

International Court

Manhattan, KS 66502

Ph: (785) 539- (home), (785) 532- (Work)

E-mail: sbhuyan@ksu.eduWeb address: <http://www-personal.ksu.edu>

OBJECTIVE To obtain a challenging career in hydrology and environmental field with the opportunity to utilize my problem solving, communication, and leadership skills.

EXPERTISE Hydrologic and Water Quality data analyses and modeling
GIS and Remote Sensing application
Project preparation and communication
Office Management

**EDUCATION
AND TRAINING**Kansas State University, Manhattan

Ph D (Biological and Agricultural Engineering), Dec, 2001

Research area: Hydrologic/Water Quality Modeling

M. S. (Biological and Agricultural Engineering), GPA: 3.8/4.0, 1999

Research Area: Soil and Water Conservation

G. B. Pant Agriculture University, Pantnagar, India

B. S. (Agricultural Engineering), GPA: 4.6/5.0, 1987

Division of Public Safety, Kansas State University, Manhattan

Completed 40-Hour HAZWOPER training

Environmental System Research Institute (ESRI)

Completed ARC VIEW-GIS training, 1999

Attended ESRI's ARC GIS seminar in Salina, KS on May 15, 2001

Certified Professional in Erosion and Sediment Control (CPESC)Completed training on "How to develop effective erosion control program",
Las Vegas, 2001**EXPERIENCE**

Research Assistant, Biol. & Agril. Engineering, Kansas State University 1997-present

Research Project: Cheney Lake Nonpoint Source Management, funded by
Kansas Water Office and NRCS, Reno County

- ◆ Analyzed U.S. Geological Survey's hydrologic and water quality data to estimate surface flow, base flow, and nutrient loading of Cheney watershed
- ◆ Used HYSEP 2.2 model to separate base flow from stream flow
- ◆ Used satellite TM image data to obtain landcover information of watershed
- ◆ Created and edited GIS data layers of soil, landcover, hydrography for the watershed
- ◆ Used Agricultural Nonpoint Source Pollution (AGNPS) hydrologic model with GIS interface to estimate water quantity and quality data
- ◆ Calibrated AGNPS model to predict runoff, sediment, and nutrient data

Research Project: Smoky Hill River Project funded by Kansas Department of
Health and Environment, KS

- ◆ Working on multiple Landsat scenes to obtain landcover information
- ◆ Analyzed stream flow data to obtain base flow and surface flow
- ◆ Created GIS data layers for the watershed
- ◆ Digitized terraces of watershed from digital ortho-photo to see the effect on surface runoff and peak rate of runoff

EXPERIENCE (contd)

Research Project: Effect of Training on soil erosion, funded by US Army, Kansas

- ◆ Conducted field experiments to measure surface runoff, peak flow rate, and sediment loss from training lands
- ◆ Used and calibrated Water Erosion Prediction Project model

Research project: Clinton Lake water quality project funded by Kansas Department of Health and Environment, Kansas

- ◆ Computed the annual pollutant loading in the Clinton Lake generated from point and nonpoint sources
- ◆ Assisted in preparation of the final project report

Teaching Assistant, Bio. And Ag. Engineering, Kansas State University

- ◆ Instructed modeling part of Non Point Source Pollution (Fall 1999) and seminar classes (Fall 2000).

Assistant Executive Engineer, State Agriculture Department, India

1989-1997

- ◆ Prepared and implemented two World Bank funded projects :
 - ❖ "Minor irrigation projects" through installation of shallow tube wells and field channels
 - ❖ "National Watershed Development Program" to conserve soil and water
- ◆ Supervised 2 technical, 1 accountant, and 20 tractor workshop staff
- ◆ Interacted with other federal agencies to implement multidisciplinary projects
- ◆ Involved in extension program to popularize agricultural technology through training and demonstration

Research Assistant, Assam Agriculture University, India

1987-1988

- ◆ Instructed a course on Agricultural Engineering

COMPUTER SKILLS

Application tools	GIS software : ARC INFO and ARC VIEW Image processing : ERDAS IMAGINE
Hydrologic models	AGNPS-GIS interface, WEPP, ANSWERS, EPIC, HYSEP, SWAT
Operating Systems	Unix, Windows, and DOS
Software/languages	Microsoft Office, WWW applications, familiar with JAVA, C

AWARD AND ACTIVITIES

International Erosion Control Conference

- ◆ Received International scholarships award from for the year 2001
- ◆ Moderated 5 technical sessions in International Erosion Control Conference, 2001
- ◆ Member

Member, American Society of Agricultural Engineers, 2000

Member, Alpha Epsilon, The Honor society of Agricultural Engineering 1998

SELECTED PUBLICATIONS / PRESENTATIONS

Bhuyan, S. J., J. K. Koelliker, L. Marzen, J. A. Harrington. **Application of remote sensing, GIS, and AGNPS to assess runoff and sediment yield of watersheds** (under review in Journal of Soil and Water Conservation).

Bhuyan, S. J. and P.K. Kalita. 2001. **Soil loss predictions with three erosion simulation models**. (Accepted for publication in Journal of Environmental Modeling and Software).

Bhuyan S. J., J. K. Koelliker, L. Marzen, and J. Harrington. 2000. **Water quality assessment for Cheney lake watershed**. ASAE Paper: 00-2197. St Joseph, Mich.: ASAE.

Bhuyan, S. J., J. K. Koelliker, and P. Barnes. 2001. **Curve number adjustment technique for prediction of runoff and water quality data**. Proc. of the International Symposium, Soil Erosion Research for the 21st Century, Hawaii. P: 287-290. ASAE, St. Joseph. MI.

Luke Marzen, S. J. Bhuyan, J. A. Harrington, and J. K. Koelliker. 2000. **Water quality modeling in the Red Rock Creek watershed, Kansas**. Proc. of the Applied Geography Conference. Vol. 23: 175-182.

Kalita, P. K., M. Hirchi, L. Schieferecke, S. J. Bhuyan, P. Woodford, and P. Gipson. 2000. **In the trenches**. Resources: ASAE. 7 (12): 13-14.

Kalita, P. K., L. Schieferecke, S. J. Bhuyan, P. Woodford, and P. Gipson. 2001. **Application of WEPP model to military training lands**. Proc. of the International Symposium, Soil Erosion Research for the 21st Century, Hawaii. P: 119-122. ASAE.

Marzen, L., J. A. Harrington, S. J. Bhuyan, and J. K. Koelliker. **Use of satellite imagery to determine land cover input variables in an AGNPS water quality model**. ASAE Paper No. 00-2200. St Joseph, Mich.: ASAE.

Bhuyan S. J. and P. K. Kalita. **Application of WEPP, EPIC, and ANSWERS soil loss models for Kansas soil**. ASAE/CSAE Paper 99-2040. ASAE/CSAE International Conference, Toronto, Ontario, Canada, July 1999.

Bhuyan, S. J., K. R. Mankin, J. K. Koelliker, L. Marzen, and J. Harrington. 2001. **Effect of cell size on AGNPS predictions**. ASAE Paper. 012002. ASAE, St. Joseph. MI.

Bhuyan, S. J., J. K. Koelliker, L. Marzen, J. A. Harrington. **An integrated approach for water quality modeling of watersheds** (submitted to Journal of Applied Engineering in Agriculture for publication).

Bhuyan, S. J. and S. Prasad. 1990. **Drying characteristics of Ginger and development of a small capacity dryer**. Proc. 4th International Congress on Mechanization and Energy in Agriculture. Adana, Turkey.