies that adapt to this change.