

THE INFLUENCE OF THE COMMERCIAL HARVEST ON AMERICAN EEL IN THE ST. JONES RIVER, DE

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In recent years, there have been noted declines in landings for American eel (*Anguilla rostrata*), raising questions of sustainability. Recent catch data show that the mid-Atlantic region accounted for 83% of the total US American eel harvest. Traditionally Delaware has played a large role in the mid-Atlantic landings with landings destined for food and bait. We initiated a mark-recapture project in the St. Jones River, DE to describe demographics of the American eel population and to generate estimates of survival, mortality, and recapture probability. In total, 5,961 American eel were tagged (June-November 2005; April-November 2006) using PIT tags and released. By working cooperatively with a commercial eel harvester on the St. Jones River, we were able to scan his entire commercial harvest which yielded 1,023 tag returns. Using mark-recapture software (MARK) we determined that in months when fishing occurred (August and October 2005), the proportion of mortality that could be attributed to the commercial harvest was 0.42 and 0.15, respectively. Through this project, we will be able to generate estimates of survival and to assess the impact of the commercial harvest on the St. Jones River population of American eel. These estimates will assist fisheries professionals in making management decisions for this commercially important species.