Abstract

The upper Illinois River watershed (UIRW) in northwest Arkansas and northeast Oklahoma is a
nutrient rich watershed. Agricultural production in northwest Arkansas is dominated by cattle
and poultry production, which can contribute to the phosphorus and nitrogen loads of the river.
Several lawsuits have been filed by downstream water users against upstream land users that
include poultry integrators and several municipal wastewater treatment plants, in an effort to
decrease nutrient concentrations and some impairment of receiving waters used for drinking and
recreation. One option to reduce water quality impairment is through the use of voluntary
conservation practices (CPs). Due to their voluntary nature, understanding the decision making
process and producer perceptions are vital to increasing adoption. This study estimates a
generalized linear model with a count data dependent variable, to identify factors that influence
adoption rates for CPs, as well as seven multinomial probit models to identify factors that
influence the perception of seven common CPs.