University: State University of New York College of Environmental Science and Forestry

Name of University Researcher Preparing Report: Theodore A. Endreny

#### NWS/AFWA/Navy Office: NERFC

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Partners or Cooperative Project: ESF & NERFC UCAR Award No.: S03-38667

#### Date: August 2004

SECTION 1: PROJECT OBJECTIVES AND ACCOMPLISHMENTS 1.1

- Finalized Fluvial Geomorphology (FGM) Module outline after series of conference calls.
- Completed all image scans for illustrations needed in FGM Module sections.
- Contracted Syracuse University Living Schoolbook to construct HTML PHP template for presenting the FGM Module sections.
- Completed Beta Testing of the FGM Module and received constructive feedback from users. Feedback guided construction of more interactive learning exercises, streamlining of definitions, and enhancement of descriptive text to increase transfer of information to the COMET users.
- Completed edits from Beta Test with Partner and constructed improved FGM Module for Alpha Testing.
- Completed Alpha Testing of the FGM Module, viewable at:
  - http://lsb-alpha.syr.edu/comet/menu.php
- Accomplished all objectives of this project.

## SECTION 2: RELATED ACCOMPLISHMENTS

- 2.1 Incorporated FGM Module into two new courses developed at SUNY ESF:
  - Ecological Engineering in the Tropics (ERE 496) with an emphasis on surveying tropical step-pool rivers
  - River Form and Process (ERE 596) with an emphasis on surveying central New York rivers
- Currently writing journal paper to share technical lessons learned from this project.

## SECTION 3: SUMMARY OF BENEFITS

3.1

- Provided graduate student exposure to the challenges and technical components of NERFC forecasting techniques.
- Improved university understanding of RFC challenges in estimating parameters for river flood forecasting.

- Incorporated FGM Module into two new courses developed at SUNY ESF:
  - Ecological Engineering in the Tropics (ERE 496) with an emphasis on surveying tropical step-pool rivers
  - River Form and Process (ERE 596) with an emphasis on surveying central New York rivers
- Advanced PI knowledge of HTML PHP procedures and ImageJ tool for interactive Internet experiences.

SECTION 4: PRESENTATIONS AND PUBLICATIONS

4.1

- Journal article in preparation on use of novel technology and ideas to create module.
- Project URL at: http://lsb-alpha.syr.edu/comet/menu.php

# SECTION 5: SUMMARY OF PROBLEMS ENCOUNTERED

5.1

- Developing of interactive FGM Module activities that represented field experiences of surveying river pattern, profile, and dimension was difficult. Fortunately, a variety of mapping and image analysis tools were identified that facilitated this process
- Connecting operational forecasting with non-flooding fluvial assessment in a way that captured COMET user interest was challenging, but a variety of linkages and some case studies were used to establish the connection.