APPENDIX A

SCOPE OF SERVICES

The following is a description of professional services for work items to be performed by the United States Army Corps of Engineers, Huntington District (COE) as a sub-contractor to Burgess & Niple, Limited (B&N) in conjunction with the Romanian Destructive Waters (DESWAT) Project. The work items described below are directly related to the Technical Approach and Work Plan as described in the B&N feasibility proposal attached.

PHASE 1

The authorized representative from COE will join B&N in a visit to the Romanian National Institute of Meteorology, Hydrology and Water Management (INMH) in Bucharest, Romania, on April 29-30, 2002. The purpose of the visit is to revise and finalize B&N proposed scope of services as dictated by the revised project schedule of INMH. Following the visit, the COE scope of services as described in PHASE 2 may be revised.

PHASE 2

1. Provide technical direction in the review of existing hydrometeorological data as described in Task 1.0 ofB&N's Technical Work Plan. This will focus on Task 1.4, Baseline Conditions and Inception Report, items 2 and 6 (project objectives and pilot testing work plan, respectively).

2. Provide technical direction and independent technical review of Task 2.0 ofB&N's Technical Work Plan. Under Task 2.1, this direction and review will be provided for items 1,2,5-9.

3. Make appropriate personnel available for a Romanian delegation visit to the Huntington District. The purpose of this visit will be to share technology and procedures with visiting Romanian delegation. This visit will be up to 2 days long. The COE shall also send two flood warning system experts to visit B&N (Columbus, Ohio office) during the Columbus, Ohio portion of the Romanian delegation's visit to the United States.

4. Attend up to 4 team meetings (assume two people per meeting). Two of these meetings will be in Columbus, Ohio and two of these meetings will be held in Huntington, West Virginia.

APPENDIX B

PHASE 1

Time and expenses for the COE's authorized representative visit to Romania will not exceed $8,000.

PHASE 2

Technical services as outlined will be completed at a cost not to exceed $22,000. Technical services may be revised as a result of Phase 1.

TECHNICAL APPROACH AND WORKPLAN

The feasibility study aims at the assessment ofhydrological forecasting models needed to implement a viable emergency management program in Romania. The core of this management program will include a weather interactive processing system for ingesting and analyzing a massive volume of data from station sensors, radars, satellites, and other sources. The processing system will quickly interpret this data, run large-scale river forecast models, and generate and distribute forecast products to the public and external interfaces as required by the Romanian Ministry of Waters and Environmental Protection. The river flood forecasting models investigated for the DESWAT project will have the capability and robustness of the United States National Weather Service (NWS) FLDWAV river flood routing models. The river flood forecasting models to be assessed for the DESWAT project will include, among others, the NWS FLDWAV, NWS AMBER flash flood/watershed model, and the array of watershed and surface water modeling systems distributed by the GMSAVMS/SMS Group. The DESWAT river flood forecasting models will feature interactive capability to produce rapid issuance and updates of river forecasts. The feasibility study will assess the financial and economic feasibility of the DESWAT project.

Members of the Romanian National Institute of Meteorology and Hydrology (INMH) will participate in the activities of the DESWAT project development including the deployment of the operational software.

Task 1.0 - Definition of Baseline Conditions, Inception Report, and Workplan

FtFP Element

The purpose of this task is to investigate and review in concert with the project sponsor and the INMH the existing hydrometeorological data and related information. This task involves the review and assessment of the operational features of the Romanian National Integrated Meteorological System (SIMIN) and its built-in capability of generating atmospheric parameters of interest in rainfall flooding forecasting. The work to be performed under this task will allow for the identification of the specific work to be performed in developing an integrated river basing/geographic Information System (GIS) database model for watershed modeling and analysis. It will also provide the technical framework for the hydrologic and hydraulic services for the design, development, and implementation ofhydrologic forecasting tools and techniques leading to conceptualization and preparation of the DESWAT project. It will include review of existing water quality studies to assess the impact of specific disasters and to characterize typical water quality conditions in Romania.

This task will identify and investigate notification and warning mechanics capable of providing factual and rapid warning to key decisions makers within the Romanian Government regarding impending or occurring inundation and water quality conditions that could be detrimental to public welfare or safety.

In essence, this task will serve the purpose of gathering, developing, and compiling baseline information concerning current and projected operational conditions of the DESWAT project.

Proposer's Response

Upon award of the project, key representatives ofB&N including Prof. Drobot and possibly other in-country subconsultants will meet in Romania with key decision makers within the Romanian Government to introduce the B&.N team and listen to their needs regarding this project. This meeting will allow B&N to better define the scope and requirements for the baseline conditions and inception report. An outline of the report will be prepared and discussed with INMH prior to starting work on task 1 elements.

Task 1.1 - Climatic Conditions

Define and describe conditions in the region that could have an affect on the operational conditions of the DESWAT project. Quantify and assess seasonal fluctuations in the surface water conditions.

RFP Element

Climatic conditions will be reviewed based on long-term records of the tributary basins. Our Romanian subconsultant. Professor Drobot and his team of specialists, will assist in assembling and interpreting the information, and in preparing a report of the results.

Proposer's Response

Task 1.2 - Environmental and Ecological Baseline Conditions

Describe current environmental conditions that could have an impact on water quality conditions, including, but not limited to:

1. Wastewater discharges;
2. Solid and hazardous waste generation and management;
3. Sensitive terrestrial, marine, and freshwater life forms; and
4. Ecological systems in the fluvial and marine environments.

RFP Element

Environmental and Ecological baseline conditions will be described based on existing reports and data available as published records or reports, information from INMH, and information developed by our Romanian subconsultant's team. The discussion will include waste-water discharges, solid and hazardous waste, sensitive terrestrial, marine and freshwater life forms and ecological systems in the fluvial and marine environments.

Task 1.3 - Socioeconomic Conditions and Projected Goals

Proposer's Response

Describe socioeconomic conditions, including but not limited to:

1. Quality of life issues relating to current and projected status of human health and well being, employment, and labor market demands, levels of income, levels of quality of education; and

RFP Element

2. Current and projected levels of agricultural, commercial, and industrial activity.

Proposer's Response

Socioeconomic conditions and projected goals will be described based on existing reports and published data, information from INMH, and information developed by our Romanian subconsultant. Professor Drobot. The discussion will include quality and life issues of health, employment, labor market, income, education and current levels of agricultural, commercial and industrial activity.

Task 1.4 - Baseline Conditions and Inception Report

HFP Element

A workshop will be conducted before the completion of the Baseline Conditions Report investigation. The workshop will have the purpose of disseminating the findings of the baseline conditions investigation. The workshop format will encourage the open exchanges of ideas regarding the project's workplan and will also permit the assessment of the decision makers needs regarding the emergency management plan.

As part of the baseline conditions report, the Consultant shall provide a detailed description of the project baseline conditions and their impact on the project's scope, goals, and objectives. The baseline conditions report shall document and compile the findings and the information collected and generated during the definition of baseline conditions as described in Sections 1.1 through 1.3 of the Terms of Reference. It will include the detailed workplan in which the responsibility of each participant will be outlined. The workplan will outline the following:

1. Deadlines and due dates of each activity
2. Project objectives and critical success factors
3. Responsibility of each participant
4. Task schedules
5. Contents of reports
6. Pilot testing workplan.

The Baseline Conditions and Inception Report will be delivered within 2 months of the order to proceed.

Proposer's Response

Upon completion of the investigations described in tasks 1.0, I.I, 1.2 and 1.3 a draft baseline conditions and inception report will be prepared and distributed to INMH for comments and input. As part of this process a one day workshop will be conducted in Romania where the findings of the B&N team will be presented to INMH. The workshop will allow INMH and the B&N team to discuss the project face to face and make sure the investigations have covered the baseline conditions of the project. Any modifications and improvements resulting from INMH comments and the workshop will be incorporated in the final baseline conditions and inception report.

Task 2.0 - Technical Analysis

Task 2.1 - Conceptual Design

RFP Element

This task will involve the completion of data collection and analytical activities related to the development of the conceptual design. It will describe the various components of the hydrometeoro logical detention devices; flood forecasting models, and communication systems. The major elements of the system include but are not to be limited to:

1. Hydrometeorological devices located in the sensitive zones.
2. Radar-rainfall data analysis.
3. Water quality monitoring devices located in strategic and sensitive zones.
4. GIS application development and data integration requirements.
5. Hydrologic and hydraulic models.
6. Communication system requirements for data transmission.
7. Hardware and software system requirements to process, monitor, and manipulate hydrometeorological data.
8. Hardware and software system for dissemination of emergency conditions.
9. Procedures of the emergency management plan.

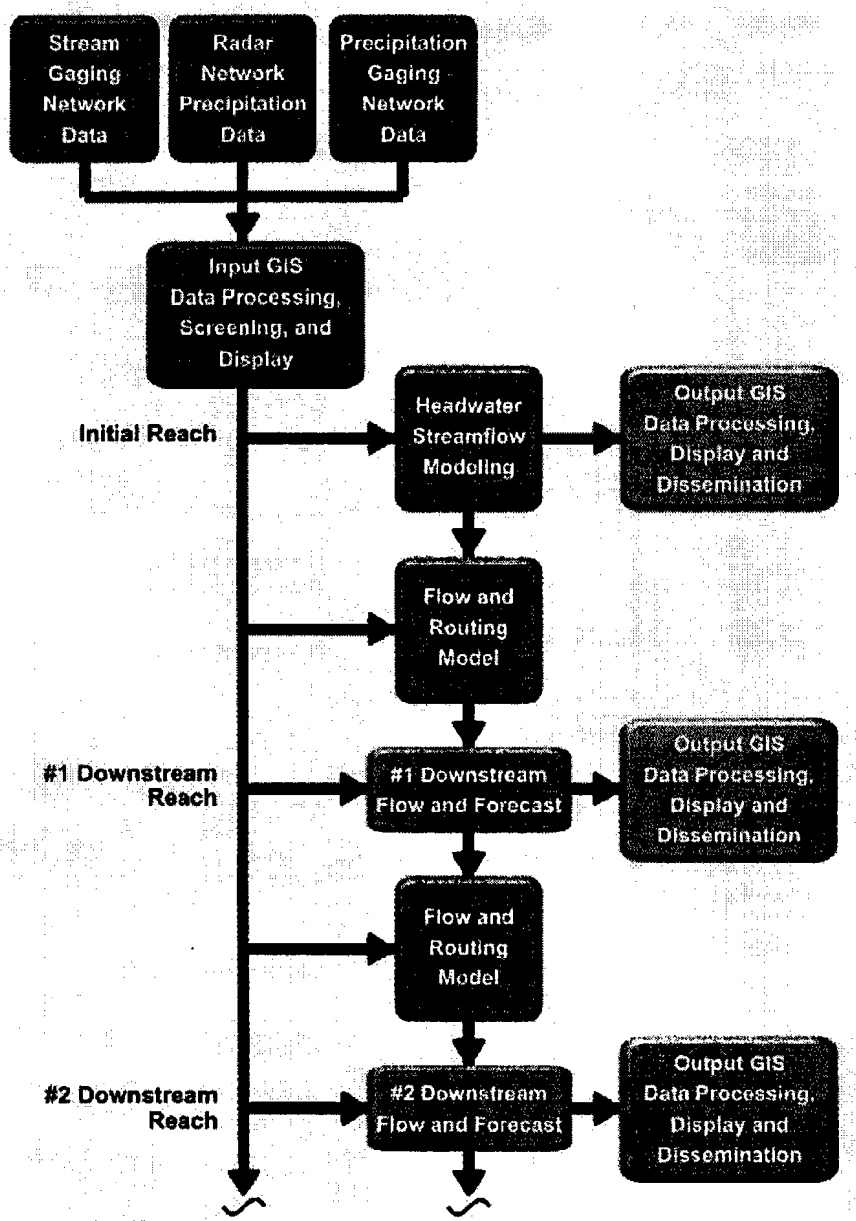
The number and locations of the hydrometeorological, hydrodynamic and water quality monitoring equipment, the data input, transmission and processing system, and data communication system requirements will be defined. The overall conceptual plan for the monitoring and emergency management will be presented in descriptive and schematic form. The conceptual plan will be presented and discussed with the sponsor and the INMH prior to its completion. Once the conceptual design has been completed, the Consultant team will move forward to develop the preliminary design of each component of the DESWAT project.

Proposer's Response

The Conceptual design activities will address the nine areas specified above in three broad categories.

The first category is data acquisition including hydrometeorological devices, radar-rainfall data analysis, and water quality monitoring devices. B&N will review currently planned gage locations for applicability to flood flow prediction for sensitive areas, and determine if coverage will adequately represent the distribution of drainage basins to be analyzed. Additional gages will be considered where indicated by this

DfcSWAI Modeling and warning bystem
Typical Basin Function



review. The above review will include radar-rainfall data and the coordination of data from on-land measuring devices with the radar-rainfall data. B&Nwill work with others (DAI) currently carrying out related activities to integrate the radar and ground based data. B&N will use inventory data regarding sensitive zones to determine which of such zones should be monitored and by what methods.

The second category is data processing, including GIS application, communication systems, and hydrologic/hydraulic modeling. B&Nwill identify the potential systems, methods and programs to meet these requirements. This work will include coordination with ongoing work by others (Lockheed-Martin and DAI) and will include review ofArcview and Arcinfo platforms for GIS applications. Alternative communication systems, or combinations thereof, for transmission of data from sensors to local and national processing centers, including telephone, microwave, satellite. Internet and other as appropriate. Models proven in flood prediction and warning schemes will be considered including models currently in use by INMH and those used by the US Corps of Engineers, US National Weather Service, US Geological Survey and others as applicable.

The third category is emergency warning activity, including computer warning hardware and software, and emergency management planning procedures. B&Nwill review computer systems installed or committed and the related communication systems to determine which warning schemes can be reasonably matched to these existing systems, and which may require significant changes to the existing systems. Options for organizing emergency management agencies for destructive waters mitigation will be reviewed, especially considering known successful organizational structures and the types of organizations now providing this service in Romania.

Task 2.2 - Preliminary Design

The DESWAT project will operate within the SIMIN system architecture. The primary responsibility of the hydrometeorological analysis will be to provide the river forecast centers with automated, as well as interactive software tools for real-time quality control of the observed data. It will also provide real-time estimation of the variables at various space-time scales as required by various forecasting needs. In addition, it will provide capability for real-time assimilation of the predicted values of the variables into the hydrologic prediction models.

RFP Etement

This task will provide the preliminary design of all components of the DESWAT project including, but limited to the investigation of the weather and river forecast network using GIS analytical tools. The DESWAT project workstations will comprise an integrated suite of automated data processing equipment that supports complex analysis, interactive processing, display of hydrometeorological data, and the rapid disseminations of warnings and forecasts. Software applications developed for the DESWAT project will part of

the SIMIN system software suite and will make use of the data communications, processing, and display capabilities of the SIMIN workstations. This includes ingest and processing of the massive volume of data from station sensors, radars, satellites, and other sources, analyzing data sets to quickly interpret these data, running large-scale river forecast models, and generating and distributing forecast and other emergency management products to the public and external interfaces as required by the project sponsor. The members of the project sponsor and INMH will be trained in all phases of software development leading to the deployment of operational software of the DESWAT project.

The river forecast models will have the capability to meet the requirements of the DESWAT project through the design, development and implementation of hydrologic forecast tools, and hydraulic techniques leading to the application of new scientific and computer technologies for river routing and flood forecasting. Project sponsor and INMH personnel will be trained on the river forecasting models of the DESWAT project.

As part of the preliminary design, the Consultant will develop and standardize water quality monitoring stations identifying all of the significant equipment associated with each type of station including but not limited to the supporting utility needs, shelter or protection plan, and data communication system. Water quality monitoring stations will be selected and located in concert with the project sponsor and will be designed to collect sufficient information to identify potential pollution sources throughout the river basins.

The technical analysis will be completed within 4 months after the submittal **of** the Baseline Conditions and Inception Report and will be documented with a Technical Analysis Report.

The Preliminary Design will meet the requirements of the above within the three broad categories

Proposer's Response

DA TA A CQUISITION

Additional Hydrometeorolosical Monitorins Stations Hydrometeorological monitoring stations will be recommended where existing or proposed monitoring is not adequate for flood modeling. River level and flow gages will be reviewed in comparison to modeling needs and addition or relocation suggested where appropriate.

Water Quality Monitorins Stations
Based on reported potential sources of increased contamination during floods, water quality monitoring equipment will be specified for critical locations along streams and elsewhere as appropriate. The study will identify sensing and modeling methods to track the travel of contamination downstream with the floodwaters. The local subconsultant, Professor Radu Drobot of the Technical University of Civil Engineering of Bucharest, will prepare information on the

location and extent of potential sources of pollution that may be released by flood-caused erosion or inundation of contaminated sites. This will help identify the extent of the need for water quality monitoring units and the areas that should be emphasized in a program to protect against flood-borne pollution. The study will make use, to the extent feasible, of the sources noted in the report "Analysis of Accidental Risk Spots (ARS) in the catchment of the Danube.

GIS Applications

Preliminary design of the data acquisition system will focus on the use of GIS technology to develop clear geographic identification and representation of data from ground and radar sensors. The selected mode of representation must be in a format that can be sorted by tributary basin boundaries and reliably applied as an input file to the flood models under consideration. Factors considered will include compatibility with other system components and processes, reliability, accuracy, maintainability. The selected system must also allow users to exert quality control over the data provided by the sensors.

The initial GIS design by subconsultant Bluegrass GIS, Inc. will focus on:

- ***Level of integration and interoperability with the SIMIN system.***

- *Level of integration with HEC geoRAS, HEC geoHMS, and other hydraulic/hydrologic modeling and emergency management programs that are selected for detailed evaluation.*

- *Capability to format or re-format input data from disparate sources to meet modeling software input requirements.*

- *Level of integration with relational database management systems and ancillary software programs that as a whole can support one or more proposed DESWAT GIS work/lows.*

- *Capability of integrating hydrologic data with standard cartographic themes including planimetry, topography, demographics, land use, and other discreet feature data.*

We understand that the Project Sponsor and the INMH are already acquainted with Environmental Systems Research Institute's (ESRI) ArcINFO and Arc View products. The design will consider best use of the ArcINFO and ArcView programs, including the new ArcGIS product (version 8) andArcIMS web GIS applications. We are confident that basing the DESWAT GIS on the ESRI platform will yield a comprehensive, flexible, and stable GIS that will provide the greatest number of off-the-shelf applications as well as support the highest degree of interoperability and connectivity with other industry standard GIS, CAD, mapping, and database applications.

The study will provide a clear and comprehensive system design that will support GIS applications for INMH. This design will include but not be limited to:

- *Specification of GIS software and hardware.*
- *A general GIS system design examining both centralized and distributed architectures based on the system requirements. This may actually be more than one design or a phased implementation based on data availability, budget, and schedule.*
- *A discussion of GIS off-the-shelf applications including the degree of connectivity and interoperability with the core GIS.*
- *A general GIS database design.*
- *A detailed and prioritized list of GIS applications.*
- *A list of data required to support those applications, including detailed descriptions involving the existence of the data, its location or absence, its accuracy and value to the project, its format, and the level of effort required to capture, convert, reformat, or otherwise manipulate the data before it can become part of the GIS.*
- *A discussion of the resources required to support the proposed system(s) in terms of staff, training, and communications.*
- *A discussion of the current state of web enabled GIS, in which applications can be ported to the web for Internet access, alternative design options for web enabled GIS, their projected worth to the overall project, and the level of effort required to implement them. Speed and bandwidth issues, as well as security issues will be discussed in detail.*
- *A list of GIS implementation recommendations and a proposed implementation schedule.*

DESWAT workstation specifications will be matched to the SIMIN workstations now in use or being purchased, and will be selected to process data from the many data inputs from the radars, station sensors, satellites and other sources. It will be essential to generate, from the GIS, data in a form that serves efficiently as input to the model or models that are candidates for the final modeling scheme.

COMPUTER MODELING

Preliminary design of the flood modeling system will consider multiple large-scale river models that were found, in the Conceptual Design stage, to meet the specific requirements ofINMH. Major factors will be data needs/format, hardware requirements, ease of operation, speed of analysis, and adequacy/format of output.

Computer models for the DESWAT project will be evaluated based on client requirements and preferred operating system. The input data type and reporting software will dictate if a packaged Geographic Information System (GIS) application can be used to collect the raw rainfall and streamflow data or if an original front-end program will be required. Hydrometeorlogical stations that are proposed will have to be compatible with the existing stations and their data output.

It is preferable that software used to determine hydrologic and hydraulic parameters be able to run inside the GIS environment. The GIS application will also be used for graphical output and used to make emergency management decisions. The GIS system will be the main computer program with the other programs sharing data with it.

A variety of computer software programs will be evaluated including Romanian developed software. United States Government Software, and proprietary software. Romanian computer models such as Vidra and Danubius will be evaluated as part of this study. United States Government developed software such as HEC-GeoHMS (hydrologic parameter program), HEC-GeoRAS (hydraulic parameter program), HEC-HMS, HEC-RAS, SWIMM, FLDWAV, HEC-5F, and others will also be evaluated for use in the DESWAT project. Proprietary software that will be evaluated will included ARCInfo, ARCView, BOSS-RMS (river modeling software), Boss-HMS (hydrologic modeling software), and other programs as required.

Evaluations will be based on user-applications of sample data for the models with the greatest potential. Simulated input for the model testing and evaluation will be developed from typical flood event records for selected streams with selected meteorological conditions.

The software programs used for modeling and reporting will be evaluated based on the client's familiarity, ease of use, resource requirements, upgrade capabilities, and long-term cost of operation. Since this model will be used exclusively by the client, their familiarity with the software is important. The software bundle must also be capable of importing raw data, developing modeling parameters, forecasting events, and exporting the final data in a seamless manner. The amount of memory and operating system requirements will dictate the type of PC and/or network that the DESWAT computer model system will run on. The ability to upgrade the models for compatibility when operating systems are upgraded will be important for the longevity of the system. The cost of operation to be evaluated will include one-time licensing

fees, upgrade licensing fees, and other operational costs associated with software use.

WARNING DISSEMINATION

Preliminary design of the emergency warning system will consider methods to provide numeric (river stage and flow) and graphic (flooded area mapping) results on a real-time basis and in a format compatible with readily available automated communication systems. The selected system must be able to quickly provide water level and flooding forecasts or warnings to the proper public agencies and electronic interfaces as may be required by INMH. This work will involve developing a complete understanding of the agencies responsible for flood control, flood warnings, evacuation and relief of flood victims. Considerations in selecting communication equipment and systems will be; types of communication devices and systems currently in use, and the needs and benefits of changing to other communication systems, or adding supplementary systems such as graphic displays. Methods of communication considered will include two-way radio/microwave, telephone, cellular telephone, satellite telephone, and internet, and others as appropriate.

The local subconsultant Professor Drobot, will assist in identifying the approaches and equipment used by the existing agencies responsible for flood damage reduction. This information will be combined with the input from INMH to assure a full understanding of the existing condition.

The GIS subconsultant, Bluegrass GIS, will assist by defining the available programs and their capabilities for transforming flood routing and elevation data into graphics for suitable for activating and guiding food warning systems.

The US Army Corps of Engineers, as a subconsultant, will be involved closely with both the model evaluation stage and the warning dissemination stage to use their experience in ongoing operations and studies. Their recent experience in applying new systems for radar-based precipitation estimates will be directly applicable in the DESWAT project. The ongoing need of the COE to provide daily flow estimates as well as flood warning activities assures that the participating COE staff will help the studies deliver practical recommendations and plans.

DEMONSTRATION AND TRAINING

For the selected system of sensors output format, communications equipment and format, workstation hardware and software, GIS systems and warning equipment/organizations, a demonstration package and trial operation workshop will be provided. A workshop will be arranged in the US, and will involve appropriate staff members of INMH. It will include visits to operating facilities in the district offices of the US Army Corps of Engineers, and with State agencies responsible for flood emergency warning and management. A

similar program for the system demonstration will be produced in Romania for access to a wider group ofINMH staff. To the extent feasible at the then-existing level of development of the SIMIN system, the DESWAT demonstration will be tied to the SIMIN system for the demonstration/training activities.

Task 3.0 - Feasibility Analysis of the DESWAT Project

Conduct and articulate a detailed technical analysis of the DESWAT project developed above. This analysis will include, but will not be limited to:

1. Engineering and design parameters, complexity, and limitations;
2. Constructibility with identification of major problem areas;
3. Operability including operating costs and personnel needs to operate;
4. Maintenance requirements, personnel needs, and costs;
5. Long-term adaptability and effects on the river system, lake and channels' environmental conditions; and
6. Life cycle costs.

Task 3.1 - Cost Analysis of the DESWAT Project

Prepare and articulate a comprehensive cost analysis to include life cycle costs, present cost analysis, cost/benefits, and economic benefit based on the analysis of the nationwide implementation of the DESWAT project.

RFP Element

As a basis for the design and development phase of the project, all information provided by the feasibility study shall fully describe the systems and/or alternatives considered and studied. All systems shall be shown through engineering drawings, sketches or diagrams to describe all features and components. The feasibility analysis and costs shall be shown in tables or other means to support the conclusions reached with respect to the project implementation.

The study will provide, cost estimates for hardware and software, staffing and training, implementation consulting, customized applications development, and systems maintenance. These costs will be estimated by Burgess andNiple, Limited including/low modeling, GIS applications, and operations. Burgess and Niple will be assisted in developing these cost estimates by US subconsultants Bluegrass GIS, Inc., the COE, and local subconsultant Professor Radu Drobot. These cost estimates will be used as a basis for the DESWAT Project cost/benefits and life cycle analysis.

Proposer's Response

Task 3.2 - Implementation Financing

RFP Element

The Consultant shall prepare as part of the feasibility study a financial plan for the implementation of the project. The financial plan shall satisfy the requirements of the prospective lenders. It shall include but will not be limited to a detailed analysis of the proposed debt-equity structure and the terms of reference of any concession agreements for the operation of the DESWAT project.

Proposer's Response

A financial plan will be prepared based on the sources of revenue available through INMH, grants, and lenders, including debt-equity structure and stepped ownership transfer to INMH to the extent desired. The financial plan for the DESWAT system will be designed to meet lender requirements.

Task 3.3 - Human Health, Environmental, and Ecological Analysis

RFP Element

The feasibility analysis shall include the identification, discussion, and analysis of the positive impacts on human health, environmental, and ecology that may result from implementation of the DESWAT project. It shall also include the analysis of short-term and long-term exposure and risk reduction of health impacts to humans.

Proposer's Response

The positive and negative impacts of the proposed DESWAT system will be evaluated, including costs and other resource demands. Long term and short-term effects will be considered. Input from INMH staff and subconsultant Professor Drobot will be used in this evaluation.

Task 3.4 - Water Quality Impacts

RFP Element

Short-term and long-term impacts on water quality that may result from the implementation of the DESWAT project. Identify gaps of data and/or information that would require a detailed analysis during the implementation of the project. Discussion on solid and hazardous waste generation and sources that have greater impact upon water quality in Romania. Identification and discussion of mitigation measures available to reduce environmental impacts to the greatest extent possible.

Proposer's Response

Identify and discuss positive and negative impacts of the DESWAT system on water quality, and means of maximizing the positive effects. Consider solid and hazardous waste sources and improvements that may result from the improved flood warning system. Input from INMH staff and subconsultant Professor Drobot will be used in this evaluation.

Task 3.5 - Ecological Impacts

RFP Element

The feasibility study shall analyze short-term and long-term impacts on sensitive life forms and ecological systems. It shall include the identification and discussion of mitigation measures available to reduce negative impacts to the greatest extent possible.

Proposer's Response

Identify possible sensitive life forms and ecological systems that may be positively or negatively affected by the proposed DESWAT system, and recommend approaches to maximize benefits. Note best mitigative measures. Input from INMH staff and subconsultant Professor Drobot will be used in this evaluation.

Task 3.6 - Socioeconomic Analysis

RFP Element

Identify, discuss, and analyze short-term and long-term (positive) impacts to human health and well being, employment, income, education, agricultural production, commercial, and industrial activity that may result from the implementation of the DESWAT project.

Proposer's Response

Evaluate and discuss project impacts in terms of human health and well being, employment, income, education, agricultural production commercial and industrial activity resulting from or affected by the DESWAT project. Input from INMHstaffand subconsultant Professor Drobot will be used in this evaluation.

Task 4.0 - Selection of Pilot Study Area and Procurement of Equipment

RFP Element

This task involves the evaluation of alternative river basins for the selection of the pilot study area that provides the most valuable information in terms of the operation details of the DESWAT project for its implementation nationwide. This task also involves developing the specifications for equipment and materials needed for the pilot study. Specific items to be procured may include, but will not be limited to hydrometeorological related devices, hydraulic modeling, and GIS software and computers, water quality instruments and data loggers and processors and equipment/software required to link the pilot study to the SIMIN system.

Proposer's Response

A plan for the pilot study of one basin of the 11 major Romanian river basins will be developed to determine the sensors that should ideally be installed and the location and organization that should be utilized to implement the DESWAT system in the selected basin. Locations and types of hydrometerological, streamflow/level and water quality monitors for the pilot study will be coordinated with the more overall review of National requirements defined in Section 2 of this proposal. The objective is to provide a plan for the pilot study that will allow INMH to proceed promptly with installation and operational testing with the specified equipment and systems. This pilot study will help identify any problems with the selected combination of sensors, modeling, and warning program, and to prove out or modify the selected scheme prior to committing to particular equipment for the National system for DESWAT under INMH.

It is understood that the INMH considers the Somesul-Tisa basin in Northwest Romania to be a good site for the pilot study, with administration in the city ofCluj Napoca.

Task 5.0 - Final Report

RFP Element

Prepare and deliver a Final Report that provides a detailed discussion of the findings of the feasibility study. This report shall indicate the most likely sources of implementation financing, and shall also include a list of prospective United States suppliers. Based on comments provided by the project sponsor, the Contractor shall prepare and deliver the Final Report. It shall be the responsibility of the Contractor to provide a Final Report in accordance with Clause I of Annex **II** of the Grant Agreement.

Proposer's Response

1 draft final report will be completed and submitted to INMH and USTDAfor review and comments..These will be incorporated into the Final Report which will be prepared to USTDA requirements. B&N will promote the project to prospective lenders, prepare a synopsis of the final report to be distributed to potential US equipment suppliers and participate at a briefing if arranged by USTDA for potential US equipment suppliers