PENNSYLVANIA GAME COMMISSION
BUREAU OF WILDLIFE MANAGEMENT
RESEARCH DIVISION
PROJECT ANNUAL JOB REPORT

PROJECT CODE NO.: 05011

TITLE: Conservation Reserve Enhancement Program

JOB CODE NO.: 01004

TITLE: Impacts of the Conservation Reserve Enhancement Program on the Regional Trends in Bird and Eastern Cottontail Populations

PERIOD COVERED: 1 July 2000 to 30 June 2001

COOPERATING AGENCIES: Pennsylvania Game Commission and The Pennsylvania State University, School of Forest Resources

WORK LOCATIONS: Columbia, Montour, Northumberland, Snyder, Juniata, Union, Perry, Cumberland, Franklin, Fulton, Bedford, Somerset, Adams, York, Lancaster, Chester, Berks, Schulykill, Dauphin, and Lebanon counties, Pennsylvania

PREPARED BY: Scott Klinger

DATE: 12 March 2002

Abstract: In April 2000, the Governor of Pennsylvania and the U.S. Secretary of Agriculture approved a $210M conservation initiative for 20 counties. The Pennsylvania Conservation Enhancement Program (CREP) has a goal of converting 100,000 acres of cropland and marginal pasture to conservation cover for 10-15 years. The program is entirely voluntary, and its goals are to improve water quality, reduce soil erosion, increase farm income, and improve wildlife habitat in 20 south-central and southeastern counties. The State must provide 20% of the costs. The State is also responsible for monitoring the effectiveness of the habitat improvements on water quality and targeted wildlife populations. In order to evaluate the regional landscape-level impacts of CREP on birds and eastern cottontail populations using agricultural lands, we established 89 survey routes across CREP-participating counties. Routes were established along randomly selected township roads. Roads were biased toward agricultural areas using remote sensing imagery. Routes varied in length from 10-25 miles. Points along routes were 0.5 mi apart, and observers recorded all birds seen or heard within 250 m of each point. Each route will be run once in May and once in June using Breeding Bird Survey Protocols. Total rabbits observed along survey routes will be used to monitor trends in relative abundance of eastern cottontail populations. Habitat data will be collected within 250 m of each survey point using Anderson Landuse Classifications. In 2002, all points along survey routes will be geo-referenced using GPS units. All Routes will be run annually from 2001 thru 2015. In addition, habitat site-specific effects on bird populations are being conducted in a concurrent study.

OBJECTIVES

To monitor trends in agricultural habitats in 20 southeastern Pennsylvania counties enrolled in CREP. To monitor trends in breeding bird populations and eastern cottontail rabbit populations on agricultural lands in those counties. To determine the impact of establishing undisturbed grassland habitats on the regional abundance and population trends of grassland nesting birds and eastern cottontail rabbits. To provide recommendations on future habitat management programs to restore farmland wildlife populations.

PROCEDURES

The study area consists of the 20 counties enrolled in the Pennsylvania CREP and contains 7,774,000 acres. Approximately 3,136,000 acres are in farmland, and 2,303,000 acres is in cropland. As of 2000, less than 30,000 acres of cropland were enrolled in CREP.

In June and July of 2000, we established 89 survey routes along township roads across the 20 CREP counties. Using remote sensing spot imagery from 1999, we selected township-level roads at random within predominately agricultural landscapes. We avoided interstates and U.S. highways to avoid traffic problems when conducting surveys. Routes selected varied in length from 10-25 miles. Routes were field checked in July and August of 2000 to ensure roads still existed and construction or other activities would not preclude their use in future surveys. We established starting points for all randomly selected routes at 0.5 mi from the intersection of 2 township roads. All points were established a minimum of 0.5 mi apart along survey routes. In some cases, because of adverse road conditions, points were established greater than 0.5 mi apart. All points along routes will be geo-referenced using GPS in 2002. Using Breeding Bird Survey Protocols, we conducted 2 surveys along each route between 1 May and 30 June 2001. Surveys began 0.5 hr before sunrise and were completed within 3 hours. All birds heard or observed within 3 minutes and within 250 m of the point were recorded. Flyovers were recorded separately. We also recorded number of eastern cottontail rabbits seen along each route within 50 m of the road. The percent habitat in Anderson Landuse Classifications was estimated for each point within a 250 m radius.

FINDINGS

Data from 2001 has been entered into a relational database and will be analyzed and included in the 2002 annual report.