ABSTRACT

THESIS: Using digital sources of data to gain insight into angler satisfaction and movement

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Digital sources of data such as online angler fora and smartphone apps are becoming more abundant in fisheries research. Digital data represent a new and potentially useful source of fisheries data. In these studies, I (1) used text data from online angler fora to explain differences in walleye angler satisfaction among nine U.S. states, and (2) used Fishbrain app data to describe how anglers are connecting lakes, and identify features of the network that can be used to understand and manage the spread of aquatic invasive species. In Chapter 1, I determined the extent to which fisheries management explained variation in satisfaction among states using factors including season length, bag limit, and transparency of the state’s natural resource agency. I found significant differences in sentiment levels among states, and that bag limit, season length, and angler density were the most important factors in driving these differences in sentiment. In Chapter 2, I used Fishbrain app data and the National Hydrography Dataset to create two networks of lakes in Minnesota. Upon comparison of these networks, I found that the angler network was more connected than the hydrology network, and that there was high coincidence between anglers and aquatic invasive species. My findings for both chapters were consistent with the literature, providing evidence that digital sources of data can be a useful and reliable source for fisheries research.