

**Natural Resource Conservation  
CRIS Research Reports In-Progress  
for Agr Exp Station, Univ of Massachusetts  
Reporting Period 10/01/2001 to 09/30/2002**

**AD-421 Publications for Reports in-Progress and Submitted to CRIS for  
MAS as of 01/17/2003**

**Project Number: MAS00081**

***RELATIONSHIP BETWEEN LANDSCAPE STRUCTURE AND WILDLIFE  
POPULATION VIABILITY***

**Performing Department: Natural Resources Conservation -- 6344**

Crist, M. R., K. McGarigal, W. Romme, and E. Roworth. 2002. Quantifying spatial and temporal dynamics in wildlife habitat under a natural disturbance regime in the southern Rocky Mountains. *Ecological Applications* (submitted).

Roworth, E., K. McGarigal, and W. Romme. 2002. Quantifying the dynamics in landscape structure under natural disturbance regimes in the southern Rocky Mountains. *Ecological Applications* (submitted).

McGarigal, K., W. Romme, M. Crist, and E. Roworth. 2001. Cumulative effects of Logging and road-building on landscape structure in the San Juan Mountains, Colorado. *Landscape Ecology* 16:327-349.

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**Project Number: MAS00083**

***Eco-physiological controls on establishment and growth of native and non-native woody plants***

**Performing Department: Natural Resources Conservation -- 6344**

Ellsworth, JW. 2002. Controls on the establishment and early growth of oriental bittersweet (*Celastrus orbiculatus* Thunb.): an invasive woody vine. MS Thesis, Department of Natural Resources Conservation, University of Massachusetts at Amherst, Amherst MA.

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**Project Number: MAS00086**

***Computational Modeling of Mechanical Properties of Structural Composite Lumber***

**Performing Department: Natural Resources Conservation -- 6344**

Clouston, P.; Lam, F. 2002. A Stochastic Plasticity Approach to Strength Modeling of Strand-based Wood Composites. *Composites Science and Technology*, 62 (2002), pp. 1381-1395

Clouston, P.; Lam, F. 2001. Computational Modeling of Strand-based Wood Composites. *ASCE Journal of Engineering Mechanics* , 127(8), 844-851

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**Project Number: MAS00788**

***PREDATION ON ATLANTIC SALMON SMOLTS AFTER DAM PASSAGE***

**Performing Department: Natural Resources Conservation -- 6344**

Martinez, J.L., S. Gephard, F. Juanes, J. Perez, and E. Garcia-Vazquez. 2001. Genetic and life history differentiation between donor and derivative population of Atlantic salmon. *Transactions of the American Fisheries Society* 130: 508-515.

Letcher, B., G. Gries, and F. Juanes. 2002. Survival of stream-dwelling Atlantic salmon: effects of life history variation, season, and age. *Transactions of the American Fisheries Society* 131: 838-854.

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**Project Number: MAS00800**

***RELATIONSHIP OF BIRD DIVERSITY TO FOREST COVER, URBANIZATION AND AGRICULTURE***

**Performing Department: Natural Resources Conservation -- 6344**

Cushman, S. A., K. McGarigal, and M. C Neel. 2003. Parsimony in landscape metrics: importance, universality, and consistency. *Landscape Ecology*. (Submitted)

Neel, M. C., K. McGarigal, and S. A. Cushman. 2003. Behavior of class-level landscape metrics across gradients of class aggregation and area. *Landscape Ecology*. (Submitted)

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**Project Number: MAS02000886**

***Invasive versus native plants: resource-use efficiency, plasticity and survival***

**Performing Department: Natural Resources Conservation -- 6344**

Sanford, NL. 2002. The effects of phenology and mammalian herbivory on growth and survival of native and alien woody seedlings in open and understory environments. MS Thesis, Department of Natural Resources Conservation, University of Massachusetts, Amherst, MA.