

## GUIDELINES FOR SOFOR GIS '2000 PAPER SUBMISSIONS

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Diskette or email to soforgis@uga.edu.

- a. A WordPerfect or Word version of the paper (DOS TXT otherwise)
- b. Electronic versions of figures (e.g., \*.PCX, \*.BMP, \*.GIF) and tables (graphics, text, or spreadsheet formats) with complete instructions on exact placement.
- c. A camera-ready copy if so desired to assist the CD developer with replication and understanding of your preferred layout.

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### **Type style**

Preferably 12 pitch (12 characters to the inch). If at all possible, use a Times Roman font.

### **Margins**

All margins should be one inch.

### **Structure (example included on page 2 of these instructions)**

Upper one-third of page one:

Title of paper: C A P I T A L S (spaces between letters), centered.

Authors: names, titles, and affiliation (all centered)

The material presented should be organized under two types of headings and the text should be divided into paragraphs:

Section Titles: CAPITALS (no spaces), centered. The first title should be ABSTRACT and begin one third of the distance down the first page. Then skip three lines and begin text. For all subsequent section titles, skip five lines after previous text, and skip three lines to begin text in that section. Other section titles include items such as INTRODUCTION, METHODS, RESULTS, CONCLUSIONS, and LITERATURE CITED.

Subtitles: First letter capitalized (no spaces), flush left. Skip one line from previous text, and begin text on the next line following.

Text: Indent first line of each paragraph five spaces. All text should be single-spaced.

### **Abstract**

The abstract should not exceed one-half page in length. It should give an evaluation of the paper's scientific and applied significance as concisely and nontechnically as possible.

### **Literature cited**

Do not start this section on a new page unless it coincidentally belongs there. The first line of each reference should be flush left, and the following lines should be indented five spaces. Skip on line between each reference.

Literature used in the preparation of the paper should be acknowledged in this section, alphabetically by the author. For publications with the same author, they should be arranged by year of publication. Sequence: name of author (last name, first name initial, middle initial), year of publication, title. The titles of periodicals should be underlined.

### **Tables, graphs and figures**

Please incorporate these into the text of the document in the appropriate places. If at all possible, please send all separate files of all graphs and figures. Remember that your manuscript will be reproduced as is.

# THE IMPACT OF PRODUCT TYPES AND PRICES ON OPTIMAL FOREST MANAGEMENT

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## ABSTRACT

Optimal stand management is largely dependent upon the types of products being produced and their relative prices. This research uses a fine resolution modified dynamic programming algorithm to search for optimal planting density and thinning strategies. Sensitivity analysis is done for differing wood products produced, absolute product prices, relative product prices and other economic parameters. Results show that differences exist in stand management when new products are produced and that changes in prices can also cause dramatic changes in stand management. Uncertainty is often modeled using stochastic processes and requires many iterations to generate meaningful results. The use of deterministic dynamic programming with sensitivity analysis generates breakpoints that can be very useful in managing over time. The ease of use of the algorithm makes alternate economic scenarios easy to investigate, making "what if?" analysis relatively simple.

## INTRODUCTION

As relative prices of one wood product change relative to other possible products, forest management may be expected to change. Hardie 1977, Broderick et al. 1982, Hotvedt and Straka 1987, Arthaud and Klemperer 1988, Roise et al. 1988, and Haight 1992 all address problems with changes in wood prices and subsequent changes in management for loblolly pine. Affected could be management activities such as planting density, timing and intensity of thinnings, increase / decrease of silvicultural activities such as fertilization, and timing of final harvest in even-aged stands.