Walleye Stizostedion vitreum is a widely distributed and important recreational fish species throughout the United States and Canada, but they are not native to Colorado. Walleye can be invasive and negatively impact native species in their introduced range, and stocking is prohibited in many parts of the western U.S. However, illegal introductions and natural dispersal of nonnative fishes are common, and managers need a means to limit the impact of introduced Walleye. Stocking triploids has been proposed as an alternative stocking method for Walleye throughout the West. Triploid fish have three sets of chromosomes as compared to normal, diploid, fish which have two sets of chromosomes. Triploid fish are much less fertile than their diploid counterparts, which could prevent the establishment of new Walleye populations in sensitive areas. Prior to the start of this project, little was known about how triploid Walleyes perform in the wild. In this seminar, I will focus on three chapters of my dissertation. First, I will discuss our work validating a modern approach for ploidy determination in Walleye. Then, I will explore differences in consumption and heavy metal bioaccumulation between diploid and triploid Walleyes. Finally, I will use triploid Walleyes to address a long-standing debate as to how fish grow.