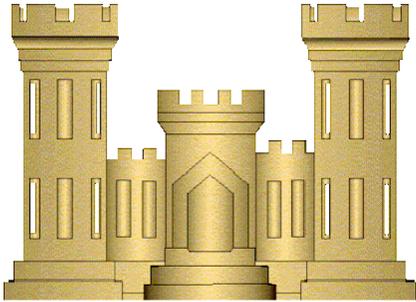


**Needs Assessment Report  
August 1998**



**Needs Assessment for  
U.S. Army Corps of Engineers  
Mobile District**

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# Executive Summary

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Michael Baker Jr., Inc. (Baker), has conducted a Needs Analysis report based upon a request made by the Mobile District Corp or Engineers (CoE) for implementation of a District-wide Geographic Information System (GIS). Baker has completed the Needs Analysis and is committed to doing follow-up reviews with the District personnel in order to prepare the Implementation Plan.

The Implementation Plan will include recommendations for appropriate hardware, software, personnel training, and identify benefits derived from the incorporation of a District-wide GIS. This Implementation Plan will be fully demonstrated through the generation of a pilot project within the Mobile District. At this time, Baker recommends that a GIS Steering Committee is developed and that this committee is composed of potential GIS representatives from the various Branches. These people should have an appropriate background in the concept of GIS.

The Mobile District will be in compliance of the latest version of the Tri-Service Spatial Data Standards (TSSDS) as the data model at the onset of the pilot project. Compliance of the data standards will maintain adherence to the Executive Order (EO) 12906, Coordinating Geographic Data Acquisition and Access: The National Spatial Data Infrastructure (NSDI), and Draft ER 1110-1-8156.

The District will maximize the use of existent data, deemed TSSDS compliant, and existent software. The use of this existent data and software will be the key focus of the Implementation Plan, and demonstrated through the pilot project. Issues concerning data ownership, data co-ownership, and data maintenance will also be addressed in the Implementation Plan and executed through the pilot project.

Vital to the Mobile District is its ability to maintain a position with other District Offices. Thus, it would appear that in order to become a first class operation, the Mobile District must become a technically enabled operation. From the preliminary review of the Mobile District, Baker finds that the GIS Implementation is a worthwhile and achievable activity for the Mobile District to pursue.



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# GIS Needs Assessment Report

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## Preface

This Geographic Information System (GIS) needs assessment was conducted at the request of the Mobile District GIS Working Group. Mr. Jeff Lillycrop was the Director, and Mike Nettles was primary point of contact (POC), for this effort. Mark Penton and Rose Moore were secondary point of contacts for interviews and other information requests.

In order for an organization as large as the Mobile District to successfully undertake a corporate wide implementation of a technology such as GIS, an orderly plan is a necessity. Draft ER 1110-1-8156, among other things, requires that an implementation plan be developed and maintained for all systems that process, store, distribute, and use geospatial data (data which is referenced to the earth's surface).

A GIS needs assessment is a precursor to, and provides the foundation for, a GIS implementation plan. A needs assessment is characterized as an investigation of the needs of potential users in the context of their production requirements. In terms of GIS, the focus is on how the organization and potential users collect, use, analyze and distribute geospatial data

Larry Cowart and Julie Pitts, Systems Analysts of the Michael Baker Jr., Inc. (Baker) in Jackson, MS, visited the Mobile District the week of May 25, 1998 for the purpose of conducting needs assessments interviews. Individual interviews were conducted with members of the staff representing management and technical staff from various District elements. An organizational breakdown summary of those interviewed is presented in Appendix C. Documentation relative to the District's mission and organization was also reviewed to further assess potential GIS users and needs thereof.

The courtesy, patience, and professionalism provided during the interview sessions by the entire Mobile District staff was greatly appreciated by Baker. This evaluation could not have been conducted without their willingness to take time from their busy schedules to participate.

# 1 Introduction

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This report presents the initial findings related to the desired applications for a Geographic Information System (GIS) at the Mobile District, USACE. Information used for the presentation of this report was gathered from the Mobile District personnel and the Mobile District Internet Homepage. A questionnaire and interview process was used to solicit information related to the daily business functions and system applications of the District. This information-gathering task is an initial activity for the need's assessment and a necessity for the forthcoming implementation plan task.

## Background

There is no comprehensive approach to the GIS initiatives undertaken so far at the District. However, there are several GIS implementation initiatives underway within the District. These initiatives are driven by the compelling needs to utilize and analyze spatial data for achievement of current missions, which include specific projects. It is already apparent that many of these data and systems created to date by the District's operations may not serve the needs of the District at large.

Data management must also be considered during the GIS development in compliance with Executive Order (EO) 12906, Coordinating Geographic Data Acquisition and Access: The National Spatial Data Infrastructure (NSDI), and Draft ER 1110-1-8156. The EO 12906 states that the National Performance Review (NPR) has recommended that the executive branch develop a coordinated National Spatial Data Infrastructure to support public and private sector applications of geospatial data in areas such as transportation, community development, agriculture, emergency response, environmental management, and information technology (Appendix D). The Commander in Chief has directed implementation of NPR's recommendations to advance the goals of the National Information Infrastructure in order to "avoid wasteful duplication of effort and promote effective and economical management of resources."

## Geographic Information System (GIS)

A GIS is a computer-based system that combines geographic (map) data with tabular (database) data in a manner that permits spatial analysis and information management. Information management functions include (but are not limited to) data input, storage, retrieval, manipulation, reporting, and display or plotting of information. A sample GIS from the Walla Walla District Corp. of Engineers can be referenced and is located in Appendix C.

## USACE Mission: Civil and Military

The District's mission is to manage and execute engineering, construction, and real estate programs for the US Army and Air Force, and for other federal agencies and foreign governments as assigned; to supervise research and development in support of these programs; to manage and execute Army installation support programs; to develop

and maintain capability to mobilize in response to national security emergencies, domestic emergencies, and emergency water planning programs; and to support Army space initiatives.

Under the direction and supervision of the Secretary of the Army, through the Assistant Secretary of the Army (Civil Works), the Commander has responsibility for investigating, developing and maintaining the nation's water and related environmental resources; constructing and operating projects for navigation, flood control, major drainage, shore and beach restoration and protection, related hydropower development, water supply, water quality control, fish and wildlife conservation and enhancement, and outdoor recreation; responding to emergency relief activities directed by other federal agencies; and administering laws for the protection and preservation of navigable waters, emergency flood control and shore protection.

### **Mobile District Mission Statement**

“To provide first quality engineering services to support the nation’s security, economic, and international objectives.”

## **2 Purpose**

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The purpose of the needs assessment is to lead to the formulation of an Implementation Plan for the use of GIS technology for the Mobile District, Corp of Engineers. The possible uses for the GIS within the District have been determined from information provided through questionnaires and on-site interviews by the potential users, support personnel, and administrative managers. This needs assessment is intended to support correct decision-making during the Implementation Plan and system design phase.

### **Needs Assessment**

A need assessment is an analysis of an organization's operations to determine how a GIS should be designed and implemented, and is necessary in reflecting the current state of GIS implementation with the District Office. For this reason all potential users of the GIS must be included in the study. During the needs assessment for the Mobile District, Baker identified existing operations and examined how data is used (or generated) and how this data is analyzed in daily work performances and operations.

This report provides information concerning the daily activities of the individual units within the District Office and the potential GIS benefits for each of the units. The following are a few of the subjective considerations that were addressed in the research process:

- The ultimate benefits derived by releasing large geospatial data resources to a large number of potential users empowered with the GIS applications that were identified for development during the interview process.
- The anticipated frequency of updates, modifications and deletions to the geospatial databases and other data possessed by the District or envisioned for future development
- The degree of difficulty that could be encountered in establishing a corporate-wide GIS at the Mobile District.

### **Site Survey Overview**

The capabilities of GIS are well suited to support the District's mission requirements. Virtually all of the District's operating entities will derive a benefit from the GIS. For example, many offices within the District will be data creators and/or data contributors to a corporate database while other offices will be users and/or processors of corporate data. In most cases individual sections will be contributors and users. Site visits to various offices resulted in the following desired GIS objectives:

- The GIS must support a continuous flow of information
- The GIS must be implemented to maximize the use and investment in the existing network of computer systems
- The GIS must allow operating entities to foster a greater degree of technical

- interdependence
- The GIS must share a common data model that provides fully integrated geographic data
- The GIS must employ standards for data that promote and ease the interchange of geographic data

## **Factors to Consider Before Implementing GIS**

Implementation of a GIS within the Mobile District cannot be solely driven by need. There are a tremendous number of factors that ultimately determine if a GIS should be implemented within the District. These factors are quite diverse and often are not purely related to any operational needs, but are ultimately determined from the composite characteristics of the District. The following are a few of the possible factors that could determine if a GIS is to be implemented for the District:

- Geospatial data requirements
- Existing CADD capabilities and databases
- Managerial culture
- Centralized/decentralized structure of data
- Awareness or knowledge of the GIS technology
- Innovative tendencies
- Propensity to accept risk
- Perception of technology as a tool for decision support
- Openness to data and information sharing
- Technological maturity
- Financial resources
- Personnel resources
- Service/manufacturing mission
- Product/service distribution requirements
- Facilities or infrastructure management necessity
- Engineering or construction activities
- Existing inventory of geospatial information

The use of GIS technology is intended to streamline the daily processes utilized within the Mobile District. Offices within the District that are presently using GIS technology will be able to realize an immediate benefit of a GIS Implementation.

## 3 Interviews

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Representatives from Michael Baker, Jr., Inc. conducted on-site interviews during the period of May 26, 1998 through May 29, 1998. The following Baker GIS System Analysts:

Larry Cowart  
Julie Pitts

This section of the report demonstrates the diverse methods used by all District offices to accomplish their individual contributions of the overall District's Mission. Also included in this section is an overview of the individual GIS accomplishments (if any) each agency has developed and maintained to date. The GIS data created and/or used by the individual operational units is also discussed.

### Interview Results

Interview participation was exceptional. The focus of the interviews was the collection of qualitative information on the existing Mobile District resources and capabilities related to GIS. In addition to the qualitative assessment, the interviews provided a forum for the solicitation of discussions associated with the wants and needs related to GIS.

Since most of the information gathered during the interviews was qualitative in nature, this report will not assert any statistical significance from any discrete data recorded during the interviews (i.e., number of employees, years of experience, budget for GIS). It is reckoned that much of this data is representative of approximate values as furnished by the respondent.

As a result of the interviews, and the expressed needs for GIS within each respective activity area, the potential GIS users were classified into four broad categories. Figure 1 shows the format used for the simple qualitative classification based upon required level of computer systems expertise and GIS knowledge required for use of the contemplated District GIS.

- Type A Users
  - Frequent users of the GIS that perform queries from the database for specific information about a specific subject for a specific purpose to address a specific requirement. These GIS users are often referred to as GIS viewers.
- Type B Users
  - Infrequent users of the GIS that must possess some knowledge of its purposes and functions, but are not dependent upon it for their day-to-day operational mission. These personnel may perform IM support activities, such as system administration of the hardware, back-ups, and database administration and network communications support.
- Type C Users

- Frequent users of the GIS that perform routine and ad hoc queries from the GIS database. In many cases these personnel are responsible for the development of GIS applications, within the GIS' native software environment to support operational requirements within a specific District department.
- Type D Users
  - Frequent users of the GIS and responsible for GIS administration. These users perform the database modeling and customization for the implementation of the GIS' or its applications, preparing and maintaining the standards utilized for the GIS' graphic and nongraphic data and preparing special software development for database integration. Generally, there are a limited number of these users within any organization using GIS.

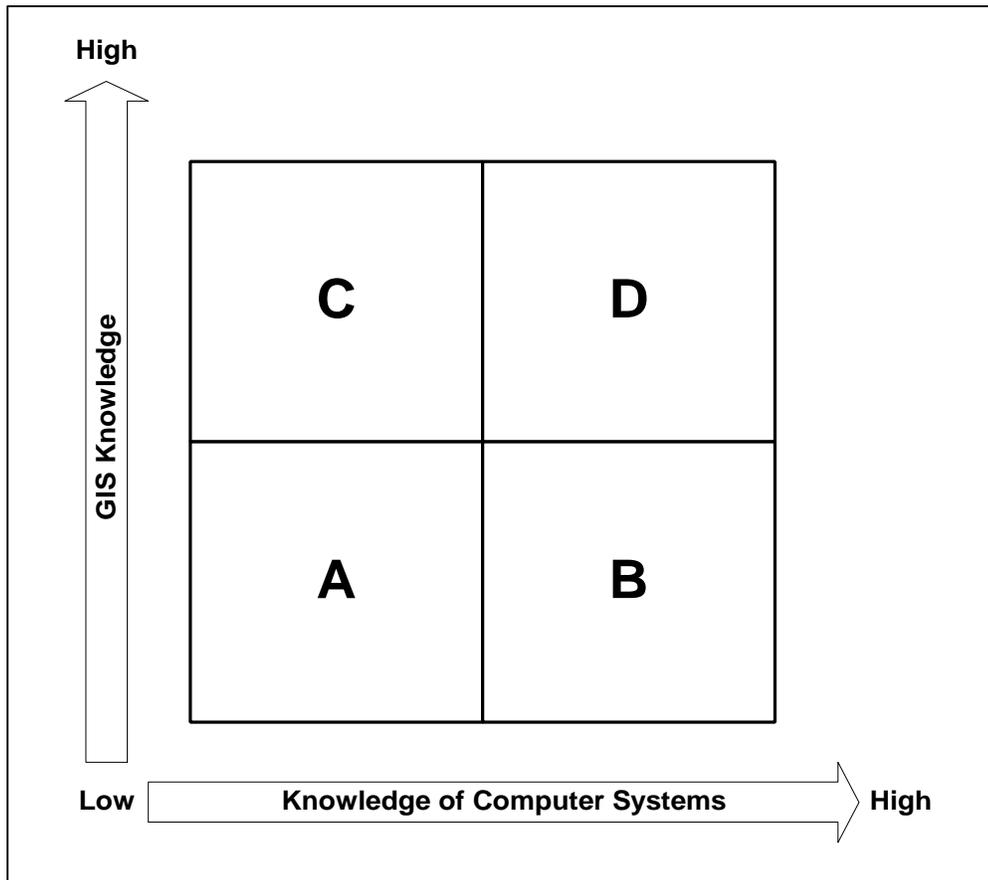


Figure 1. General Classification of GIS Users

### Classification of Mobile District Activities

Provided is a very brief summation of the expressed requirements for GIS for each activity examined during the Needs Assessment. For more specific information on a particular working group (Division, Branch, Section, or Unit), please refer to the interview summaries contained in Appendix C.

***Executive Office, Special Assistants, Boards and Committees*** – Type A User - The Executive Office, Special Assistants, Boards, and Committees will indirectly benefit from a GIS. Executive Officers, in both government and private industry, typically request information that subsequently is provided to public organizations. It is quite common for a District commander to delegate these requests to a person charged with developing a project briefing. A sample GIS product for use by this group would be maps for project visualization, charts and tables used in decision-making processes, and reports generated from findings.

***Public Affairs Office (PAO)*** – Type A User - The Public Affairs Office provides timely and accurate information to the public and other agencies. The PAO responds quickly and accurately to frequent requests made by varying public and private agencies for multi-media (video and audio), maps and other types of general information, i.e., when the public requests information about a specific campsite.

***Safety and Occupational Health Office (SOHO)*** – Type A User - The SOHO mission is to conduct field and office surveys to determine the degree of compliance with Safety and Occupational Health Program. SOHO seeks to adhere to policies in the most efficient manner as possible throughout the District. Within the District's offices, a GIS can be used to record locations of hazardous materials and areas subject to higher potential risk. Another mission requirement is to review Engineering Division plans and specifications. Maps and data used in this office should supply health and safety issues, emergency evacuation routes, as well as identification of existent and potential hazards.

***Office of Council (OC)*** – Type B User - The mission of the OC is to perform litigation beneficial to council in court and in settlements. A GIS function used by this office could provide a visual explanation of pertinent information as needed in legal proceedings.

***Programs and Project Management Division (PM)*** – Type D Users - The PM by mission description is responsible primary customer interface, charged with integrating the work of other elements in the execution of civil, military, support for others, and environmental programs and projects within and outside the continental United States. Organizational goal is to provide customers quality products within cost and schedule constraints. This coordination requires involvement with other offices within the District and military and civilian customers. A GIS function of this group would be to provide highly visual and simplified maps to communicate project objective and alternatives. It would also prove useful to plan for direct integration with the District WWW site.

***Civil Works Programs and Project Management Branch (PM-C)*** - Type C Users - The PM-C responsibilities cover parts of Georgia, Alabama, Florida, and Mississippi with over ninety-six thousand square miles. These responsibilities are mostly water resources development and management, which includes:

- Barge navigation systems
- Deep draft harbors
- Shallow draft harbors
- Lakes with recreation and nature areas
- Hydropower plants
- Federal navigation and environmental enforcement responsibilities

Many of the aforementioned units have established individual GIS models to help manage the resources and daily project management tasks. These third party algorithms for hydrologic/hydraulic modeling and surface generation are readily available as off the shelf programs that can be integrated with a desktop GIS in various ways. A primary GIS function of this office would be utilization of project design maps and planning support materials.

***Military Project Management Branch (PM-M) and Strategic Initiatives and SFO Project Management Branch (PM-I)*** – Type C Users - The PM-M and PM-I Military construction and Support For Others (SFO) responsibilities cover Alabama, Mississippi, Tennessee, Florida, and Central and South America with over two hundred thousand square miles of territory. Responsibilities are military construction, environmental studies, structural engineering, Base Realignment and Closure Committee (BRAC), which are inclusive of the following:

- Air Education and Training Command (AETC) Bases
- Training and Doctrine Command (TRADOC)
- Army Materiel Command (AMC)
- Air Force Materiel Command (AFMC)/Air Force Reserve Command (AFRES)
- Air Force Special Operations Command (AFSOC)
- Air Force Space Command (AFSPC)
- Latin America Management Team
- Army Medical Command (MEDCOM)
- U.S. Coast Guard
- Environmental Protection Agency (EPA)
- Federal Aviation Agency (FAA)
- Formerly Used Defense Sites (FUDS)
- Storm Water Pollution Prevention Plans (SWPPP)
- Resource Conservation and Recovery Act (RCRA) Subpart X projects

***Engineering Division (EN)*** – Type C Users - The Engineering Division has a two-fold mission handling civil and military engineering support. Within this division design and construction services are provided in support of the traditional military mission and the infrastructure of the military. Structural designs and construction services are provided for civil improvement and management projects. A primary GIS function would include production of project design maps and multiple use base maps.

***Survey Unit*** – Type C Users - This section provides the base surveys and topographical data for use by many working groups. Information retrieved from production scheduling and budgeting help the Survey Unit prepare cost allocation reports

for Engineering Division. They also support Engineering Division for surveying and mapping activities. Survey Unit is a critical path player in development of a District wide GIS. Products produced by Survey Unit will guide selection of coordinate systems and datums by which other data must be geo-referenced.

***Design Branch (EN-D)*** – Type C Users - The Design Branch is currently a GIS user within the District. Project Support Section is currently using Bentley *Microstation* and Intergraph *InRoads* for military design from technical specifications and drawings. Primary GIS functions would include heavy use of project design support maps.

***Project Support Section (EN-DW)*** – Type B Users - The section develops military design schedules from technical specifications and drawings. Additional responsibilities include develop and track solicitations for CBD for Military Design and O & M projects. Primary GIS function needs are use of the system for design support activities.

***Project Design and Review Section (EN-DR)*** – Type D Users - The section is using GIS as a standard tool to accomplish Civil Site Design including topographic and planimetric data. The GIS models developed in the Section will benefit from the corporate GIS by allowing easier access to data to and from others. The Review Section is using *Microstation*, *AutoCAD*, and *ArcView* for Civil site design projects with topographic and planimetric data.

***HDC Unit*** – Type B Users - The mission requirements are not consistent with GIS capabilities, but the Design Branch could utilize the data generated by the HDC Unit in a timely manner via updated reports and database information.

***Cost Engineering Branch (EN-E)*** – Type B Users - The primary software utilized by this Branch is *MCACES* (Construction criteria database). This software is used to develop cost data primarily developed from hardcopy drawings and supplied by other departments. Cost Engineering Branch is also using *RACER*, and *TRACES* software for developing project costs, cost advisement, and management of cost throughout life of project.

***Geotechnical, Environmental and HTRW Branch (EN-G)*** – Type D Users This Branch provides a supporting role in assisting military facilities with environmental and hazardous waste cleanup, by applying technological procedures that involve mapping, design, geological processes, etc.

***Environmental and HTRW Section (EN-GE)*** – Type C Users - By nature this section could use GIS in conjunction with information collected digitally and other methods to perform many tasks, especially in the support of HTRW related work. Information gathered by this section could be used by engineers in other Branches/Sections to perform "what if" scenarios and model environmental conditions. In situations where it is necessary to monitor conditions or movements for HTRW, the GIS is a valuable system for visually displaying information plans allowing input for future conditions. "What if the wind shifts to the NE at 10 mph?, etc."

***Geotechnical and Dam Safety Section (EN-GG)*** – Type B Users – This section primarily supports the existing civil infrastructure by performing inspections tri-annually. This section uses a records management system called PICES to generate hardcopy reports that are delivered to varying units. The reports that are generated consist of data derived from the performed inspections upon civil structures within the District.

***Hydrology and Hydraulic Branch (EN-H)*** - Type D Users -The Office of the Chief of the Hydrology and Hydraulic Branch and the EN-H mission handles the tasks of Water Control Management.

***Coastal, Hydrology and Hydraulic Section (EN-HH)*** - Type D Users - The Coastal, Hydrology and Hydraulic Section is a current user of GIS technology. Ongoing hydrologic studies use the GIS for hydrologic engineering investigations related to flood control, water supply, white water availability, sedimentation, frequency and duration determination, and local protection projects. This section has a wealth of digital data. Examples include, topographical (cross sections) relating to previous flood events for insurance studies and channel improvement investigations. The current hydrologic studies are based upon outdated technical engineering approaches that are much more time consuming compared to what is available with a desktop GIS. Typical work flows that can realize a significant time savings are calculation of drainage areas, storage capacity curves, hydrologic basin parameters, and many other H-H tasks. This section shares information with other District units, and would thereby require strict adherence to TSSDS.

***Water Management Section (EN-HW)*** - Type D Users - Hydraulic design is used in many phases of District projects. From the initial feasibility studies, through to design, and eventually operation and maintenance, Water Management Section performs hydraulic analysis with existing information to create new data for other units to utilize in subsequent analysis. For example, the hydraulic analysis of interior flood drainage requires accurate specifications concerning the existing drainage systems from the Survey Section. Changes and additions to the existing interior drainage systems resulting from the hydraulic analysis of the proposed work is incorporated into the existing databases for consideration of the Design Branch. In addition, other units in the District, working different projects, will use information that is generated and utilized by the Water Management Section during other projects.

***Construction Division (CD)*** – Type A Users - ***Note:*** This Division did not participate in the GIS interviews and the following was developed from previous interviews with other Corp of Engineers District Construction Divisions.

The Construction Division is, at this time, considered an indirect beneficiary of a corporate GIS. There are technological advances on the horizon that will allow digital equipment to measure how much earth is moved as the earth moving equipment is working. This information could easily be used with a GIS to more accurately calculate payments to earthen work contractors.

***Operations Division (OP)*** – Type C Users - Next to Engineering and Real Estate

Divisions, the Operations Division and Readiness Division will potentially be a heavy user of the corporate GIS. The office of the Chief of Operations Division will benefit from the GIS by being able to report to the District commander in a quick and accurate manner during emergency situations. Analysis supplying real-time data could be of important use in this office.

***Management Support Branch (OP-M)*** – Type C Users - The Management Support Branch is responsible for developing and maintaining working relationships with field personnel, solving budget issues and staffing of projects. At present, the Management Support Branch is developing and maintaining land use and timber management graphic data utilizing *ArcInfo* and *ArcView*.

***Physical Support Branch (OP-P)*** – Type A Users - The Physical Support Branch is responsible for the maintenance of federal navigational channels along Mississippi, Alabama and Florida coast. Maps showing previous maintenance, future maintenance and possible physical obstructions would be used in this office.

***Eastern Support Section (OP-PE)*** – Type A Users - The Eastern Support Section supports the eastern half of the Mobile District for the federal navigational channels. Maps showing previous maintenance and information pertaining to the physical obstructions would be used in this office.

***Western Support Section OP-PW)*** – Type A Users - The Western Support Section supports western half of the Mobile District for the federal navigational channels.

***Readiness Branch (OP-R)*** – Type C Users - The mission requirements for OP-R lend itself well to GIS usage. OP-R is required to access information quickly and make decisions based on information received. OP-R has need for access to data provided by others. **NOTE:** This could be an area affected immediately if a GIS and relevant data were available.

***Emergency Operation Center (OP-EM)*** – Type A Users - This center provides the District with Emergency Impact Studies, locations of disaster shelters and analysis of “worst case scenarios” upon request.

***Regulatory Branch (OP-S)*** – Type D Users - This Branch is responsible for permits, evaluations, and enforcement activities relating to wetlands and Clean Water Act. This Branch is a GIS user and developer which, with a defined interface, links the *Regulatory Analysis Management System (RAMS)* to GIS data layers. The branch uses of *ArcInfo* and *Arcview* to develop coverage of wetlands on various sites utilizing planimetric, topographic, permit actions, enforcement actions, endangered species, historical sites, from digital and hardcopy source material.

***Enforcement Section (OP-ES)*** – Type A Users - This section of the Regulatory Branch assures enforcement of compliance of Environmental Laws as they govern the permit of structural additions or modifications within wetland areas. Working closely with the Permit Evaluation Section in compliance of specifications to designs and

boundary issues, the Enforcement Section also deals with the preliminary reporting of possible legal action against those parties not in compliance with environmental regulations and laws.

***Permit Evaluation Section (OP-PE)*** – Type C Users - The Permit Evaluation Section applies surveying, mapping and other geographic referencing to the evaluation process entailed when structural modification are granted within wetlands areas. This section aids the Enforcement Section by assuring that preliminary guidelines have been met and are in adherence to applicable laws and regulations governing wetland protection and reclamation as well as the Clean Water Act. This section is also running a full GIS on a daily basis. Using *Arcview* as the primary software in their GIS.

***Technical Support Branch (OP-T)*** – Type C Users - The Technical Support Branch has on-going GIS models in the Natural Resources Section, and the Navigation Section.

***Navigation Section (OP-TN)*** – Type B Users - This Section does not have CADD or GIS at the present time. This section could be utilizing several different CADD and GIS products, such as *InRoads*, *MGE*, *Arcview*, to develop dredging color fill maps, flood control coverage maps, etc. This Section should be considered a potential supplier of data for the corporate GIS.

***Natural Resources Section (OP-TR)*** – Type C Users - This Section has a mission that is consistent with the capabilities of GIS use. GIS was developed initially for use in Natural Resource management. If data were available digitally, this Branch could benefit from a GIS immediately.

***Hydropower Section (OP-TH)*** – Type A Users - The Hydropower Section has CADD capability, and could be a provider of data for the corporate GIS. OP-TH will utilize the GIS in a limited capacity, mainly database review and viewing of data.

***Hydropower Test Unit (OP-TT)*** – Type B Users - This Office will benefit indirectly from a corporate database/GIS. However, this Unit will contribute information about specific projects to the database. This Unit will benefit from a digital review process that may or may not involve GIS.

***Spatial Data Branch (OP-SD)*** – Type D Users - This is a new Branch within the Mobile District and is responsible for military surveying and mapping projects. The Branch has limited GIS experience and develops CADD drawings from field data for military projects. This Branch will contribute information through the digital spatial data being produced in-house and by contracted A/E firms.

## **Field Offices**

***ACF Project Management Office (OP-AC)*** – Type D Users - The site offices of W. F. George, Lake Seminole, and Jim Woodruff are responsible for natural resource, lakeshore, and recreation management within their area. The Walter F. George site office

has a GIS developed for aquatic plants survey, and the addition of acreage calculations, agriculture practices, and rate of erosion are planned for the GIS in near future.

***Allatoona Project Management Office (OP-AL)*** – Type C Users - This site office is responsible for operation of 30 recreation areas, 40 organizational leases, specified acts permits on 25,000 acres of land, and 12,000 acres of water. The are currently using *dBASE III* software for lakeshore and floating cabin permit.

***BW&T / Alabama-Coosa Project Management Office (OP-BA)*** – Type C Users - The BW&T/Alabama-Coosa site office uses *AutoCAD*, along with thrid-party software to develop dredging color fill maps. The use of databases (*Access* and *dBASE*) to capture and manage dredging pre and post data is utilized daily.

***Carters Project Management Office (OP-CA)*** – Type C Users - This site office is responsible for hydropower production, flood control, recreation and natural resources management. Carters Management Office has *Microstation* , but its use is limited at this time. The primary data is generated with database and spreadsheet software for annual, financial, user fee reports, and property inventory and citation tracking. They are very interested in the GIS developed for aquatic plant survey developed at W. F. George site office.

***Lanier Project Management Office (OP-SL)*** – Type B Users - The Sidney Lanier site office personnel generally had an attitude of “we have everything we need”, “we do not want the District to make us change to a new software”, “we are happy with what we use now”.

***Okatibbee Project Management Office (OP-OL)*** – Type B Users -The Okatibbee site office is responsible for flood control, recreation, water quality and natural resources. At this time OP-OL does not have CADD or GIS capability. This site office will benefit from the Corporate GIS and will also be a potential contributor of data.

***Tenn-Tom Project Management Office (OP-CO)*** – Type C Users - The Tennessee –Tombigbee Waterways Project Management site office is utilizing GIS technology for the natural resources wildlife habitat. The use of CADD in tracking of dredging and lake maintenance has been on going since 1995.

***West Point Project Management Office (OP-WP)*** – Type C Users -West Point has GIS software *ArcInfo* and *Arcview* and has started locating features with GPS receivers to help with shoreline, natural resources, recreation and hydropower management.

***Panama City Project Management Office (OP-PE)*** – Type B Users - Panama City site office has CADD (*AutoCAD*), but no GIS capability at this time. OP-PE is responsible for surveying and maintenance of area projects, and performs analysis of models of navigation channels on the river systems.

***Real Estate Division*** – Type B Users -The Real Estate Division is responsible for Interviews

the acquisition, management and disposal of all real estate assets, i.e., land, buildings and other structures (civil and military) in the district. It is also responsible for maintaining all real estate records for district projects, including planning, appraisal, acquisition and management documents, i.e., planning reports, appraisals, deeds, leases, out grants, disposals, maps and boundary survey data. This division consists of Acquisition Branch, Planning and Control Branch, Management and Disposal Branch and Appraisal Branch.

***Acquisition Branch (RE-A)*** – Type B Users - This Branch has no CADD or GIS capability at this time. RE-A is responsible for acquiring all acquisitions except leases, lease whole interest, and Real Estate interest (deeds, closing). Primary software utilized by RE-A is *REMIS*, a Real Estate Management Information System, which is an Oracle database.

Using *REMIS* database to keep tract of land acquisitions processes electronically, the Acquisitions Section uses a combination of digitized (MicroStation) files and manual update procedures of hardcopy documents being keep and updated in card files or file cabinets.

***Leasing Section (RE-AL)*** – Type B Users - This Section has no CADD or GIS capability at this time. RE-AL is responsible for acquiring lease whole interest, and Real Estate for Department of Defense and other government agencies. Primary software utilized by RE-AL is *RFIMS*, which is a space utilization software for leasing office space, as well as carpet and other items for District offices.

The Leasing Section uses the *RFIMS* database to space utilization progress electronically. All other processes are manual update procedures of hardcopy documents being keep and updated in card files or file cabinets.

***Purchase Section (RE-AP)*** – Type B Users - RE-AP is responsible for purchasing Real Property for DoD and other government agencies. This Section has no CADD or GIS capability at this time.

***Management and Disposal Branch (RE-M)*** – Type B Users - RE-M is responsible for the management and disposal of Military and Civilian Real Property in the Mobile District. This Branch Section has no CADD or GIS capability at this time.

***Military Management and Disposal Section (RE-MD)*** – Type B Users - This Section has no CADD or GIS capability at this time.

***Civilian Management Section (RE-MM)*** – Type B Users - This section has the same basic needs as the Military Management and Disposal Section for the civilian side of the District. This Section has no CADD or GIS capability at this time

***Forestry Section (RE-MT)*** – Type B Users - RE-MT is responsible for contract sale and removal of timber and related forest products from Army installations, Civil Works projects, and NASA facilities within the Mobile District. This Section has no CADD or GIS capability at this time. Maps showing delineated areas of timber

management would be a primary mapping need of this office. Also maps providing ownership information and future timber removal would be greatly utilized in this office.

***Planning and Control Branch (RE-P)*** - Type A Users - RE-P has CADD capability, knowledge of GIS, but limited experience using GIS (MGE) technology.

***Control and Reports Section (RE-PA)*** – Type A or C Users - The RE-PA is responsible for Real Estate funds, personal actions, records, reports, mapping and audits of Real Property. RE-P are developing CADD maps and exhibits for reports, and general site maps for Real Estate Division with ownership attributes, boundary survey data, and other pertinent database information.

***Cadastral Section (RE-PC)*** – Type C Users - RE-PC is digitizing segment maps, Legal Description boundary data, boundary survey maps as time permits. The nature of the work within this Section lends itself to a GIS. The Cadastral Section has CADD capability, but no GIS experience at this time. Maps delineating the property and property boundaries of Corp owned and proposed Corp ownership of lands would be an example of the mapping needs of this office.

***Planning and Environmental Division (PD)*** - Type A Users - Much of the work within the Planning Division will be delivered to other District organizational units.

***Environmental and Resource Branch (PD-E)*** – Type C Users - The Environmental and Resource Branch has *ArcInfo*, *ArcView*, and *MGE* GIS software, with only one person with one year of experience.

***Plan Formulation Branch (PD-F)*** – Type A Users - The Plan Formulation Branch prepares feasibility reports for water resources solutions; prepares economic evaluations for proposed and completed projects; project management for small water resource projects; areas inundated; hurricane evacuation routes and times; identifying properties with in the 100 year flood plains for insurance companies, land owners, etc.

***Environmental Resource Planning Section (PD-ER)*** – Type C Users - The Environmental Resource Planning Section is developing GIS coverages for the Environmental Compliance database (federal and state regulations), and creating data for status reports, presentations, and other pertinent work tasks.

***Inland Environmental Section (PD-EI)*** – Type C Users - The Inland Environmental Section are utilizing a GIS (aquatic plants GIS) in *ArcInfo* and/or *ArcView* format for preparing and performing environmental documentation / studies to support projects for river / stream / reservoirs for site office. Maps depicting the movement and terrain for specific plant species would be a mapping need of this office.

***Coastal Environmental Section (PD-EC)*** – Type C Users - The Coastal Environmental Section are utilizing CADD (*MicroStation*) for data mainly received for contractors. PD-EC works closely with PD-ER and is aware of the GIS data being developed by this Section. The nature of the work within this Section lends itself to a

GIS. By using GIS, analysis of coastal erosion or coastal movement due to natural disasters could be performed in this office.

***Plan Development and Floodplain Management Section (PD-FP)*** – Type A Users - The Plan Development and Floodplain Management Section has a GIS for flood plain and hurricane evacuation studies.

***Information Management Office (IM)*** – Type C Users – The primary function of this office is to maintain the Local Area Network (LAN) and the Wide Area Network (WAN). Both of these networks provide the District Office with Intranet and Internet capabilities and applications. Maintenance of servers utilized in different Branches and Sections is maintained through this office. Electronic mailing services (e-mail) and the security classifications associated with any of the Intranet and Internet applications is also maintained through this office.

IM provides each unit with hardware up-grades, software application upgrades and the necessary security required by the individual units. IM is also responsible for the network connections to and from each of the field offices. These connections are maintained at the present time as dedicated 56K lines. The network FDDI and Star ring configurations and associated hubs and routers are maintained through this office. Daily back-up procedures for all computers within the District Office are functions of the IM office. Off-site storage of the back-up data is handled in this office. IM assists the Field Offices with their daily back up procedures, yet off site storage is the responsibility of the individual field offices.

The Information Management Office will play a major role in a corporate GIS by assisting others in the procurement of necessary GIS equipment, the TSSDS database structure and maintenance procedures, as well as aid in the formulation of District GIS policies. The IM Office could merge an existent corporate database with geographic data to assist the District in making GIS management decisions, as well as perform queries concerning GIS equipment, wiring, location of GIS users and graphically display the information.

Individual District interviews are reported in Appendix A. Review comments made by the District and the responses provided by Baker are found in Appendix B of this report.

## 4 Potentials of GIS

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The entire District will benefit from a corporate GIS, although the amount of benefit varies between the Divisions, Branches, Sections, and Units. Overall, the incorporation of a GIS would streamline the information gathering, researching and collecting of data in the Division.

Even departments, which presently can not see the value of a GIS, could eventually use a corporate GIS for research and document control. The ad hoc query ability of the corporate GIS will speed up the District's response time for addressing internal and external client information requests.

### Technology

- CADD (computer aided drafting & design)
- DBMS (Database Mgmt. system)
- Geoprocessing/Spatial Analysis
- Remote Sensing
- Global Positioning System (GPS)
- Multi-media/sound/video
- Supervisory control & data acquisition

### GIS Capabilities

- Digital Mapping
- Referencing of design or as-built drawings to real world coordinates on a map
- Manage & retrieve records that share a relationship to locations on a map
- Incorporate existing models or develop other analysis tools to explore the relationships and interdependencies of natural or built environments
- Display and analysis of geographic images linked with other geographic data
- Collection of geographic coordinates, survey control to accurately position objects on a map
- Interactive video capability referenced to mapping.
- Monitor and control processes using data referenced geographically and displayed on a map

- Text processing
- Network communications and electronic data interchange (EDI)
- Generation of work orders and management of tasks via a map reference showing dedicated or required resources
- Link databases and users in different locations within the District or with external organizations

## 5 Constraints

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The site survey identified several constraints that must be addressed to promote a successful District-wide GIS. The existence of constraints suppresses GIS development.

The constraints will be identified and a recommendation made to lessen the impact of the constraint. It is not necessary that all constraints be identified at this time to insure a successful GIS. However, identification of potential problem areas and planning solutions to those problem areas will allow for an earlier transition GIS. The constraints identified by the Needs Assessment Team were:

### Funding

**Problem:** Limited Funds

The District has a tremendous workload, but a restricted budget for its activities. The costs associated with modifications of current work practices to incorporate GIS across the District are not presently addressed in current funding plans. However, GIS is being implemented at various levels within the District in a disjointed manner. To fully reap the benefits of these invested dollars, it is vital the District direct these financial resources, limited as they may be, in a productive manner.

**Solution:**

Use this needs assessment and the subsequent implementation plan to avoid the purchase of hardware and software to start the GIS. Formulate a steering committee with the authority to monitor and control GIS development in accordance with the District's goals. This solution sounds simple, but it is important that the money spent on hardware and software and the amounts expended on training, data collection and data maintenance are directed to benefit the corporate GIS vision.

### Data Accuracy

**Problem:** Data is not of common spatial accuracy

This constraint is very significant and cannot be overlooked. An important task in building the District's GIS is to geo-reference the data to a common coordinate system and apply accuracy standards. Mapping needs to have an accuracy appropriate for the applicable tasks.

It is erroneously assumed that data gains accuracy once entered into a computer. This is not the case. Data acquired from disparate sources or covering varying geographic extents will normally have varying levels of accuracy. For example, regional information may not use the same coordinate system or have the

accuracy required for a site plan. For small scale mapping of large geographic areas a ten-meter accuracy maybe sufficient. However, a map for a site that has a ten-meter accuracy is inadequate.

**Solution:**

It should be noted that the Tri-Service Spatial Data Standards (TSSDS) and the Tri- Service A/E/C Standards are intended to complement standards specified by the FGDC and the Defense Information Systems Agency (DISA). The TSSDS and the A/E/C CADD Standards are mandatory for all DoD projects. Both standards are available on CD-ROM and from the Tri-Service CADD/GIS Technology Center's internet home page at <http://mr2.wes.army.mil>. TSSDS symbology is available in *AutoCAD*, *MicroStation*, and *ArcInfo* formats. The Interactive Spatial Data Standards Application (ISDSA), associated with the TSSDS, is a *Microsoft Access* software application which provides a vehicle for electronic distribution of the standard schema, user education, user commentary, implementation guidance, automatic generation of SQL code, and hard copy printing of the TSSDS. The TSSDS release 1.75 schema is divided into 24 entity sets (real world thematic data categories such as geology and buildings).

## Data Formats

**Problem:** Data formats varying between Intergraph, *ArcInfo*, etc.

The District has many different hardware and software platforms. Presently there are at least three (3) major GIS platforms being considered or used within the District. Each GIS platform and existing/envisioned application environment is very different in nature. They are:

1. **Intergraph's MGE** - used in Engineering Division, Operations Division, Planning and Environmental Division, the Real Estate Division has *MGE*, but it is not utilized at this time.
2. **ESRI's ArcInfo and ArcView** – used in Engineering Division, Operations Division (including site offices), and Planning and Environmental Division, (the States and Counties within the District provide data in *ArcInfo* and/or *ArcView* format).
3. **Bentley's MicroStation GeoGraphics** – This product was demonstrated at the Mobile District Office in May 1998 and has been considered for use by the various engineering offices.

**Solution:** Develop a plan to migrate all data to a common standard.

We know that the District is adopting the Tri-Service Spatial Data Standards as their GIS standard. This is a very important first step in developing a Corporate GIS. The GIS implementation plan will specify a low cost product “custom design features”, like Intergraph's *GeoMedia*, Bentley's *MicroStation*, *GeoGraphics*, or ESRI's *ArcView* as the primary Corporate desktop GIS solution. These desktop GIS will give the District the ability to view and

incorporate data from the various software platforms already in use within the District.

With the incorporation of a desktop GIS as the District's Corporate GIS platform the GIS can immediately make use of MGE data, *MicroStation*, *ArcInfo*, *ArcView* data sets. Eventually existing GIS data models and platforms that are present throughout the District will migrate to the TSSDS. But this migration must occur without causing major disruptions in the existing workflows.

## **Organizational Efficiency**

### **Problem:** No Centralized Organization in Place to Sustain a Corporate GIS

To maintain a centralized corporate GIS within the District, there must be an unit that functions as an administrator of corporate data. The administrating organization must have an intimate knowledge of the GIS data requirements, the data structure, the required data accuracy's, as well as read/write access to the data and distribution needs. This organization must standards for the GIS. It is not indicative that the District reorganizes to create a centralized data administrator. Imposing such a radical change within the District's structure probably will not yield the desired returns.

### **Solution:**

Establish a GIS steering committee to establish policies and procedures for the GIS. Identify personnel with existing organizations that are capable to undertake the additional tasks and responsibilities associated with steering committee participation.

## **Organizational Participation**

### **Problem:** Unwillingness to Participate in Corporate Approach for GIS

This is a common phenomenon within organizations with many areas that specialize in different products or tasks. The Mobile District, like most Corps of Engineer Districts, has a broad mission that includes many diverse responsibilities. It is quite normal for an office to be highly specialized and independent of sister offices. This environment is created when collection, maintenance and retrieval of information are department oriented. As these independent offices begin to store digital data, it becomes apparent that sharing data is more plausible yet often not accomplished. Lack of data sharing between offices is propagated by the fears of loss of control, corruption of the data, or unauthorized access to sensitive information.

### **Solution:**

Initiate a plan for data management that uses the common TSSDS data structure and promotes sharing of the databases. The data management plan must clearly define data ownership and maintenance responsibilities.

## **Data Master Index**

**Problem:** No Master Index to What Data is Available

There is no metadata file that includes the type of data and the data accuracy. There is no uniform method for indexing digital and other information within the District. This problem inhibits widespread use of common information. In many cases information is duplicated.

**Solution:**

Create a master index system of available digital data and hard copy data that is regularly used. All of these data types should then be added to an index and hardcopy data digitized and/or scanned then entered into the GIS.

## **Conversion and Migration Costs**

**Problem:** Cost of data conversion and data migration

The usual scenario for an organization is a digitizing process that enters all available geospatial information into the GIS. The costs of digitizing hardcopy maps, drawings and documents into a digital format can be so expensive that the GIS cannot be afforded. Also, it is often quite expensive to migrate existing data that was not prepared to a recognized standard into a common format such as the TSSDS.

**Solution:**

There are many methods of keeping conversion costs down. The foremost approach to conversion cost reduction is to only convert those data necessary to support specific spatial analysis. When these data are converted they are developed to comply with standards such as the TSSDS.

The scanning of maps, drawings and documents (these can be vectorized later, as may be required) can reduce the cost of converting to the digital environmental (raster). The District currently has scanning capabilities in the Engineering Division (other Divisions may have large format scanning capability also). A scanning conversion method gives the users an inexpensive means to access digital maps, drawing and documents without the extra cost of vectorization. Updates and changes can be made to raster elements by digitizing the changes and/or updates to a raster file. Scanning can also be used in the capacity of achieving maps, drawings and documents which are not readily required for daily

District activities and for historical data that maybe desired for periodic reference and report generation.

## **Pockets of Digital Data**

### **Problem:** Pockets of Digital Data With Little Integration with Other Potential Users

Pockets of digital data are not necessarily a major problem if recognized early in the GIS development. It is quite common to have isolated GIS users with databases in various stages of development. Political and organizational constraints can be too difficult to overcome in developing a truly centralized approach to GIS. Conversely, when data standards from different site/departments are allowed to exist then true corporate implementation can rarely be achieved.

### **Solution:**

If the needs of all GIS users are taken into consideration and accommodated where possible throughout the implementation process, the expertise and the data possessed by the isolated users will become an asset to the District implementation. The GIS users past experiences, knowledge from training and information generated and incorporated in the GIS's are valuable to a developing GIS. The networking of existing and new GIS's within a shared, distributed database environment with the proper read and read/write capabilities will in effect create the desired "corporate" GIS, from which all levels of developers and users can benefit.

# 6 GIS Organizational Structure

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## GIS Administration

A Typical GIS organization may consist of a GIS Director, Coordinator, Database Administrator, and System Administrator. To meet the requirements of all potential users at the District, the GIS Organization must be able to expand. The duties of the GIS organization key personnel are as follows:

**GIS Director.** The GIS Director's primary responsibility is to provide guidance, direction and to be a receptor for new ideas for the organization's GIS. The Director is responsible for approving and/or obtaining approval for equipment, training, and any major focus or direction changes, which may be incorporated into the GIS.

**GIS Coordinator.** The GIS Coordinator's chief responsibility is to insure all GIS providers and users perform their daily functions aided by the use of a GIS and to assist in the planning of GIS related product development. By managing daily GIS functions and directing the System Administrator, the GIS Coordinator can incorporate required provider and user changes within the GIS.

**System Administrator.** The System Administrator's principal responsibility is to insure system management and configuration standards are adhered to and sustained during the design, implementation, and modifications of a GIS. The System Administrator is responsible for the management of the GIS network interface; file transfer protocol and movement; system access; disk and peripheral configuration; system performance; and backups and archives. The System Administrator is also responsible for system performance; development of a system operator's instructional manual; system security classification; and future system expansion. System Administrators typically have extensive background, experience and education in computer hardware and software configuration and system management.

**Database Administrator.** The Database Administrator's primary responsibility is to enforce the established TSSDS graphic and non-graphic database standards during all phases of the GIS installation. The Database Administrator is responsible for the administration of relational and graphic data format and structure: graphic and non-graphic data privileges; and data quality control and assurance. The Database Administrator is also responsible for database performance tuning; database operator's instructional manual development; custom data requirements; and future database integration and design. Database Administrators typically have extensive background, education, and experience in relational and file-based database administration.

**GIS Analyst.** The GIS Analyst is considered an "expert" GIS user. The Analyst is skilled in core GIS topics and high-level GIS analytical applications. The GIS Analyst should be fluent in any applicable GIS data entry, analysis, and output procedures. The Analyst is a "customer consultant." He or she is responsible for custom GIS software interface and macro development; training support and course development; development

of an operator's workflow instructional manual; and data translation support. A GIS Analyst could be any user (engineer, planner, etc.) with at least eighteen months of full-time GIS experience.

***GIS Operator.*** The GIS Operator is considered a "proficient" GIS user, well trained in all GIS core topics. The GIS Operator should be capable in all appropriate GIS data entry, and data output procedures and capable of system demonstration support. A GIS Operator could be any user (CAD operator, surveyor, engineer, etc.) with at least six month of full-time GIS or CAD experience.

***GIS User.*** The GIS user, also referred to as the "GIS customer", generates studies, requirements, products, and other outputs by using data that are usually completed by other GIS support personnel. The GIS user should understand the principles of GIS and be familiar with select products. Typical users might be managers, maintenance staff, engineers, and clerk-typists.

## **7 GIS Data Ownership and Maintenance**

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One significant factor to contemplate in the implementation of a GIS is the definition of responsibilities for data creation, ownership, maintenance and the quality of the graphic and non-graphic data.

### **Data Ownership**

The office responsible for data ownership would be the office of origination. This office also assumes a responsibility for the data accuracy and completeness. Data ownership can be further sub-divided into three categories, 1) graphic and non-graphic data, 2) graphic data only and 3) non-graphic data only.

Leading candidates of data ownership within the Mobile District are the Engineering Division and the Programs and Project Management Division. These Divisions require and produce CADD products. The Engineering Division works closely with other District offices and can make their data available to the other offices. The same is true with the Programs and Project Management Division. However, principal ownership of the data will reside with the creators.

### **Data Co-Ownership**

Co-ownership of GIS data implies that there is shared responsibility between two or more offices. This data can be subdivided into two categories: 1) non-graphic data and 2) graphic data. Co-ownership requires a higher degree of coordination between the owners and their data, including a shared responsibility for the District's data resources.

District Offices with a shared data responsibility would include the Engineering Division, primarily the Project Support Section and the Project Design and Review Section of the Design Branch, the Geo-technical, Environmental Branches and Sections, the Hydrology Branch, the Regulatory Branch, and the Technical Support Branch. Responsibility for data maintenance, data accuracy, data input and modifications will have to be decided upon prior to a GIS implementation.

## 8 GIS Cost Summary Example

The benefit costs used in cost justification are typically estimated based upon expected functional improvements and efficiency expected by introducing GIS into the workflow. The values included in this assessment are illustrative and are intended as a guide for calculating the Return on Investment (ROI) for a GIS implementation. The ROI is based on savings affiliated with GIS functions only. Aside from economic benefits, there will be secondary benefits due to increased productivity associated with design, maintenance, mapping, and analyses products.

The present worth projection is typically based on a five-year life span for the proposed hardware and an eight-year life span for the proposed database. These figures are based on guidance presented in the United States Army Material Command pamphlet (AMC-P 11-28) titled, "Army Programs, Economic Analysis, Concepts and Methodologies", dated July 1985.

The rationale used in developing an Implementation Plan includes maximum return on investment after examination of project workflow. Hardware and software installation as well as personnel training and expenses incurred will be addressed in the Implementation Plan.

### A. Elements for Data Acquisitions and Inputs Frequency and Source

	<u>Frequency</u>		<u>Where/Source</u>
	<u>One-Time</u>	<u>Annual</u>	
1. Labor to locate and acquire sources of Geographic data	X	-	Existing DB's
	X	X	COE Projects
2. Acquisition of new geographic data	-	X	COE Projects
3. Survey control acquisition	X	X	COE Projects
4. GIS data dictionary, photogrammetric and planimetric specifications	X	-	Contracted
5. Training costs	X	X	Vendors/ In-house
6. Sustaining engineering - Contracted	X	X	COE Projects
7. Additional information not located in # 2 and input of attributes into GIS	X	X	In-house and COE Projects

### B. Cost Elements for Data Manipulation and Output Example (Values are shown for illustrate reference only for One-Time and Annual cost differences. Actual values for the District will be compiled during the preparation of the Implementation Plan). Example Analysis of Cost Elements

One-Time                      Annual

Hardware and Software Elements  
Estimates

1. Cost of new computer hardware/ software	\$ 350,000	
2. Annual cost for hardware/software maintenance contract		\$ 40,000

Labor and Materials

3. Annual or one-time training costs for GIS applications operators	\$ 150,000	
4. Annual labor and material costs for map generation		\$ 35,000

**Data Section B Totals**

	<b><u>One-Time</u></b>	<b><u>Annual</u></b>
5. Total one-time costs (sum of lines 1 and 3, one time costs only)	\$ 500,000	
6. Total annual costs (sum of lines 2 and 4, annual costs only)		\$ 75,000

**C. Benefits Analysis Examples (Values are shown for illustrate reference only for  
Benefit Analysis. Actual values for the District will be compiled during the  
preparation of the Implementation Plan).**  
**Example Analysis of Benefits Analysis**

<b><u>Activities</u></b>	<b><u>Annual</u></b>
1. Initial Utility and Base Map Research	\$ 250,000
2. Permit Processing	\$ 95,000
3. Field Investigation by A/E firms	\$ 375,000
4. Maintenance of Utility Data	\$ 160,000
5. Master Plan Basic Map Information Update	\$ 65,000
6. Additional Utility Map Research	\$ 35,000
7. Repair to Utilities that are damaged due to inaccurate or incomplete data	\$ 110,000
8. Site Plans for Construction Projects	\$ 45,000
9. Infrastructure Analysis	\$ 35,000
10. Facility Maintenance Contracts	\$ 15,000

**Data Section C Totals**

11. Total annual benefit from activities (Sum 1 through 10 excluding 7)	\$ 1,185,000
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12. Total annual benefit from cost avoidance (sum of 7)	\$ 235,000
13. Total annual benefits	\$ 1,420,000

**D. Return of Investment Calculation Worksheet (Typical method for calculation of an economic benefit, based upon a hypothetical cost study, values are for reference only).**

**One Time Costs**

<b><u>Activities</u></b>	<b><u>Annual</u></b>
1. Data acquisition and input;	\$ 1,328,000
2. Training costs for GIS operators;	\$ 125,000

<b><u>Activities</u></b>	<b><u>Annual</u></b>
3. Total one-time costs for database	\$ 1,453,000
4. Cost of new computer hardware/ software	\$ 350,000

	<b><u>Annual</u></b>
5. Data acquisition and input	\$ 90,000
6. Data manipulation and output	\$ 50,000
7. Total annual costs (5 + 6)	\$ 140,000
Annual Benefits	\$ 140,000

**Annual Benefits**

8. Benefits from activities	\$ 1,185,000
9. Benefits from cost avoidance	\$ 235,000
10. Total annual benefits (8 + 9)	\$ 1,420,000

**Present Worth (p/a)**

11. Enter project/application life in years      n = 8
12. Enter discount rate as decimal  
(OMB Circular A-94 uses 10%  
discount rate)      I = .1
13. Calculate present worth factor p/a;
- $$p/a = \frac{(1+I)^n - 1}{I(1+I)^n}$$
- $$p/a = \frac{(1.1)^8 - 1}{.1}$$

$$\begin{aligned}
 & 0.1(1.1)^8 && p/a = 5.33 \\
 = & \frac{2.14356 - 1}{0.1 \times 2.14356} \\
 = & \frac{1.14356}{.214356} = && 5.33
 \end{aligned}$$

**Return on Interest (ROI)**

**Calculation Estimates**

14. Total one-time cost for database from line 3 above	\$ 1,453,000
15. Cost of new computer hardware/software; from line 4 above	\$ 350,000
16. Multiply total annual costs on line 7 by present worth factor on line 13	\$ 746,200
17. Present Worth of Costs (14 + 15 + 16)	\$ 2,549,200
18. Present Worth of Benefits (10 x 13)	\$ 7,568,600
19. ROI, Present Worth of Benefit/Present Worth of Costs, (18 / 17)	2.97

## 9 Recommendations

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After interviewing the selected personnel, Baker has determined that a need for a detailed work-flow analysis for the pilot project is needed for development of the Implementation Plan. The questionnaires provided information pertinent to the preparation of the Implementation Plan on a holistic level. The following recommendations are noted as necessary and substantial in the preparation of the Implementation Plan and would be logical step for any startup GIS project in the District.

Immediate recommended procedures, following selection of a pilot project, for preparation of the Implementation Plan are as follows:

- All data must be TSSDS compliant for the pilot study
- A Implementation Committee must be selected  
A specific data flow between various individual offices must be established
- Establish data ownership and maintenance

It was previously determined that Implementation strategies would be used in a pilot project, with the pilot area to be selected by the Implementation Committee.

With individual GIS being developed on different software platforms, it is important to select an Open GIS software that will work across many platforms. This software will have to be decided upon by the GIS Implementation Committee. Baker at this time is suggesting the use of Intergraph's GeoMedia. This software will allow original data to be access in a "read only format". By having only viewing capabilities, the viewer can query the data, plot maps, and generate reports without manipulation to the original data.

Establish access to information provided by other Federal and State agencies as well as the Internet and also maintain this data in TSSDS compliance. Location of these types of data will be included in the Implementation Plan.

The following recommendations are made to facilitate a successful start-up of the pilot study GIS project.

- **Negotiate data exchange agreements with partners;** Initiation of a pilot project will likely incorporate data exchange between various partner agencies and contributing Sections within the District. Agreements must be reached with partners as per their expectations for value added data in return. Partners will require information in a form that will minimize the effort to refresh their respective databases. The agreement strongly illustrates the priority of acceptance of TSSDS. In the case of those partners contributing a large proportion of data, specific standards may already be in place. District staff who will process data from sponsor partners must understand the incoming data structure as well as the TSSDS. Staff must be familiar with methods to restore data for pilot project needs, but also how to translate and compress information for distribution to other District offices. A solid understanding of the processes required to retrieve and back-up data to mass storage

devices is needed for a successful GIS implementation. Data may be received in various compression formats for different operating systems (Unix, Windows). Pilot study team members will require familiarity with how to process and transfer, (often via ftp), each data type appropriately to a desktop GIS platform.

- **Gain familiarity with a desktop GIS application;** Nearly every potential application of GIS defined in the needs assessment report can be achieved through the use of a desktop GIS. Most all packages contain user-friendly software tools with ever increasing utility. The mainstream packages carry the ability to read a wide range of spatial data in their existing format. Often, a large processing effort is required to convert a drawing or design file to a readable format for a particular application, thereby making a second copy of a large data set. The mainstream packages prove useful by reading spatial data directly from ARC/INFO, AutoCAD, Microstation, MGE, and MapInfo without the need to reformat. It is our opinion that Intergraph's Geo Media is the most versatile, economical, and user-friendly GIS application available for Windows OS. Desktop GIS applications are often built upon an extendable architecture. A very powerful module is designed to operate exclusively with raster datasets. Desktop GIS add-ons serve as a user-friendly tool capable of providing analysis functionality with digital elevation model (DEM) files, commonly used hydrology tasks, and other continuous surface data. A raster modeling tool is also useful for simple image processing, point sample interpolation, 3D visualization, modeling of sedimentation scenarios and vector/raster data conversion.
- **Facilitate use of on-line systems currently in place;** A wealth of digital data are becoming available on-line for use in a GIS. Much of the information is provided free of charge, others require a fee and considerable time to process an individual request. Project staff need to be aware of what data are out there for the taking and what is considered proper use of it. Care must be taken not to misuse information, and also to realize that there are errors found in digital spatial data from time to time.
- **Build a base map database;** A fundamental step to efficiently and effectively using a GIS is to development of a comprehensive base map and robust spatial database that can be used for many purposes. Ideally, topographic, planimetric, hydrographic, land use, and other geographic information will be obtained for the entire study area at a spatial scale and level of accuracy that will suit a wide variety of analysis needs. In the course of building the base map GIS, strict adherence to the TSSDS is required. A primary objective of the pilot study may be to formulate project alternatives for construction. To meet this objective it may be necessary to build base maps for upland and/or aquatic sites that do not yet exist. A well presented set of alternatives, each accompanied by a consistently formatted map product, is needed for clear communication of project objectives to diverse audiences.
- **Synchronize internal and external data sources;** Data compiled within Mobile District will likely come from various software platforms, data compression formats, and coordinate projection systems. It is imperative that an arrangement is in place to address these issues, and efficiently synchronize the data to fit and overlay properly. Spatial data input to the pilot project GIS will likely come from external agencies in a format less familiar to study staff than data from internal sources. The ability to

recognize characteristics of various data formats and coordinate systems are necessary for successful data management throughout the project.

- **Identify data gaps in critical map layers;** Through the course of visits to field offices involved with potential pilot projects, it is found that data gaps do exist. A plan of action must be formulated to identify where, and if, additional data are needed. Queries to additional agencies or GIS data vendors must be made to compile a comprehensive database for the entire pilot project area.
- **Prepare historical data for inclusion in GIS;** Detailed review of the pilot study data archive may reveal a wealth of historical information that may be useful for integration in the GIS. It would be beneficial to use this information to attribute as many map features as possible. This will help to build a comprehensive system upon which more exhaustive analysis can be made. A familiarity of digitizing, scanning, and image geo-referencing is needed by pilot study staff.
- **Specify models for inclusion into GIS;** It is understood that there are many numerical models that potentially could be used for a pilot project. There exists a need to closely examine each model and decide which are most appropriate for integration with the GIS. Some may be better suited than others. Utilization of some models may be best served by simply geo-referencing the model software output. Overall, there is a need to identify all models to be used, prioritize frequency of their use, and rate each on their feasibility for implementation in the GIS.
- **Develop a field checklist for use by staff visiting project;** Careful planning will be required between those individuals deployed on field visits and those building and maintaining the GIS. A concise and specific standard set of coding attributes, developed from the TSSDS should be used to avoid delays in interpretation of field notes. A hard copy checklist of valid attribute values can be developed and provided to field staff to facilitate consistent coding of features for inclusion in the GIS. A checklist developed and understood by everyone early in the project can save considerable effort later.
- **Quality control of drainage basins, channels, and other important project features;** As is the case with any large scale GIS analysis, a QA/QC of the project data are required before critical path processes are done. Often, a data set “right out of the box” may omit or incorrectly delineate a basin boundary or ephemeral stream. Ideally, those with greatest familiarity with the project areas are charged with this task.
- **Continued development of enhanced map products for use throughout study;** The inherent benefits to using a GIS are realized to their fullest extent with each subsequent use of the system. Although building and synchronization of data sets are time consuming tasks, the nature of the system invites a constant refinement and accumulation of information. It is imperative that such efforts are coordinated closely among study team members. A file management system should be in place whereby any and all data constructed or derived by a team member should be available for use by others. A bulletin board system, such as an Intranet pilot project home page is

needed to inform others of the data's existence, currency, and location.

- **Create map products with the objective of better communication;** A purpose for which a GIS system is implemented is often to enhance understanding of complicated spatial problems and provide support for recommended solutions. A prime objective of creating a quality map is to facilitate understanding of a problem or solution in a fraction of the time needed to explain it verbally. To meet this end, it is imperative that everyone utilize standard map symbols and colors contained in the TSSDS. This will enhance understanding of map products as well as promote cartographic consistency. A great need within all District production work flows are time savings. Adoption of the TSSDS Standards will enhance comprehension of maps among various discipline groups working on the pilot study project.
- **Familiarity with available plotting tools for public display meetings;** An important part of a successful project work flow is a well received public review meeting. In an effort to make comprehension of project objectives clear, a series of highly visual, large maps are required. Much time will be saved later in the course of the pilot project if a set of map templates are developed for those products presented in a public forum. Although data concepts and title of the maps will change, it is recommended to adhere to the TSSDS standard format of symbols and colors to facilitate easier comprehension across maps.
- **Develop a WWW based display for public knowledge and comment period;** An economical and logical choice for distributing information to the public is through use of the World Wide Web. There is an important need to create a project specific Web site for a pilot study. Many issues surrounding high profile projects can be identified as socially sensitive in many areas. A system where the public can obtain simple visual map displays, concise explanations of project objectives, and summary charts and tables would be very beneficial. Public comment input could be sought through email links on the web site complete with pull down forms to facilitate easier data management and record keeping. Use of a desktop GIS application is instrumental in creation of a project description web site.

## Appendix A

### Questionnaire/Interviews

<u>Person Interviewed</u>	<u>Organization</u>	<u>Page</u>
Anderson, Benny	EN-E Cost Engineering Branch	A2
Burke, Roger	PD-F Plan Formulation Branch	
Hare, Calvin L.	RE-AL Leasing Section	A2
Findley, Diane	PD-EI Inland Environmental Section	A2
Morgan, Donald	OP-AC Walter F. George/Lake Seminole	A2
Eringham, John R.	PD-FP Plan Development and Floodplain Management Section	A2
Poioux, George	EN-DA Project Support Section	A2
Gates, Hal S.	EN-DR Project Design & Review Section & MECOM Support	A2
Ansley, H. R.	OP-WP West Point Project	A2
Whittington, Howard M. and Hathorn, James	EN-HH Coastal, Hydrology and Hydraulic Design Section	A2
Abbott, Joe and March, Kevin	RE-PC Cadastral Section	A2
Baehrs, John	EN-DA Project Support Section	A2
Ercums, “Maze” Namejs and Croley, John F.	RE-PA Control and Reports Section	A2
Givhan, Joseph P., Jr.	RE-A Acquisitions Branch	A2
Hill, Jimmy F.	RE-MT Forestry Section	A2
Huntley, Jack	OP-OL Okatibbee Lake	A2
McEnery, James A.	OP-S Regulatory Branch	A2
Wagoner III, James A.	RE-MD Military Management and Disposal Section	A2
Walker, Jim and Clark, Meddie	OP-M Management Support Branch	A2
Day, Kenneth	OP-TR Natural Resources Section	A2
Huddleston, Ken	OP-AL Allatoona Lake	A2
Williams, Karen F. and Youngman, William M. and	PD-ER Environmental Resources Planning Section	
Ree, Susan Ivester	PD-EC Coastal Environmental Section	A2
Brown, Linda	OP-AC Walter F. George/Lake Seminole Project	A2
Lackey, LuAnn and Sapp, Brian	OP-CA Carters Project	A2
Lillicrop, Linda	OP-TN Navigation Section	A2
Abeln, Michael T.	PM Programs and Project Management Division	A2
Merek, Kevin	RE-PC Cadastral Section	A2
Nelson, Michael	OP-PE Panama City Project	A2
Nettles, Mike	OP-SD Spatial Data Branch	A2
Seitz, Mark C.	OP-BA Black Warrior & Tuscaloosa Project	A2
Warren, Paul	OP-WP West Point Project	A2
Bond, Robert	PM-C Civil Works Programs and Project Management Branch	A2
Chamblee, Robert	EN-GG Geotechnical & Dam Safety Section	A2

**Questionnaire/Interviews (Continued)**

<b><u>Person Interviewed</u></b>	<b><u>Organization</u></b>	<b><u>Page</u></b>
Ferrill, Reid S.	RE-PA Control and Reports Section	A2
Nettles, Ron	EN-GG Geotechnical & Dam Safety Section	A2
Simmons, Roger	PM-I Strategic Initiatives and SFO Project Management Branch	A2
Palmer, Tony and Brewer, D. Allen	OP-CO TENN-TOM Project	A2
McWhorter, Van Burbamy, Karl and Coffee, Glenn	OP-OL Okatibbee Lake	A2
Burkett, Ed	PD-E Environmental and Resource Branch	A2
	EN-HW Water Management Section	A2

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 26MAY98

Interviewee Name and Title: Benny Anderson, Chief Cost Engineering Branch

Address and/or Location: \_\_\_\_\_

Telephone: 334-690-3400 Fax: 334-694-4343 E-mail: ?

Operational Unit Name (department/section): EN-E Cost Engineering Branch

1. What is the department/branch/division/code/unit in which you work? Engineering Branch (Cost)  
\_\_\_\_\_
2. What department/branch/division/code/unit do you report to? Engineering Division , Chief - Mr. Smith  
\_\_\_\_\_
3. Briefly describe the mission of your department/section: Responsible for cost of project, also advise and manage cost throughout life of project.
4. How many people are in your section? 9 \_\_\_\_\_
5. How many people are temporary and how many are permanent? all nine (9)  
\_\_\_\_\_
6. Average number of years (working experience) for personnel: 20+
7. Average education level of the people in your unit: BS/BA
8. Number of Personnel with CADD experience in your section: Trained in MicroStation, not utilized.
9. Number of Personnel with GIS experience in your section: None
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): Little
11. What Technical GIS Training (if any) have people in your unit had? None  
\_\_\_\_\_
12. Does a centralized Information Management/Technology department presently support your unit? YES
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? IM (Engineering Branch support with hardware/software), weekly meeting with IM (on the committee).
14. To what level do you fund your present CADD/GIS activity? ? \_\_\_\_\_
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases MCASCS (Corps estimating software for estimating projects), it generates reports, and spreadsheets RASER (also costing software), Excel & Lotus (Lotus is being phased out). \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ GIS Databases MCASCS (Construction Criteria Database), Unit Price Software, Area Cost Factor.  
\_\_\_\_\_

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Non-CADD/GIS Databases See Above

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16. What data do you get from external sources (which provider? what frequency)?: A/E firms and the Design Branch (mainly Drawings to use in estimating cost from drawings)
- 

CADD System MicroStation Sharing by: Hard copy: (paper)

17. What information, if any, do you provide to others - and to whom? Cost of projects, take the hardcopy drawings and develop cost of each item. (with MCASCS) - Some reports are now being Emailed.
- 

18. What information (content) is portrayed or contained within the data your section uses? prn, dbf, dbt - A/E firms are required to use the same version of MCASCS (Corps software

19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? drawings
- 
- 
- 
- 
- 

20. What analyses are performed by your section using these sources? SEE ABOVE
- 

21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)? SEE ABOVE
- 

22. How often are these data sources updated and how are they updated? As required throughout life of project.

23. Briefly describe your sections CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): N/A
- 

24. Denote your existing software and hardware training with respect to the following:

**Word processing:** Word X version \_\_\_\_\_ years of experience \_\_\_\_\_

**Spreadsheet:** Excel X version \_\_\_\_\_ years of experience \_\_\_\_\_

other TRACES & RASER

**CADD:** N/A

**Databases:** N/A

**GIS:** N/A

25. What personnel do you envision requiring GIS training? No need, except yto use as storage ubnit only.  
\_\_\_\_\_  
\_\_\_\_\_
26. What information do you presently possess or desire for conversion into the GIS: Historic data
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
Storage of data, such as drawings, spreadsheets, etc.
28. How do you believe a GIS will help (or hinder) you with your work? Help
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS? Not sure what exists within the District that we could utilize.  
\_\_\_\_\_
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS?  
Please identify: See Above  
\_\_\_\_\_
31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced: See previous pages.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
32. What other flows do you believe would be improved by applying a GIS? Based off drawings from project, lead estimator assigns tasks, then estimation is ran through MCASCS and report generated, submitted tp each section within which project requires services from. A/E firm completes part or whole if A/E firm is required.  
-
33. Which work flows would you like to see GIS exercise during a demonstration project? A/E Design, A/E estimators
34. Please describe these work flows: See above and on previous pages.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
35. Which study projects performed by of the Mobile District?s responsibility would provide the most diverse examples of your application for a demonstration GIS project? Not sure what has been performed.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 29MAY98

Interviewee Name and Title: Roger Burke, Chief - Plan Formulation

Address and/or Location: Mobile

Telephone: ? Fax: ? E-mail: ?

Operational Unit Name (department/section): \_\_\_\_\_

1. What is the department/branch/division/code/unit in which you work? Plan Formulation
2. What department/branch/division/code/unit do you report to? Plan Environmental  
\_\_\_\_\_
3. Briefly describe the mission of your department/section: **Prepare Feasibility Reports for solutions towards Water resource problems, prepare economic evaluations fpr proposed and completed projects, Project maps for small water resource projects**
4. How many people are in your section? 21
5. How many people are temporary and how many are permanent? 1 contract, 3 co-op, 17 permanent  
\_\_\_\_\_
6. Average number of years (working experience) for personnel: 16-greater
7. Average education level of the people in your unit: BS/BA .
8. Number of Personnel with CADD experience in your section: 3
9. Number of Personnel with GIS experience in your section: 3
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 5
11. What Technical GIS Training (if any) have people in your unit had? **Yes, Co-op in tech. program. Professor training - seminar**
12. Does a centralized Information Management/Technology department presently support your unit? YES
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? **IM - hardware, software and network support**
14. To what level do you fund your present CADD/GIS activity? **Division sets budget**
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases **application narrowly defind, emergency flood and hurricanes, applications up to section chief**  
\_\_\_\_\_  
\_\_\_\_\_  
GIS Databases N/A  
\_\_\_\_\_  
\_\_\_\_\_  
Non-CADD/GIS Databases N/A  
\_\_\_\_\_

16. What data do you get from external sources (which provider? what frequency)?: See below

17. What information, if any, do you provide to others - and to whom? Flood Insurance study for cities, civil defense, as needed. uppers don't get involved with details. from water and federal emergency management agency (FEMA)

Database: N/A

CADD System: N/A

GIS System: N/A

Sharing by: Hard copy - paper

Soft copy: CD-ROM

Electronic: Network, E-mail, modem, or Internet [ftp]

18. What information (content) is portrayed or contained within the data your section uses?

CADD Areas inudated, hurricane evacuation routes and times

GIS 100 year flood plains identify properties with in flood plan. Eavanaugh used for flood insurance companies, Environmental project - EN provides data.

Database See above

19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? All multimedia - photographs

20. What analysis are performed by your section using these sources?

CADD ecomonic, feasibility, running of HECI and HECII model - flood stage for different models

GIS In feasibility study - disc teams so you have others from district (EN, Hydrology/Hvdraulics, environmental, Planning, etc.) to perform a project.

Database identifying problem and solutions alternatives and cost benefit ratio to received a particle

**construction projects.**

Hardcopy **Life cycle cost, several economic analysis models, trans cost models, risk models.**

21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?

CADD **comes from Engineering**

GIS **Same as above**

Database **Same as above**

Hardcopy **Same as above**

22. How often are these data sources updated and how are they updated?

CADD **as needed**

GIS **N/A**

Database **data used in studies - from public service and interviews update utilities, specifctions as needed.**

Hardcopy **updated economic analysis of 2 years - this is being budgeted for**

23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): **NT platforms - PCs standalone (Intergraph - CADD)**

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24. Denote your existing software and hardware training with respect to the following:

**Word processing:** Word  X  version  O97  years of experience

**Spreadsheet:** Excel  X  version   years of experience

**CADD:** MicroStation  X  version   years of experience

**Databases:** Access  X  version   years of experience

ORACLE  CEFMS  version   years of experience

**GIS:**  None

25. What personnel do you envision requiring GIS training?  John Erringman, Bill Youngman - whoever wants to - best job.

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26. What information do you presently possess or desire for conversion into the GIS:

Drawings:  Studies done with in various geographics locations - both rural and urban in nature.

27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?

28. How do you believe a GIS will help (or hinder) you with your work?  help or at the very least an aid

29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?

Engineering - Water Management Real Estate (for feasibility study), Operations - Regulations functions.

30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please

identify:  NOAA, USGS, EPA, FWS, NWS

31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced:  Internal studies by P/G (Drawing, maps) use hard copy done and some pulled up on network. Requests from O & M - dredging plans. Operations identify needs, studies underway - individual plan needed, Operations to Engineering for specs - contract, contractors, local sponsor Operations and maintenance projects - Inland waterways and coastal navigation - Corps maintenance.

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32. What other flows do you believe would be improved by applying a GIS?  Continueing from aove - dredging draft and shell draft Lake Lanier and Lake Altoona

33. Which work flows would you like to see GIS exercise during a demonstration project?  use remote area - (TENN TOM), :Lubbub creek in Pickens County, AL - show me how a GIS can aid this study.

34. Please describe these work flows:  Problem Environmental restoration need, materialy assist

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35. Which study projects performed by of the Mobile District?s responsibility would provide the most diverse examples of your application for a demonstration GIS project? **See above**

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 5/28/98

Interviewee Name and Title: Calvin L. Hare, Chief, Leasing Section

Address and/or Location: Mobile District COE, P.O. Box 2288 Mobile, AL 36628

Telephone: 334-690-2553 Fax: 334-690-3515 E-mail: CalvinL.Hare@

Operational Unit Name (department/section): Real Estate Div. Leasing Div. (Leasing Section)

1. What is the department/branch/division/code/unit in which you work? Aguis. Branch
2. What department/branch/division/code/unit do you report to? \_\_\_\_\_
3. Briefly describe the mission of your department/section: Acquire lease, and Real Estate for agency at DoD and other Federal Agencies upon request.
4. How many people are in your section? 8
5. How many people are temporary and how many are permanent? 8 perm.
6. Average number of years (working experience) for personnel: 16-greater
7. Average education level of the people in your unit: BS/BA
8. Number of Personnel with CADD experience in your section: None
9. Number of Personnel with GIS experience in your section: None
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): None
11. What Technical GIS Training (if any) have people in your unit had? None
12. Does a centralized Information Management/Technology department presently support your unit? YES
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? In-house assessment of HD/SW need as well as support HD/SW needs
14. To what level do you fund your present CADD/GIS activity? None
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases None  
GIS Databases None  
Non-CADD/GIS Databases None
16. What data do you get from external sources (which provider? what frequency)?: RFIMS – DoD Army, Leased Priority Parking spaces, etc. Leasing office space as well for carpet, and other itme in req. offices, training sites, Helicopter site for training, Headquarter in Central America, (also plans for space utilization).  
Database: Oracle (RFIMS) N/A  
CADD System: None  
GIS System: None  
Sharing by: Hard copy: X (paper, fax, or paper: As-Built Drawings) by mail or Fax
17. What information, if any, do you provide to others - and to whom? See above 15 & 13

18. What information (content) is portrayed or contained within the data your section uses?  
 CADD Software program to change floor plan layout.  
 GIS None  
 Database RFIMS Database, see above.
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? As-built, Maps, Charts
20. What analysis are performed by your section using these sources?  
 CADD Changes and need of clients learned property – parking in floor plan changes, etc  
 GIS N/A  
 Database RFIMS (see 16 & 18)  
 Hardcopy N/A
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
 CADD Software is in artided scale (1/8"=1') typical accuracy  
 GIS N/A  
 Database N/A  
 Hardcopy As above
22. How often are these data sources updated and how are they updated?  
 CADD Updated locally – in-house as needed by the leasing clients.  
 GIS N/A  
 Database See Above. RFIMS database  
 Hardcopy See Above.
23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): TD-20 (8)
24. Denote your existing software and hardware training with respect to the following:
- |                         |                          |                    |                                |
|-------------------------|--------------------------|--------------------|--------------------------------|
| <b>Word processing:</b> | Word <u>X</u>            | version <u>6.0</u> | years of experience <u>2</u>   |
|                         | WordPerfect <u>X</u>     | version _____      | years of experience <u>2-3</u> |
| <b>Spreadsheet:</b>     | Excel <u>X</u>           | version <u>6.0</u> | years of experience <u>2</u>   |
|                         | Quattro Pro _____        | version _____      | years of experience _____      |
|                         | other <u>Lotus</u>       | version _____      | years of experience <u>5</u>   |
| <b>CADD:</b>            | other <u>Home Design</u> | version <u>3.0</u> | years of experience _____      |
| <b>Databases:</b>       | Access _____             | version _____      | years of experience <u>1</u>   |
|                         | ORACLE _____             | version _____      | years of experience <u>1</u>   |
| <b>GIS:</b>             | NONE                     |                    |                                |

25. What personnel do you envision requiring GIS training? 5 to 6 Realty
26. What information do you presently possess or desire for conversion into the GIS:  
Drawings: See 24
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?
  1. chart land areas
  2. office space layout
  3. pull in Aerial Photos, and other files, CADD files of As-Built, etc.
28. How do you believe a GIS will help (or hinder) you with your work? See previous page & #27
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
None at this time.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: For sites, need or wants to have ability for customers to send digital picture of property for leasing they need before leasing and after leasing pictures.
31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced:  
No CADD or GIS - RFISMS – handles all reports data (but not the pictures, the pictures are placed into a file folder) would like the ability to add pictures to their document.
32. What other flows do you believe would be improved by applying a GIS? Sec. 31
33. Which work flows would you like to see GIS exercise during a demonstration project? Sec. 31
34. Please describe these work flows: Sec. 31 and 30, 20, 21, and 22
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? None, but above and prev. pages for needs.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 28 May 1998

Interviewee Name and Title: Diane Findley, Chief PD-EI

Address and/or Location: COE, Mobile NFB 2004

Telephone: 694-3857 Fax: 694-3815 E-mail:

Operational Unit Name (department/section): Inland Environment Section

1. What is the department/branch/division/code/unit in which you work? PD-Planning Environmental
2. What department/branch/division/code/unit do you report to? Environment & Resources Branch Division
3. Briefly describe the mission of your department/section: To prepare/perform environmental documentation/studies to support Mobile District projects in rivers/stream/reservoirs.
4. How many people are in your section? 12
5. How many people are temporary and how many are permanent? All Permanent
6. Average number of years (working experience) for personnel: 11-15
7. Average education level of the people in your unit: BS/BA
8. Number of Personnel with CADD experience in your section: 0-5
9. Number of Personnel with GIS experience in your section: 0-5
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 0-5
11. What Technical GIS Training (if any) have people in your unit had? 0
12. Does a centralized Information Management/Technology department presently support your unit? NO
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? Was existent at other sites, i.e., Lake Lanier and Tuscaloosa.
14. To what level do you fund your present CADD/GIS activity? None
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases N/A  
GIS Databases N/A  
Non-CADD/GIS Databases Mailing lists/access and Q&A
16. What data do you get from external sources (which provider? what frequency)? Water Quality Data/Monthly; Aquatic Plant Surveys for Lake Seminole/Annually.  
Database: N/A  
CADD System: N/A  
GIS System: Arc/INFO  
Sharing by: Hard copy: x - paper  
Soft copy: 5.25
17. What information, if any,

- Database: N/A
- CADD System N/A
- GIS System: ARC/INFO
- Sharing by: Hard copy: x paper
18. What information (content) is portrayed or contained within the data your section uses?
- CADD N/A
- GIS Aquatic plant survey coverage on Lake Seminole
- Database Mailing lists on Access
- Database Physical features of project.
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? all of these; water quality, no rs data.
20. What analysis are performed by your section using these sources?
- CADD Environmental
- GIS Environmental.
- Database Environmental
- Hardcopy Environmental
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?
- CADD Scale for Construction.
- GIS See Attached Info.
- Database See Attached Info.
- Hardcopy N/A
22. How often are these data sources updated and how are they updated? N/A
23. Briefly describe your sections CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): None
24. Denote your existing software and hardware training with respect to the following:
- Word processing:** Word Office 97 version 6.0 years of experience  
WordPerfect Windows 3.1 & 95 version 6.0 & 8.0 years of experience
- Spreadsheet:** Excel Windows 3.1 & Office 97 version 5.0 years of experience 1
- CADD:** None
- Databases:** Access \_\_\_\_\_ version 2.0 years of experience \_\_\_\_
- GIS:** None
25. What personnel do you envision requiring GIS training? Not sure if they are going to have people and time.
26. What information do you presently possess or desire for conversion into the GIS: aquatic plant surveys
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?
28. How do you believe a GIS will help (or hinder) you with your work? Would help with aquatic plant surveys.

29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS? Unsure if financially feasible. Suggest that it be contracted out. Use personnel.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: ?
31. Describe the typical workflow in your organization for which CADD/GIS data is utilized or produced: Behind technically. Utilize field office production do a lot of habitat evaluations. Data given internally. Unsure of who to use. No surfing web. Ag habitat-contractors do assessments.
32. What other flows do you believe would be improved by applying a GIS? Restoration and mitigation. R=prjs. Restore environmental, wetlands. Mitigation = 5 yrs. Tenn-Tom 88k acres land. Mitigate damages. Bottomland hardwoods
33. Which work flows would you like to see GIS exercise during a demonstration project? Impact studies. Project have GIS nothing done internally. Now proposed port in Wetlands. Using CADD EN to do design. Front end. Environmental and Eco work begins in PLG. EN preliminary design.
34. Please describe these work flows: Get info to assess environmental impact from EN. Habitat assessments. O&M work. Recov= 1 year project suit 4 further study; feas= more detail Environmental and Ecological. Land specs have to be made and buy real estate..
35. Which study projects performed by of the Mobile District?s responsibility would provide the most diverse examples of your application for a demonstration GIS project.?

Notes:

Could utilize. Responsible for aquatic plant management. Lake Seminole- utilizes their GIS. No training. No problem. Time is a problem. Could bring in personnel. Branch has 3 sections. 30 people. Proposing realignment could have equipment and knowledge. Division chief kicked in very supportive. Personnel involved: Mike Eubanks 694-3861; Jerry D. Jones 690-2725; JoAnn Brandt 690-3260; Steve Hrabovski 690-2872; Brian Peck 690-2750; Bev Stout 694-4637; Scott Chadkiewics. They have a dream : entire Mobile District want to shorten time. Field office utilize heavily. Note: Consider Lake. Seminole a GIS kingdom

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 16 June 98

Interviewee Name and Title: Donald Morgan Wildlife Biologist

Address and/or Location: CESAM-OP-AC, P.O. Box 96, Chattahoochee, FL 32324

Telephone: 913-662-2001 Fax: 912-662-2903 E-mail: \_\_\_\_\_

Operational Unit Name (department/section): CESAM-OP-AC/LS

1. What is the department/branch/division/code/unit in which you work? CESAM-OP-AC/LS
2. What department/branch/division/code/unit do you report to? Operations
3. Briefly describe the mission of your department/section: **Management of the natural resources, aquatic plant, and lakeshore uses associated with Lake Seminole recreation**
4. How many people are in your section? **Potentially associates with GIS.**
5. How many people are temporary and how many are permanent? **6 Permanent Park Rangers**
6. Average number of years (working experience) for personnel: **6-10**
7. Average education level of the people in your unit: **BS/BA**
12. Number of Personnel with CADD experience in your section: **0-5**
13. 9. Number of Personnel with GIS experience in your section: **0-5**
14. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): **0-5**
15. 11. What Technical GIS Training (if any) have people in your unit had? **Self training book provided by ESRI; 2-day ArcView training**
12. Does a centralized Information Management/Technology department presently support your unit? **Yes**
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? **Operational Funding FY94 and upgrade of ArcView in FY98. Comperative effort with WES to develop aquatic plant survey technieques in 1992.**
16. To what level do you fund your present CADD/GIS activity? **Aerial photography, day to day expense of personnel; \$50,000, plus training.**
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized? **Aquatic plant surveys maps to applications.**  
CADD Databases N/A.  
GIS Databases Aquatic.  
Non-CADD/GIS Databases **line, points, polygon coverages**
16. What data do you get from external sources (which provider? what frequency)? **No data at this point.**
17. What information, if any, do you provide to others - and to whom? **State Agencies-aquatic plant surveys**  
Database: **dBASE IV**  
CADD System: **N/A**  
GIS System: **ARC/INFO**

Sharing by: **Hard copy - paper**

Soft copy: **floppy: 3.5"**

Electronic: **Network through E-mail**

18. What information (content) is portrayed or contained within the data your section uses?

CADD **N/A**

GIS **Boundary lines, lakeshore use allocations of limited, protected resources - prohibited, aquatic plant surveys, to timber inventories, wildlife inventories.**

**Database**

19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? **Maps, Spreadsheets from data, aerial photos, as-built drawings.**

20. What analysis are performed by your section using these sources?

CADD **N/A**

GIS **Differences between yearly aquatic vegetation acreage, silviculture actions thinning burning**

Database **N/A**

Hardcopy **No analysis – used for archive and contractor purposes.**

21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?

CADD **N/A**

GIS **horizontal accuracy within 15'**

Database **No mistakes – do not understand levels and accuracy within associated database**

22. How often are these data sources updated and how are they updated? **N/A**

CADD **N/A**

GIS **Spray applications 3-4 times per year with GIS. Aquatic surveys annually by a GPS and aerial photography. Forest inventory and silviculture actions ongoing.**

Database **N/A**

Hardcopy **N/A**

23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): **1-pc., working in DOS 6.1 or Windows NT for ArcView.**

24. Denote your existing software and hardware training with respect to the following:

**Word processing:** Word 6.0 & 97 version 2 years of experience       

**Spreadsheet:** Excel 97 version 3 years of experience 2

other Lotus 123 version 3 years of experience       

**CADD:** **N/A**

**Databases:** dBASE III & IV version 10 years of experience       

**GIS:** ESRI ARC/INFO PC version dbase 4 years of experience       

ESRI ArcView PC version        years of experience

25. What personnel do you envision requiring GIS training? All need ArcView training.
26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: As-builts - hardcopy  
 Images: Aerial Photos - hard copy  
 Databases: Lakeshore Management Permits in dbase III
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)? Aquatic Plant Surveys and Tracking of applications, Forest Resource Inventory and Management, Lakeshore Use Permits, Recreation area "as-built" drawings, and Soil Surveys
28. How do you believe a GIS will help (or hinder) you with your work? No comment
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS? Very well could be, I am not familiar with existing databases.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: Soil Surveys, when they become available, USGS topographic maps.
31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced: No Comment
32. What other flows do you believe would be improved by applying a GIS? No Comment
33. Which work flows would you like to see GIS exercise during a demonstration project? No Comment
34. Please describe these work flows: No Comment
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? AEC River System. Lake projects-natural resource management; locks; powerhouses.

Notes: Lake Seminole would make a great demonstration project for field office. We have shoreline mgmt., natural resource management, aquatic plant mgmt, and recreation issues. The ACF project also has all the issues associates with navigation.

Work Flows: At the present time, there are three individuals at the project familiar with ArcView.

The Aquatic plant mgmt. Data is acquired in the field with GPS units. This data with associated attributes are then downloaded to ARCINFO.

The editing is accomplished in ARCINFO and most analysis is accomplished in ArcView. Any overlays are union of coverages is accomplished in ARCINFO dbase III.

Forestry: Burn units are digitized from base maps. Data is updated as prescribed burns are performed. Timber sales and thinnings are similiarly tracked.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 27May98

Interviewee Name and Title: John R. Eringham

Address and/or Location: PD-FP Room 3020 Distirct Office

Telephone: 334-694-3879 Fax: 334-690-2727 E-mail: john.r.eringman@sam.usace.army.mil

Operational Unit Name (department/section): PD-FP

1. What is the department/branch/division/code/unit in which you work? Flood Plan Management Section
2. What department/branch/division/code/unit do you report to? Flood Plain Management Branch & Planning Divison
3. Briefly describe the mission of your department/section: Flood Plain Studies, Hurricane Evacuation Studies
4. How many people are in your section? 10
5. How many people are temporary and how many are permanent? 10
6. Average number of years (working experience) for personnel: **16-greater**
7. Average education level of the people in your unit: **BS/BA**
8. Number of Personnel with CADD experience in your section: **three (3)**
9. Number of Personnel with GIS experience in your section: **two (2) Various, ArcView**
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 3 years for people in 8 & 9 above and about 1 or less for all 10 people
11. What Technical GIS Training (if any) have people in your unit had? John has had training in ArcView, but no one else
12. Does a centralized Information Management/Technology department presently support your unit? **9**  
**YES 9 NO**
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? Internal assessment of Hardware and software then IM purchase the requested items
14. To what level do you fund your present CADD/GIS activity? **N/A**
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases SEE BELOW  
GIS Databases Create Hurricane Evacuation studies, tide surges, flood data in ArcView Non-CADD/GIS Databases ArcView database with Latitude and longitude to create different coverage maps for Hurricane, tide surge, and flood data
16. What data do you get from external sources (which provider? what frequency)? shelter, demographic information from County and State agencies, and they use First Street software for streets. They use spreadsheet over databases  
Database: 9 Oracle 9SQL 9 Informix 9Sybase 9Access 9Other Quattro Pro, Excel and Lotus  
CADD System: MicroStation (in .dgn and .dxf) GIS System: ARC/INFO, ArcView and Other export files  
Sharing by: Hard copy is very rare, but time they get a fax

- Soft copy: floppy: 3.5" .or CD-ROM
- Electronic: E-mail, modem, or Internet [ftp]
17. What information, if any, do you provide to others - and to whom? Hurricane Evacuation studies, tide surges, flood data in ArcView, public, State and County agencies and also to other Corps sections and branches
- Database: 9 Oracle 9SQL 9 Informix 9Sybase 9Access 9Other \_\_\_\_\_
- CADD System: 9AutoCAD 9MicroStation 9Other \_\_\_\_\_GIS
- System: ArcView , mainly in ArcExplorer. They issue data in ArcExplorer, because the software is free and it has a viewing tool built in to it.
- Sharing by: Hard copy: NO
- Soft copy: floppy: 3.5" , but mainly on CD-ROM
- Electronic: Internally by Network, E-mail, somethimes by modem, or Internet [ftp], but rarely
18. What information (content) is portrayed or contained within the data your section uses?
- CADD NO
- GIS Shape files, or ArcExplorer (shape files), sometimes ArcView , but mainly used for external clients (County or State agencies)
- Database ArcView database for the above shape files (100,000 records to very few records)
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? Aerial photos, this is basically from contractors fpr contours, digitizing, etc. (Civil only)
20. What analysis are performed by your section using these sources?
- CADD NO
- GIS Determines population in the evacuation, transportation studies, such as Zone A the time it takes to evacuate people (these coverages are created with ESRI's Spatial analysis and 3D analysis, also USGS DEMs
- Database NO
- Hardcopy Hardcopy to FEMA, but rarely
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?
- CADD N/A
- GIS Hurricane 1:100,000, accuracy set project to project based on the size of the project area.
- Database SAME AS ABOVE
- Hardcopy N/A
22. How often are these data sources updated and how are they updated?
- CADD N/A
- GIS As needed or required
- Database SAME AS ABOVE
- Hardcopy As per FEMA requirements
23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): Intel based PCs

24. Denote your existing software and hardware training with respect to the following:

<b>Word processing:</b>	Word <u>  X  </u>	version <u>  6.0  </u>	years of experience <u>  2  </u>
	WordPerfect <u>  X  </u>	version <u>  8.0  </u>	years of experience <u>  2  </u>
<b>Spreadsheet:</b>	Excel <u>  X  </u>	version <u>  5.0  </u>	years of experience <u>    </u>
	Quattro Pro <u>  X  </u>	version <u>  various  </u>	years of experience <u>  3  </u>
	other <u>  Lotus  </u>	version <u>  various  </u>	years of experience <u>  3  </u>
<b>CADD:</b>	AutoCAD <u>    </u>	version <u>    </u>	years of experience <u>    </u>
	MicroStation <u>    </u>	version <u>    </u>	years of experience <u>    </u>
	other <u>    </u>	version <u>    </u>	years of experience <u>    </u>
<b>Databases:</b>	Access <u>    </u>	version <u>    </u>	years of experience <u>    </u>
	ORACLE <u>  X  </u>	version <u>  Latest  </u>	years of experience <u>  2  </u>
	dBASE <u>    </u>	version <u>    </u>	years of experience <u>    </u>
<b>GIS:</b>	ESRI ARC/INFO <u>  X  </u>	version <u>  Latest  </u>	years of experience <u>  2  </u>
	ESRI ArcView <u>  X  </u>	version <u>  Latest  </u>	years of experience <u>  2  </u>
	ESRI Spatial Analysis <u>  X  </u>	version <u>  Latest  </u>	years of experience <u>  2  </u>
	ESRI 3D Analysis <u>  X  </u>	version <u>  Latest  </u>	years of experience <u>  2  </u>

25. What personnel do you envision requiring GIS training? Three or four for general GIS use and one or two developers
26. What information do you presently possess or desire for conversion into the GIS:  
Drawings: City and County Parcel data (hard copy and soft copy of existing parcel data  
Images: Aerial photos in raster format or hardcopy photos  
Databases: Parcel data
31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced:  
City/County/State agencies data (road, population, etc.) to produce Hurricane Evacuation and tide surge coverages.
35. Which study projects performed by of the Mobile District?s responsibility would provide the most diverse examples of your application for a demonstration GIS project? North West Florida and Alabama Hurricane Evacuation studies.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 27 May 1998

Interviewee Name and Title: George Poiroux, Chief Project Support Section; Design Branch Engineer Division

Address and/or Location: COE, Mobile

Telephone: 334- 694-4082 Fax: 334-694-2902:

Operational Unit Name (department/section): Design Branch

1. What is the department/branch/division/code/unit in which you work? Same as above.
2. What department/branch/division/code/unit do you report to? Lee Phillips, Chief of Design
5. Briefly describe the mission of your department/section: Two units under supervision. Specs-puts together solicitation packages for construction contracts. 2. AE Unit-negotiates new contract.
6. How many people are in your section? 14 lost. Section built as result .
5. How many people are temporary and how many are permanent? No contract or temp personnel
6. Average number of years (working experience) for personnel: 16-greater
7. Average education level of the people in your unit: BS/BA; 5 grad. Engineers; 2 profess. Engineers
8. Number of Personnel with CADD experience in your section: 6-10
9. Number of Personnel with GIS experience in your section:
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience):10 years working with CADD.
11. What Technical GIS Training (if any) have people in your unit had? 1/3 staff MicroStation and AutoCADD.
12. Does a centralized Information Management/Technology department presently support your unit
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? CADD Manager Mark Pendleton handles hardware/software/network needs.
14. To what level do you fund your present CADD/GIS activity? Supplement with overhead.
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?

Databases: Military Design Schedule – tracks milestones to time-keeper program..

GIS Databases: N/A

Non-CADD/GIS Databases: N/A

16. What data do you get from external sources (which provider? what frequency)?: doesn't use..
17. What information, if any, do you provide to others, and to whom? Specs Unit-solicitation packages goes on CBD.  
Most contracts are on CD-Rom. Contractors request copies. AE side – when services are needed.  
CADD System : CD-Rom  
Electronic: x (Network: \_\_\_\_\_, E-mail: \_\_\_\_\_, modem, or Internet [ftp] \_\_\_\_\_)
18. What information (content) is portrayed or contained within the data your section uses?  
See above and below

19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? Technical specs and drawings. All connected. Designer CADD files in project directory. This is where they are manipulated. Then files are archived. Started archiving process less than 10 years ago. Back ups and tapes are loaded and handled outside the section.
20. What analysis are performed by your section using these sources?  
CADD Negotiating delivery orders through AE's determining government estimate. .
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
CADD Design staff and scale of 1 inch+30 feet. Topo mapping. State Plane coordinates also cover south and central America.
22. How often are these data sources updated and how are they updated? Use Military schedule and update weekly. Project engineers do this and it can be done daily.
23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): PC NT Platforms
24. Denote your existing software and hardware training with respect to the following:
- Word processing:** Word x version \_\_\_\_\_ years of experience \_\_\_\_\_
- Spreadsheet:** Excel X version \_\_\_\_\_ years of experience \_\_\_\_\_
- CADD:** AutoCAD X version \_\_\_\_\_ years of experience \_\_\_\_\_  
MicroStation X version \_\_\_\_\_ years of experience \_\_\_\_\_
- Databases:** Access X version \_\_\_\_\_ years of experience \_\_\_\_\_
- GIS:** Intergraph MGE \_\_\_\_\_ version \_\_\_\_\_ years of experience \_\_\_\_\_  
Intergraph GeoMedia \_\_\_\_\_ version \_\_\_\_\_ years of experience \_\_\_\_\_  
Other InRoads version \_\_\_\_\_
25. What personnel do you envision requiring GIS training? 1 technician
26. What information do you presently possess or desire for conversion into the GIS: Lotus Notes
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
Design
28. How do you believe a GIS will help (or hinder) you with your work? Will help.
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
USGS quads. Wetlands, Real Estate; Boundaries.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: USGS-not a lot they depend on. Technical Specs done in DC-District Quarterly.
31. Describe the typical workflows in your organization for which CADD/GIS data is utilized or produced: See above
32. What other flows do you believe would be improved by applying a GIS? ?
33. Which workflows would you like to see GIS exercise during a demonstration project? ?
34. Please describe these work flows: ?

35. Which study projects performed by the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project: ?

Notes:

Issue not resolved. Customer review designs. Comment and response from clients. COE has client to do work, not budgeted by Congress. GIS has to be sold to customers. Clients – electrical/utilities. Considers GIS solutions to be a matter of economics. Not a big military project. O&M projects. Partner GIS with installation to manage O&M projects.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 20 May 98

Interviewee Name and Title: Hal S. Gates- Civil Engineer Tech.

Address and/or Location: Room 4018 Mobile District Office

Telephone: 334-694-4080 Fax: 334-690-2902 E-mail: hal.s.gate@sam.usace.army.mil

Operational Unit Name (department/section): EN-DA

1. What is the department/branch/division/code/unit in which you work? EN-DA, Site
2. What department/branch/division/code/unit do you report to? EN-D
3. Briefly describe the mission of your department/section: Provides civil site design for in-house projects
4. How many people are in your section? 8
5. How many people are temporary and how many are permanent? 1.7
6. Average number of years (working experience) for personnel: 16-greater
7. Average education level of the people in your unit: BS/BA
8. Number of Personnel with CADD experience in your section: 6-10
9. Number of Personnel with GIS experience in your section: 0-5
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 0-5
11. What Technical GIS Training (if any) have people in your unit had? 1, GIS Cert. Program Bishop State Comm. College
12. Does a centralized Information Management/Technology department presently support your unit? NO
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? N/A
14. To what level do you fund your present CADD/GIS activity? None
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases N/A  
GIS Databases N/A  
Non-CADD/GIS Databases N/A
16. What data do you get from external sources (which provider? what frequency)? N/A  
Database: N/A  
CADD System: AutoCAD and MicroStation  
GIS System: ArcView  
Sharing by: Hard copy: paper  
Soft copy: floppy 3.5 and ZIP disk  
Electronic: Network, and E-mail

17. What information, if any, do you provide to others - and to whom? **CADD Files for design to user and other disciplines**  
 Database: **None**  
 CADD System: **AutoCAD and MicroStation**  
 GIS System: **None**  
 Sharing by: **Hard copy - paper**  
 Soft copy: **floppy 3.5 and ZIP disk**  
 Electronic: **Network, E-mail, modem, or Internet [ftp]**
18. What information (content) is portrayed or contained within the data your section uses?  
 CADD **Topographic, site planimetrics.**  
 GIS **N/A**  
 Database **N/A**  
 What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? **Maps. .dwg, .dgn, .dxf**
19. 20. What analysis are performed by your section using these sources?  
 CADD **3D Modeling**  
 GIS **N/A**  
 Database **N/A**  
 Hardcopy **Review.**
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
 CADD **Scales, Tri-Service Standards**  
 GIS **N/A**  
 Database **N/A**  
 Hardcopy **User Defined**
22. How often are these data sources updated and how are they updated?  
 CADD **2 years**  
 GIS **N/A**  
 Database **N/A**  
 Hardcopy **2 years**
23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): **CADD 8 Intergraph TD-3, 4, and 30 workstations**
24. Denote your existing software and hardware training with respect to the following:  
**Word processing:** Word   x   version   7.0   years of experience   2    
 WordPerfect            version            years of experience             
**Spreadsheet:** Excel   x   version   7.0   years of experience   10

**CADD:** AutoCAD  x  version  13  years of experience  10   
 MicroStation  x  version  M95  years of experience  15

**Databases:** Access  x  version  7.0  years of experience  1

**GIS:** ESRI ARC/INFO   version   years of experience    
 ESRI ArcView   version  Latest  years of experience  1

25. What personnel do you envision requiring GIS training? **1 engineer, 1 Tech**
26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: **District Maps** , Format: **DGN**  
 Images: **.BMP, JPEGs**, (Such as: aerial photographs, satellite images, terrestrial photos, etc.)  
 Databases:  N/A , (Such as: Coastal/Environmental remediation, engineering, etc.)
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
**Extract scaled maps for use in projects.**
28. How do you believe a GIS will help (or hinder) you with your work? **Help**
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS? **?**
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: **?**
31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced: **Maps are generated for use in design projects as \*.dwg, \*.dgn**
32. What other flows do you believe would be improved by applying a GIS? **?**
33. Which workflow would you like to see GIS exercise during a demonstration project? **Maps**
34. Please describe these workflow: **Left blank**
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? **?**

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 20 May 98

Interviewee Name and Title: Hal S. Gates- Civil Engineer Tech.

Address and/or Location: Room 4018 Mobile District Office

Telephone: 334-694-4080 Fax: 334-690-2902 E-mail: hal.s.gate@sam.usace.army.mil

Operational Unit Name (department/section): EN-DA

1. What is the department/branch/division/code/unit in which you work? EN-DA, Site
2. What department/branch/division/code/unit do you report to? EN-D
3. Briefly describe the mission of your department/section: Provides civil site design for in-house projects
4. How many people are in your section? 8
5. How many people are temporary and how many are permanent? 1.7
6. Average number of years (working experience) for personnel: 16-greater
7. Average education level of the people in your unit: BS/BA
12. Number of Personnel with CADD experience in your section: 6-10
13. 9. Number of Personnel with GIS experience in your section: 0-5
14. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 0-5
15. 11. What Technical GIS Training (if any) have people in your unit had? 1, GIS Cert. Program Bishop State Comm. College
12. Does a centralized Information Management/Technology department presently support your unit? NO
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? N/A
14. To what level do you fund your present CADD/GIS activity? None
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases N/A  
GIS Databases N/A  
Non-CADD/GIS Databases N/A
16. What data do you get from external sources (which provider? what frequency)? N/A  
Database: N/A  
CADD System: AutoCAD and MicroStation  
GIS System: ArcView  
Sharing by: Hard copy: paper  
Soft copy: floppy 3.5 and ZIP disk  
Electronic: Network, and E-mail

17. What information, if any, do you provide to others - and to whom? **CADD Files for design to user and other disciplines**  
 Database: **None**  
 CADD System: **AutoCAD and MicroStation**  
 GIS System: **None**  
 Sharing by: **Hard copy - paper**  
 Soft copy: **floppy 3.5 and ZIP disk**  
 Electronic: **Network, E-mail, modem, or Internet [ftp]**
18. What information (content) is portrayed or contained within the data your section uses?  
 CADD **Topographic, site planimetrics.**  
 GIS **N/A**  
 Database **N/A**  
 What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? **Maps. .dwg, .dgn, .dxf**
20. What analysis are performed by your section using these sources?  
 CADD **3D Modeling**  
 GIS **N/A**  
 Database **N/A**  
 Hardcopy **Review.**
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
 CADD **Scales, Tri-Service Standards**  
 GIS **N/A**  
 Database **N/A**  
 Hardcopy **User Defined**
22. How often are these data sources updated and how are they updated?  
 CADD **2 years**  
 GIS **N/A**  
 Database **N/A**  
 Hardcopy **2 years**
23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): **CADD 8 Intergraph TD-3, 4, and 30 workstations**
24. Denote your existing software and hardware training with respect to the following:
- Word processing:** Word   x   version   7.0   years of experience   2    
 WordPerfect            version            years of experience
- Spreadsheet:** Excel   x   version   7.0   years of experience   10

**CADD:** AutoCAD  x  version  13  years of experience  10   
 MicroStation  x  version  M95  years of experience  15

**Databases:** Access  x  version  7.0  years of experience  1

**GIS:** ESRI ARC/INFO   version   years of experience    
 ESRI ArcView   version  Latest  years of experience  1

25. What personnel do you envision requiring GIS training? **1 engineer, 1 Tech**
26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: **District Maps** , Format: **DGN**  
 Images: **.BMP, JPEGs**, (Such as: aerial photographs, satellite images, terrestrial photos, etc.)  
 Databases:  N/A , (Such as: Coastal/Environmental remediation, engineering, etc.)
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
**Extract scaled maps for use in projects.**
30. How do you believe a GIS will help (or hinder) you with your work? **Help**
31. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS? **?**
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: **?**
31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced: **Maps are generated for use in design projects as \*.dwg, \*.dgn**
32. What other flows do you believe would be improved by applying a GIS? **?**
34. Which workflow would you like to see GIS exercise during a demonstration project? **Maps**
34. Please describe these workflow: **Left blank**
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? **?**

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 15 June 98

Interviewee Name and Title: H.R. Ansley, Park Ranger/QAR

Address and/or Location: 500 Resource Mngmt. Dr., West Pt. GA 31833

Telephone: 706-645-2937 Fax: 706-643-3200 E-mail: Hubert.R.Ansley@sam.usace.army.mil

Operational Unit Name (department/section): Operations Division/West Point Project

1. What is the department/branch/division/code/unit in which you work? CESAM-OP-WP
2. What department/branch/division/code/unit do you report to? CESAM-OP WP
16. Briefly describe the mission of your department/section: **Natural Resource Management, Recreation and Hydro-Power, shoreline Management.**
17. How many people are in your section? **3-5 Use GIS, 1 CADD, 7-8 potential GIS Users**
5. How many people are temporary and how many are permanent? **All Permanent**
6. Average number of years (working experience) for personnel: **11-15**
7. Average education level of the people in your unit: **BS/BA**
16. Number of Personnel with CADD experience in your section: **0-5**
17. Number of Personnel with GIS experience in your section: **0-5**
18. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): **0-5**
19. What Technical GIS Training (if any) have people in your unit had? **ESRI (sponsored) Software Training and Corps Prospect.**
12. Does a centralized Information Management/Technology department presently support your unit? **NO**
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? **Purchased with District's I-M Approval.**
17. To what level do you fund your present CADD/GIS activity? **Actual: 10k, Planned: 10k**
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized? **N/A**  
CADD Databases **As-built drawing and new construction projects**  
GIS Databases **GPS (Pathfinder) of project features relative to natural resource management.**  
Non-CADD/GIS Databases **N/A.**
16. What data do you get from external sources (which provider? what frequency)?: **CD of Aerial Photos provided by contractor; USGS coordinates for certain items.**  
Database: **SQL**  
CADD System: **AutoCAD**  
GIS System: **ARC/INFO; ArcView**
17. What information, if any, **Have corrected GPS files for other projects.**

Database: SQL

CADD System: AutoCAD

GIS System: ARC/INFO and ArcView

Sharing by: Email and Hardcopy and/or softcopy

18. What information (content) is portrayed or contained within the data your section uses?

CADD Construction Drawings.

GIS Inventory of natural resource elements (road signs, nesting, structures, lake bouys, etc.) Forest Compartments and Timber Stands, shoreline of lakes, etc.

Database Physical features of project.

19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? Maps of Aerial Photos

20. What analysis are performed by your section using these sources?

CADD Working Drawings and File Storage

GIS Inventory of location of natural resource features; i.e. timber stand evaluation, recording prescribed fine treatments.

Database N/A

Hardcopy N/A

21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?

CADD Scale for Construction.

GIS See Attached Info.

Database See Attached Info.

Hardcopy N/A

22. How often are these data sources updated and how are they updated? N/A

CADD: As needed per project.

GIS Not Updated

Database Not Updated.

Hardcopy N/A

23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): One main workstation with three sub-stations. See attached info.

24. Denote your existing software and hardware training with respect to the following:

**Word processing:** Word none version 6.0 years\_of experience 3

WordPerfect none version     years of experience    

other N/A Version     years of experience    

**Spreadsheet:** Excel None version 5.0 years of experience 1

Quattro Pro N/A version     years of experience

other \_\_\_\_\_ version \_\_\_\_\_ years of experience \_\_\_\_\_

**CADD:** AutoCAD None version R14 years of experience 10  
 MicroStation N/A version \_\_\_\_\_ years of experience \_\_\_\_\_

**Databases:** Access None version 2.0 years of experience 1  
 ORACLE N/A version \_\_\_\_\_ years of experience \_\_\_\_\_  
 dBASE N/A version 3.5.1 years of experience 0

**GIS:** ESRI ARC/INFO Planned version \_\_\_\_\_ years of experience \_\_\_\_\_  
 ESRI ArcView Planned version 3.0 years of experience \_\_\_\_\_  
 Intergraph MGE N/A version \_\_\_\_\_ years of experience \_\_\_\_\_  
 Intergraph GeoMedia N/A version \_\_\_\_\_ years of experience \_\_\_\_\_  
 Other PathFinder version 2.01

25. What personnel do you envision requiring GIS training? **Jana O'Neil, H.R. Ansley, and Phil Adams**
26. What information do you presently possess or desire for conversion into the GIS:  
 Other data: **Water Well locations, Eagle Nest locations, and Kudzu spraying locations (Hardcopy and softcopy)**
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
**Track silviculture (?) treatment of forest timber stands, Develop maps for recreation users (brochures), Assess Coverage of timber/habitat types, Plan for major maintenance initiatives (road paving, etc.), Increase accuracy of shoreline use permit information, Track environmental actions, Cultural site data and vandalism on sites.**
30. How do you believe a GIS will help (or hinder) you with your work? **A working system with trained, knowledgeable users will increase our capability and improve our accuracy, especially in recording critical project features, previous works completed, and planned efforts.**
31. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
**We are not aware of other, existing databases.**
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: **Unsure, but USGS seems to be on the cutting edge with this technology.**
31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced: **We are still in the data gathering phase, using GPS to plot locations for features not yet in the GIS.**
32. What other flows do you believe would be improved by applying a GIS? **All types of mapping. Development of management plans, data recording for shoreline use permits.**
36. Which work flows would you like to see GIS exercise during a demonstration project? **It would be good to see a finished product such as a recreation area map produced and printed using multiple overlays with text for titles, legends, etc.**
37. Please describe these work flows: **Unknown.**

35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project. Unknown.

Notes: **They have ARC/INFO coverages for the West Point Lake Project (1995)**

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 26 May 98

Interviewee Name and Title: Howard M. Whittington, Jr. PE and James Hathron Hydro Eng./Data Mar.

Address and/or Location: Hydro Branch Eng. Division

Telephone: 334-690-2727 Fax: 334-694-4058 E-mail: howard.m.whittington@sam.usace.army.mil

Operational Unit Name (department/section): Hydrology and Hydraulics Branch

1. What is the department/branch/division/code/unit in which you work? Hydrology and Hydraulics Branch
2. What department/branch/division/code/unit do you report to? Engineering Division
3. Briefly describe the mission of your department/section: Responsible for creation of Hydraulic/Hydrographic design, Water and Resource Management And Res. Management, for Corps & Public
4. How many people are in your section? 26
5. How many people are temporary and how many are permanent? 26 Perm.
6. Average number of years (working experience) for personnel: 16-greater
7. Average education level of the people in your unit: MS/MA
8. Number of Personnel with CADD experience in your section: None
9. Number of Personnel with GIS experience in your section: None
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 2-3 years
11. What Technical GIS Training (if any) have people in your unit had? 2 or 3 ESRI.
12. Does a centralized Information Management/Technology department presently support your unit? YES
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? In-house evaluation
14. To what level do you fund your present CADD/GIS activity? 5% of Branch budget for IM support
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases H & H database,  
GIS Databases N/A  
Non-CADD/GIS Databases N/A
16. What data do you get from external sources (which provider? what frequency)? River Forecast (city, Jacksonville, District-real time Data rainfall, outside COE Local Gov't) daily and weekly.  
Database: Oracle, SQL, Access, (limited use at this time.)

CADD System: MicroStation

GIS System: ARC/INFO, ArcView, MGE

Sharing by: hard copy from client to change leasing terms, etc. or above

Electronic: x Local Area Network

17. What information, if any, do you provide to others - and to whom? Bridge, clearing, mdoel report (see Data Chart).

Database: Oracle.SQL , and Access

CADD System: MicroStation

GIS System: ARC/INFO, ArcView, and MGE

Sharing by: Hard copy - paper

Soft copy: floppy: 3.5" (rare)

Electronic: Network, and E-mail: (X Document in Draft form)

18. What information (content) is portrayed or contained within the data your section uses?

CADD Streamflow record, station description, station analysis, station abstracts, digital photo of gage station, rating curves and tables, discharge measurements, tide data, HANDAE programs, Flood profiles, low water profiles, high water descriptions, brenc elevation, lock & dam record, reservoir cross section, digital quad sheets, basin maps, hurricane surge map, navigation charts, drainage area reports, stream milage tables, co-op stream gage program, flood insurance studies, HEC-1 and HEC-2 models, sedimentation bed samples, suspended sediment data (daily and periodic), sediment rating curves, USGS reports, Hydrologic and hydraulic model description and manuals, personnel profile [for EN-HY data components] Project data (pool elevation (MND – 6A), Tail (MND – 6A), inflow, discharge, generation, lockage information, spillway gate settings, digital photos), rainfall readings, gage data (hourly, daily, and peaks), navigation bulletins, reservoir regulation manuals (PDF format), water management weekly report, annual reports (summary of system operation, personnel training, charts), water volume report (weekly declaration of energy generation), daily navigation depth (Claiborne and Blountstown), and personnel [for EN-HW data components] HEC-2 and HEC-6 models, coastal models, hydrology and hydraulic DM's (studies, letter reports, physical models), O&M Manuals, ER, ETL, EM, EP, etc., drainage area reports, digitized quad sheets, basin maps, FEEMA flood maps, aerial photography, streamflow record (archived/real time), rating curves and tables, flood profiles / low water profiles, reservoir cross section (pool and tail), stream mileage table (river and navigational miles), as-built Drawings, digital photos, and personnel profile [for EN-HD data components]

GIS N/A

Database See CADD Databases above

19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? New Data Digital, .PDF format, historic (4 & 5 year for legacy/historic) .

20. What analysis are performed by your section using these sources?  
 CADD N/A  
 GIS **Hardcopy (InRoads for dredging)**  
 Database N/A  
 Hardcopy N/A
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
 CADD **A to E size drawing at various scales**  
 GIS N/A  
 Database same as CADD - above  
 Hardcopy **Same as CADD -above**
22. How often are these data sources updated and how are they updated?  
 CADD N/A  
 GIS N/A  
 Database **Hourly**  
 Hardcopy **as needed**
23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): **30 workstations, 3 Nt servers, water central data system (WCD), IVRS with ARC/INFO and MGE, and Oracle**
24. Denote your existing software and hardware training with respect to the following:
- |                         |                             |                            |  |
|-------------------------|-----------------------------|----------------------------|--|
| <b>Word processing:</b> | Word <u>  x  </u>           | version _____              | years of experience <u>  5 to 10  </u> |
|                         | WordPerfect <u>  x  </u>    | version _____              | years of experience _____              |
| <b>Spreadsheet:</b>     | Excel <u>  x  </u>          | version _____              | years of experience _____              |
|                         | Quattro Pro <u>  x  </u>    | version _____              | years of experience _____              |
| <b>CADD:</b>            | MicroStation <u>  x  </u>   | version <u>  95  </u>      | years of experience <u>  5  </u>       |
| <b>Databases:</b>       | Access _____                | version <u>  97  </u>      | years of experience <u>  2  </u>       |
|                         | ORACLE <u>  X  </u>         | version _____              | years of experience <u>  2  </u>       |
| <b>GIS:</b>             | ESRI ARC/INFO <u>  X  </u>  | version <u>  NT 7.01  </u> | years of experience _____              |
|                         | ESRI ArcView <u>  X  </u>   | version <u>  3.0  </u>     | years of experience _____              |
|                         | Intergraph MGE <u>  X  </u> | version _____              | years of experience _____              |
25. What personnel do you envision requiring GIS training? **Training in Use (ArcView/Arc/Info) inhouse (training in daily use).**
26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: **Quad Sheets, Index Maps**  
 Images: **Aerial Photos, and gage photos**  
 Other data: **possible use of ther state agency information for Real Property date and Reports.**

27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
N/A
1. Lab Use (new ?) ESRI
  2. Water Management
  3. Hurricane Map generation
  4. Discharge of River and Dams based off water flow for river flood stage
28. How do you believe a GIS will help (or hinder) you with your work? More effective with dealing with Public, help generate maps
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
 Floodplain management; Water Quality (Planning Division); Environmental and resource management, and Operations Division data
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: Weather Service; USGS
31. Describe the typical workflow in your organization for which CADD/GIS data is utilized or produced:  
Modem or (ftp) reformat to EXCEL spreadsheet, InRoads (or other) to generate required data
32. What other flows do you believe would be improved by applying a GIS? Not sure
33. Which workflow would you like to see GIS exercise during a demonstration project? See above
34. Please describe these workflow: See above workflow page 1 mission data, etc.
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? Historic/legacy data, (maps and charts), Reports, charts, maps for programs to public and clients.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 28 May 98

Interviewee Name and Title: Joe Abbott

Address and/or Location: 7000 (Room) Mobile District Office

Telephone: 334-690-3510 Fax: 334-690-2948 E-mail: \_\_\_\_\_

Operational Unit Name (department/section): Cadastral Section

1. What is the department/branch/division/code/unit in which you work? **Real Estate Division/Planning Control Branch**
2. What department/branch/division/code/unit do you report to? **Planning Central**
3. Briefly describe the mission of your department/section: **Mapping (Real Estate), Legal Description, Boundary Survey Contract, Loease exchanges (Reserving, Boundary Design).**
4. How many people are in your section? **3**
5. How many people are temporary and how many are permanent? **3**
6. Average number of years (working experience) for personnel: **(23, 10, and 1 yrs. Experience)**
7. Average education level of the people in your unit: **BS/BA**
8. Number of Personnel with CADD experience in your section: **(all three limited, one class other self taught)**
9. Number of Personnel with GIS experience in your section: **0-5**
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): **(2-3 years)**
11. What Technical GIS Training (if any) have people in your unit had? **None**
12. Does a centralized Information Management/Technology department presently support your unit? **YES**
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? **IM, they request Hardware/Software through IM**
14. To what level do you fund your present CADD/GIS activity? **No Idea.**
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases **Digitize with Deed, Use USGS Quads, etc. Parcel Desp., & Boundary Surveys to produce Real Estate Maps.**  
GIS Databases **None at this time**  
Non-CADD/GIS Databases **Access Load encroachment, (owner none, status)**
16. What data do you get from external sources (which provider? what frequency)?: **In-house records deed records, also receive information from Contractor, and in some cases city and country.**  
Database: **No**  
CADD System: **None**  
GIS System: **None**

- Sharing by: **Hard copy - paper (mainly)**
- Soft copy: **floppy: 3.5"**
- Electronic: **Network: LAN , and E-mail**
17. What information, if any, do you provide to others - and to whom? **Legal Descriptions, Boundary data (coordinate maps), Boundary Survey Maps, Computation Sheet (Boundary).**
- Database: **N/A**
- CADD System: **N/A**
- GIS System: **N/A**
- Sharing by: **Hard copy - Mail to Land owner**
- Soft copy: **NO**
- Electronic: **NO**
18. What information (content) is portrayed or contained within the data your section uses?
- CADD **See #17 Above**
- GIS **N/A**
- Database **maybe utilized for new data in Access**
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? **Maps, Aerial Photos, Deeds, (Hard Copy)**
20. What analysis are performed by your section using these sources?
- CADD **review, boundary Disputes, encroachment (CADD & Hardcopy)**
- GIS **N/A**
- Database **N/A**
- Hardcopy **N/A**
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?
- CADD **3<sup>rd</sup> Order Survey (1"=1000', & 1"=200') for the most part, but can have 1"=100' or Greater for detail**
- GIS **N/A**
- Database **database accuracy is what is received (coordinate accuracy – old info .01, New .001)**
- Hardcopy
22. How often are these data sources updated and how are they updated?
- CADD **Continuous updated until Project is completed.**
- GIS
- Database
- Hardcopy **Not update at time due to lack of resource to update Hardcopy maps.**
23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): **1 Workstation, TD-40 MicroStation See Back**

24. Denote your existing software and hardware training with respect to the following:
- Word processing:** Word   x   version   6.0   years of experience     
WordPerfect   x   version    years of experience   old, not used
- Spreadsheet:** Excel   x   version    years of experience
- CADD:** AutoCAD    version    years of experience     
MicroStation   x   version    years of experience
- Databases:** Access   x   version    years of experience
- GIS:**   None
25. What personnel do you envision requiring GIS training?   4 people would require training
26. What information do you presently possess or desire for conversion into the GIS:  
Drawings:   Real Estate Map and boundary maps   (Such as: maps, plans, etc.)  
Images:   Aerial Photo  , Media:   if satellite image    
Databases:   encroachment data, survey (boundary) data, (Mainly hardcopy, few in a database format)
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?
- Boundary Data (maps) This data is given to Land Owners for their information on boundaries and what a project will to land or a period of a month or year.
  - Planning for Projects
28. How do you believe a GIS will help (or hinder) you with your work?   Help speed the process of producing Land Maps (Real Estate Maps for land owners).
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
  Engineer Division Data.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify:   USGS Quad, Aerial Photos, County Tax Assessor Parcel maps, (Address, Construction data for New Construction.)
31. Describe the typical workflow in your organization for which CADD/GIS data is utilized or produced:   Receive information for survey data, city and county, review encroachment and develop maps (Real Estate)
32. What other flows do you believe would be improved by applying a GIS?   Property reference to be added to a database with pertinent information (address, name, Phone #, mailing address) for quicker response for ?, to keep from running to other department to gather information.
33. Which workflow would you like to see GIS exercise during a demonstration project?   What was described above in question 32.
34. Please describe these work flows:   See 32 above.
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project?   See 32 Above, any study project would integrate Real Estate Maps.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 27 May 1998

Interviewee Name and Title: John Baehr - Geologist

Address and/or Location: Mobile.

Telephone: --690-3146

Operational Unit Name (department/section): Geotechnical

1. What is the department/branch/division/code/unit in which you work? Geotechnical
2. What department/branch/division/code/unit do you report to? Robert Chamblee
18. Briefly describe the mission of your department/section: RIF investigations remedial designs usually. Anniston Army Depot, specific to Anniston.
19. How many people are in your section? 5
5. How many people are temporary and how many are permanent? 4-5 part time, contractors-SAIC 4-5 perm.
6. Average number of years (working experience) for personnel: 16-greater
7. Average education level of the people in your unit: BS/BA
20. Number of Personnel with CADD experience in your section: 0-5
21. Number of Personnel with GIS experience in your section: 0-5
22. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 0-5
23. What Technical GIS Training (if any) have people in your unit had? 0-5
12. Does a centralized Information Management/Technology department presently support your unit? YES
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? From IM
18. To what level do you fund your present CADD/GIS activity? N/A
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized? None
16. What data do you get from external sources (which provider? what frequency)? Softcopy data, reports
17. What information, if any, do you provide to others, and to whom? Potomac Research Institute - reports
18. What information (content) is portrayed or contained within the data your section uses?  
CADD Seismic, various types of data.
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? Digital form, seismic work
20. What analysis are performed by your section using these sources? None
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
N/A

22. How often are these data sources updated and how are they updated? As need - reports
23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): N/A
24. Denote your existing software and hardware training with respect to the following:
- Word processing:** Word x version      years of experience
- Spreadsheet:** Excel x version      years of experience
- CADD:** MicroStation x version      years of experience
- Databases:** Access x version      years of experience
- GIS:** None
25. What personnel do you envision requiring GIS training? ?
26. What information do you presently possess or desire for conversion into the GIS: RIF reports?
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)? Open up public domain on internet; also give control data to public and project sites, Dbase with all photos of mission flown.
32. How do you believe a GIS will help (or hinder) you with your work? Will help.
33. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS? Existing compliance well GPS data. For daily report for depot. Part of partner agreement.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: Compliance wells. Sample of quarter. Data will be updated quarterly and as needed.
31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced: ?
32. What other flows do you believe would be improved by applying a GIS: Aerial Photos; Stereo Plotter
38. Which workflows would you like to see GIS exercise during a demonstration project? No Comment
39. Please describe these work flows: No comment
40. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS: See below

Notes:

At Anniston, an inventory was done in the early 1970's that took approximately 10 to 15 efforts to cover 15,000 acres. 375 monitoring wells were drilled in groupings. This is point data. All of the information pertaining to each point goes in different types of reports. Army database uses the information, so the various reports have to be submitted. Data can be dumped. Contractor puts in Army format.

Potomac Research Institute. Not public domain. Data goes to contractor. Anniston Contracts MicroStation and data goes to the contractor performing MicroStation functions. Building in-house GIS for utilities. MGE is imported easily. Various packages for environmental, using MicroStation. Engineering did base map. Working with building utilities. Hard wire for environmental to call utilities anytime. Will be able to use map. Web page build for environmental stuff.

Password protected. Ron Nettles is handling the MicroStation implementations.

Geotechnical is trained at COE office and at Anniston. Can't do this without Anniston. ARGON LABS is the reason for Intergraph Implementation for GIS. Bells and Whistles – Geologist and Anniston personnel like what they saw in Intergraph – therefore, they chose this as GIS of choice.

Want Anniston to train Intergraph as OJT. What will be Mobile maintenance on this GIS, Will be done in-house by contractor?

Producing GIS independently from the COE. Doing so with the help of their client – Anniston Army Base. Lots of research and investigation into exact hardware/software and implementation procedures, inclusive of personnel training, has been done. GIS implementation is in the beginning stages at this time. ARGON LABS is the contractor that is providing the necessary means to establish this GIS.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 27 May 98

Interviewee Name and Title: Namejs "Maze" Ercums - Suspensory Realty Specialist, Chief RE-P

Address and/or Location: CESAM-RE-P, Room 2000E, New Federal Bldg. Mobile

Telephone: 334-694-3671 Fax: 334-690-2547 E-mail: Namejs.ercums@sam.usace.army.mil

Operational Unit Name (department/section): Real Estate Planning and Control Branch (RE-P)

1. What is the department/branch/division/code/unit in which you work? RE-P
2. What department/branch/division/code/unit do you report to? Real Estate Division
3. Briefly describe the mission of your department/section: Coordinate RE funds, Personnel actions, records, reports, mapping and audit.
4. How many people are in your section? 14
5. How many people are temporary and how many are permanent? 1
6. Average number of years (working experience) for personnel: 11-15
7. Average education level of the people in your unit: High School and BS/BA
8. Number of Personnel with CADD experience in your section: 0-5
9. Number of Personnel with GIS experience in your section: 0-5
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 0-5
11. What Technical GIS Training (if any) have people in your unit had? none
12. Does a centralized Information Management/Technology department presently support your unit? NO
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? Combination of directed approaches and in-house effort to upgrade hw/sw
14. To what level do you fund your present CADD/GIS activity?  
9 None 9 Actual (estimated annual \$ amt.) 2 employees (\$40,000) Planned (estimated annual \$ amt.) all employees (\$300,000)
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases CADD generated maps exhibits for reports; some digitized maps of some projects in Mobile District; MicroStation; Digitized maps at Tem-Tom/Walters F. George/Lake Lanier  
GIS Databases N/A  
Non-CADD/GIS Databases REMIS/CEFMS/FRMIS-various stations lists on actions in RE-P
16. What data do you get from external sources (which provider? what frequency)?: Boundary Survey Data; Courthouse data (deeds/maps/etc.)  
Database: Oracle  
CADD System: MicroStation

- GIS System: N/A  
Sharing by: LEFT BLANK
17. What information, if any, do you provide to others - and to whom? To all District Offices and Public.  
Database: Oracle  
CADD System: MicroStation  
GIS System: N/A  
Sharing by: Left Blank
18. What information (content) is portrayed or contained within the data your section uses?  
CADD Geographic Presentation/Ownership of land attributes/Historical Documents.  
GIS N/A  
Database CEFMS/REMIS-Financial and Proved Data
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? All of the above, plus Deeds/Legal descriptions
20. What analysis are performed by your section using these sources?  
CADD Real Estate Planning Reports/Command Management Interactions; property ownership.  
GIS N/A  
Database N/A  
Hardcopy Maps/Legal Descriptions/Data Certifications.
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
CADD Maps to government specifications; count exhibits for boundary case reports.  
GIS N/A  
Database N/A  
Hardcopy Need to use Government specifications/Maps/Boundary Computations
22. How often are these data sources updated and how are they updated?  
CADD No set schedule for data update/boundary Maintenance contracts.  
GIS N/A  
Database CEFMS Daily/REMIS Daily  
Hardcopy Maps out of Date! Computation or information scattered.
23. Briefly describe your sections CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): 2 CADD setups/3<sup>rd</sup> CADD coming/hope to upgrade all employees to at least CADD
24. Denote your existing software and hardware training with respect to the following:
- Word processing:** Word x version 6 years of experience 3  
WordPerfect x version 6 years of experience 1
- Spreadsheet:** Excel x version 6 years of experience 2
- CADD:** None

Databases: None

GIS: None

25. What personnel do you envision requiring GIS training? 5 (Kevin, Bud, Joe, Reid) and Planning Unit.

26. What information do you presently possess or desire for conversion into the GIS:

Drawings: Yes - maps, plans, etc , hard copy/soft copy: Yes

Images: Yes, hard copy/soft copy - Aerial photographs, satellite images, terrestrial photos

Databases: Yes, Environmental remediation, engineering, etc.

Other data: Yes, land usage, geologic, soils, other thematic type, etc.

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27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?

1. Project maps database 2. Boundary Survey Data 3. Real Estate Report exhibits

4. Land Ownership data-historical

28. How do you believe a GIS will help (or hinder) you with your work? Decrease information access, increase efficiency, increase accuracy-less transition downtime

29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?

Transition Downtime (training), Construction/Engineering Design Plans; Planning concepts.

30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: Land Ownership maps and Data from country courthouse.

31. Describe the typical workflow in your organization for which CADD/GIS data is utilized or produced:

Request for RE Report; Site Visit; Data analysis; Exhibits Production; Data Storage.

32. What other flows do you believe would be improved by applying a GIS? Boundary Survey data into RE maps Database

33. Which workflow would you like to see GIS exercise during a demonstration project? Project Maps Database and Survey data from historical files.

34. Please describe these work flows: Plan Land req.; upon acquiring, update maps and records and data fields.

35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? Encroachment surveys & Boundary Changes.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 28May 98

Interviewee Name and Title: Joseph P. Givhan, Jr.

Address and/or Location: Room 7024; Mobile District, 109 St. Joseph St., Mobile, AL 36602-3630

Telephone: 334-694-3661 Fax: 334-690-2548 E-mail: joseph.p.givhan@sam.usace.army.mil

Operational Unit Name (department/section): Real Estate Division

1. What is the department/branch/division/code/unit in which you work? Acquisition Branch
2. What department/branch/division/code/unit do you report to? Purchase Section
3. Briefly describe the mission of your department/section: Acquiring Real Estate interest, (ALL) all acquisition except leases, (deeds, closing)
4. How many people are in your section? 5
5. How many people are temporary and how many are permanent? 4 perm., 1 temp.
6. Average number of years (working experience) for personnel: 11-15
7. Average education level of the people in your unit: BS/BA
8. Number of Personnel with CADD experience in your section: None
9. Number of Personnel with GIS experience in your section: None
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): Limited – very minimum, know of it, but do not use it.
11. What Technical GIS Training (if any) have people in your unit had? None
12. Does a centralized Information Management/Technology department presently support your unit? **YES, the assessment of needs in-house.**
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? Through IM – see above.
14. To what level do you fund your present CADD/GIS activity? N/A.  
9 None 9 Actual (estimated annual \$ amt.) \$70,000 9 Planned (estimated annual \$ amt.) \$70,000
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases None  
GIS Databases None  
Non-CADD/GIS Databases REMIS – Oracle; Real Estate Management Information System – track of land – Joe Abbott will start deed (track number) then it is turned over to this department for acquisition.
16. What data do you get from external sources (which provider? what frequency)? REMIS – Oracle database  
Database: Oracle  
CADD System: None

- GIS System: None
- Sharing by: Hard copy: paper - mainly Word documents and/or in REMIS database.
- Soft copy: N/A
- Electronic: Network - LAN
17. What information, if any, do you provide to others - and to whom? Information is inputted into REMIS and also information about status of acquisition of tracks (for a project) is sent to Glenn Coffee in Planning Division (PD-E)
- Database: Oracle
- CADD System: None
- GIS System: None
- Sharing by: Hard copy: paper – Word documents send by Email (or in some cases Email notes)
- Soft copy: See Sharing by above
- Electronic: Network and E-mail
18. What information (content) is portrayed or contained within the data your section uses?
- CADD Left Blank
- GIS Left Blank
- Database Track (parcel) Acquisition information.
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? Maps (Real Estate mainly), engineering, maps, and design of projects for acquisition of tracks of land
20. What analysis are performed by your section using these sources?
- CADD N/A
- GIS N/A
- Database Relationship of Landowners used to negotiate with Land Owners, as in projects such as dredging project for disposal site.
- Hardcopy N/A
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?
- CADD N/A, they are responsible for tracking (land) acquisition
- GIS N/A, they are responsible for tracking (land) acquisition
- Database N/A, they are responsible for tracking (land) acquisition .
- Hardcopy N/A, they are responsible for tracking (land) acquisition
22. How often are these data sources updated and how are they updated? As needed/required
23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): No CADD/GIS Workstation, But have three (3) – 486 PCs and two (2) TD-20
24. Denote your existing software and hardware training with respect to the following:
- Word processing:** Word \_\_\_\_\_ x \_\_\_\_\_ version 6.0 years of experience

WordPerfect x version \_\_\_\_\_ years of experience \_\_\_\_  
**Spreadsheet:** Excel X version \_\_\_\_\_ years of experience \_\_\_\_  
**CADD:** NONE  
**Databases:** ORACLE REMIS version \_\_\_\_\_ years of experience \_\_\_\_  
**GIS:** NONE

25. What personnel do you envision requiring GIS training? **One person-REMIS expert**
26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: **land track data**  
 Images - hard copy/soft copy - **Images in coordination case, and Judicial Dept. for claim on track.**
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
 1. **Track number identification between sections, and ability review status of project operations and dredging sections.**
28. How do you believe a GIS will help (or hinder) you with your work? **Helps see above statement on 26.**
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
**Status of operations, dredging section also have track number and other dept. numbers association to evaluation running down different track numbers for the same track (parcel).**
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: **See above #26.**
31. Describe the typical workflow in your organization for which CADD/GIS data is utilized or produced: **No CADD/GIS, they use REMIS database, they request map of tracks from Joe Abbott's Dept. for maps for coordinates packages.**
32. What other flows do you believe would be improved by applying a GIS? **See #26**
33. Which work flows would you like to see GIS exercise during a demonstration project? **The integration of different datasets (track #'s) between the group and Operation Division and dredging Section.**
34. Please describe these work flows: **See above and 26.**

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 22 May 1998

Interviewee Name and Title: Jimmy F. Hill, Supervisory Forester

Address and/or Location: District Office, Mobile AL

Telephone: 334-694-3680 Fax: 334-694-4328 E-mail: jimmy.f.hill@sam.usace.army.mil

Operational Unit Name (department/section): Forestry Section, Real Estate Division

1. What is the department/branch/division/code/unit in which you work? CESAMRE-MT
2. What department/branch/division/code/unit do you report to? CESAMRE-M
20. Briefly describe the mission of your department/section: Contract for sell and removal of timber and related forest products from Army installations, civil works projects, NASA facilities.
21. How many people are in your section? 10
5. How many people are temporary and how many are permanent? 10
6. Average number of years (working experience) for personnel: 11-15
7. Average education level of the people in your unit: BS/BA
24. Number of Personnel with CADD experience in your section: 0-5
25. Number of Personnel with GIS experience in your section: 0-5
26. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 0-5
27. What Technical GIS Training (if any) have people in your unit had? None
12. Does a centralized Information Management/Technology department presently support your unit? Yes.
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? None
19. To what level do you fund your present CADD/GIS activity? None
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases: None  
GIS Databases: None  
Non-CADD/GIS Databases: None
17. What data do you get from external sources (which provider? what frequency)? River Stage elevations infrequent.  
Database: None  
CADD System: None  
GIS System: None  
Sharing by: Hard copy: None  
Soft copy: None
17. What information, if any, do you provide to others, and to whom? None

18. What information (content) is portrayed or contained within the data your section uses?  
 CADD None  
 GIS None  
 Database Timber harvest information system (THIS) PC contained, data shared with field offices through modem.
21. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? USGS Survey maps, Aerial photos.
22. What analysis are performed by your section using these sources? No comment
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
 CADD Input Data – put in by field foresters talk to field foresters.  
 GIS Get list of field offices  
 Hardcopy Sufficient for prospective bidders/contractors to identify sale areas, and specific forest products offered for sale.
22. How often are these data sources updated and how are they updated? Hardcopy: Supplied by reporting installation or project, updated as needed
23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): None
24. Denote your existing software and hardware training with respect to the following:  
**Word processing:** Word 6.0 version \_\_\_\_\_ years of experience  
**Spreadsheet:** Excel 6.0 version \_\_\_\_\_ years of experience \_\_\_\_\_
25. What personnel do you envision requiring GIS training? Foresters
26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: USGS Maps  
 Images: Aerial Photos
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
Procure maps of sale areas, Identify wetlands, Identify archeological/historical sites
34. How do you believe a GIS will help (or hinder) you with your work? Will help.
35. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
Project manager.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: See above
31. Describe the typical workflows in your organization for which CADD/GIS data is utilized or produced: No comment
32. What other flows do you believe would be improved by applying a GIS? See above and below
41. Which workflows would you like to see GIS exercise during a demonstration project? See notes below
42. Please describe these work flows: See below
43. Which study projects performed by of the Mobile District?s responsibility would provide the most diverse

examples of your application for a demonstration GIS project.

Notes:

Issue not resolved. Customer review designs. Comment and response from clients. COE has client to do work, not budgeted by Congress. GIS has to be sold to customers. Clients – electrical/utilities. Considers GIS solutions to be a matter of economics. Not a big military project. O&M projects. Partner GIS with installation to manage O&M projects.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 2 June 98

Interviewee Name and Title: Jack Huntley – Proj. Manager

Address and/or Location: U.s. Army COE, P.O. Box 98, Collinsville, MS 39325

Telephone: 601-626-8431 Fax: 601-626-8750 E-mail: jack.r.huntley@usace.army.mil

Operational Unit Name (department/section): Operations Div.

1. What is the department/branch/division/code/unit in which you work? Okatibbee Lake (OP-OL)
2. What department/branch/division/code/unit do you report to? OP
3. Briefly describe the mission of your department/section: Management of flood control project, recreation, water quality and natural resources.
4. How many people are in your section? 11
5. How many people are temporary and how many are permanent? 9 perm 2 temp.
6. Average number of years (working experience) for personnel: 6-10
7. Average education level of the people in your unit: none
8. Number of Personnel with CADD experience in your section: none
9. Number of Personnel with GIS experience in your section: 0-5
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): Van McWhorten (Roger) has taken GIS/CADD class.
11. What Technical GIS Training (if any) have people in your unit had? See above.
12. Does a centralized Information Management/Technology department presently support your unit? NO
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? In-house assessment then IM delivery
14. To what level do you fund your present CADD/GIS activity? None
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases N/A  
GIS Databases N/A  
Non-CADD/GIS Databases N/A
16. What data do you get from external sources (which provider? what frequency)?: None  
Database: None  
CADD System: None  
GIS System: None
17. What information, if any, do you provide to others - and to whom? CADD Files for design to user and other

**disciplines**

Database: **CEFMS only**

CADD System: **None**

GIS System: **None**

Sharing by: **Hard copy - paper letters**

Soft copy: \_\_\_ (floppy: 3.5" or 5.25", tape: 8mm, 4mm, or \_\_\_\_\_ )

Electronic: E-mail - **Water Management Dat to District Office, Also Camp Area for District.**

18. What information (content) is portrayed or contained within the data your section uses?

CADD **None**

GIS **None**

Database **None**

19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? **Left Blank**

20. 20. What analysis are performed by your section using these sources?

CADD **None**

GIS **None**

Database **None**

Hardcopy **None**

21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?

CADD **None**

GIS **None**

Database **None**

Hardcopy **None**

22. How often are these data sources updated and how are they updated? **None**

CADD **None**

GIS **None**

Database **None**

Hardcopy **None**

23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): **Ranger, Management (Project Management) all but Maintaining Personnel.**

24. Denote your existing software and hardware training with respect to the following:

**Word processing:** Word   x   version   6.0   years of experience   2  

**Spreadsheet:** Excel   x   version   6.0   years of experience   2  

**CADD:** **None**

**Databases:** **None**

- GIS: None
25. What personnel do you envision requiring GIS training? Field Office and Park Rangers 4 or 5 people
26. What information do you presently possess or desire for conversion into the GIS:
- Drawings: Map (base maps), hard copy/soft copy
- Images: .Photos, hard copy/soft copy
- Databases: None
- Other data: Maintenance, Campsite, Habitats for wildlife, hard copy/soft copy
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
See Above 26.
28. How do you believe a GIS will help (or hinder) you with your work? See 26, also Flood Control Data (Management)
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
Not sure what is out there with in the District.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: Miss. Wildlife, fisheries and Parks, Power Co. Lease info, lease for Marina (Boat ramp, etc.) Meridian Naval Station (Their master plan).
31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced: N/A
32. What other flows do you believe would be improved by applying a GIS? N/A
33. Which work flows would you like to see GIS exercise during a demonstration project? Tenn/Tom Natural Resources GIS that is being developed.
34. Please describe these work flows: See above.
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? Any Watershed studies that might be in Mississippi, Alabama, Florida, etc. for areas within the District.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 5 June 98

Interviewee Name and Title: James A. McEnery

Address and/or Location: Mobile District Office, OP-S

Telephone: 690-3185 Fax: 690-2660 E-mail: \_\_\_\_\_

Operational Unit Name (department/section): OP-S

1. What is the department/branch/division/code/unit in which you work? OP-S (regulatory)
2. What department/branch/division/code/unit do you report to? OP-S
3. Briefly describe the mission of your department/section: Permits, evaluations, and enforcement activities relating to wetlands and the Clean Water Act.
4. How many people are in your section? 30
5. How many people are temporary and how many are permanent? 1
6. Average number of years (working experience) for personnel:
7. Average education level of the people in your unit:
8. Number of Personnel with CADD experience in your section:
9. Number of Personnel with GIS experience in your section:
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience):
11. What Technical GIS Training (if any) have people in your unit had?
12. Does a centralized Information Management/Technology department presently support your unit?
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)?
14. To what level do you fund your present CADD/GIS activity? Reg. Funded differently; \$ from congress
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases See Notes  
GIS Databases Arc/Info  
Non-CADD/GIS Databases See Notes
16. What data do you get from external sources (which provider? what frequency)?: MARIS, EPIC emn prt info ctr @ Bishop state College.  
Database: All Forms 1" ArcInfo  
CADD System:  
GIS System: X  
Sharing by: Hard copy: x (paper, fax, or \_\_\_\_\_)  
Soft copy: x (floppy 3.5)

- Electronic:  (Network: , E-mail: , modem, or Internet )
17. What information, if any, do you provide to others - and to whom? Epic  
 Database: 9 Oracle 9SQL 9 Informix 9Sybase 9Access 9Other dbase  
 CADD System:  
 GIS System:  ARC/INFO 9ArcView 9GeoMedia 9MGE 9Other  
 Sharing by: Hard copy:  (paper, fax, or \_\_\_\_\_)  
 Soft copy:  (floppy: 3.5" or 5.25", tape: 8mm, 4mm, or \_\_\_\_\_ )  
 Electronic:  (Network: , E-mail: , modem, or Internet [ftp] )
18. What information (content) is portrayed or contained within the data your section uses?  
 CADD \_\_\_\_\_  
 GIS \_\_\_\_\_  
 Database \_\_\_\_\_
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? AOA
20. What analysis are performed by your section using these sources?  
 CADD N/A  
 GIS N/A  
 Database N/A  
 Hardcopy No analysis – used for archive and contractor purposes.
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
 CADD \_\_\_\_\_  
 GIS \_\_\_\_\_  
 Database \_\_\_\_\_  
 Hardcopy 0 MSUTM Use 1degree AL zone 16
22. How often are these data sources updated and how are they updated? N/A  
 CADD N/A  
 GIS ?\_ \_\_\_\_\_  
 Database: Daily/Weekly  
 Hardcopy N/A
23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): \_\_\_\_\_
24. Denote your existing software and hardware training with respect to the following:  
**Word processing:** Word 6.0 & 97 version \_\_\_\_\_ years of experience 5  
 WordPerfect 5&6 version \_\_\_\_\_ years of experience 10  
**Spreadsheet:** Excel 6.0 & 97 version \_\_\_\_\_ years of experience 5

**CADD:** AutoCAD \_\_\_\_\_ version \_\_\_\_\_ years of experience \_\_\_\_\_  
 MicroStation \_\_\_\_\_ version \_\_\_\_\_ years of experience \_\_\_\_\_

**Databases:** Access \_\_\_\_\_ version \_\_\_\_\_ years of experience \_\_\_\_\_  
 ORACLE  X  version \_\_\_\_\_ years of experience  2   
 dBASE  X  version \_\_\_\_\_ years of experience  8

**GIS:** ESRI ARC/INFO  X  version \_\_\_\_\_ years of experience  8   
 ESRI ArcView  X

25. What personnel do you envision requiring GIS training?  Training in-house.
26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: \_\_\_\_\_, hard copy/soft copy: \_\_\_\_\_, Format: \_\_\_\_\_ Media: \_\_\_\_\_  
 Such as: maps, plans, etc.)  
 Images: \_\_\_\_\_, hard copy/soft copy: \_\_\_\_\_, Format: \_\_\_\_\_ Media: \_\_\_\_\_ (Such as:  aerial photographs , satellite images, terrestrial photos, etc.)  
 Databases:  us site specific – some quad sheets done,   
 Other data: \_\_\_\_\_, hard copy/soft copy: \_\_\_\_\_, Format: \_\_\_\_\_ Media: \_\_\_\_\_  
 (Such as: land usage, geologic, soils, other thematic type, etc.) Lotus Notes
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
 1.  Regulatory actions for a given locations   
 2.  Wetlands/environmental data   
 3.  Computing acres and measuring distances.   
 4.  Overlaying data from other agencies, soils, wetlands, endangered species, historical sites.   
 5.  Using data in public notices and other documents.
28. How do you believe a GIS will help (or hinder) you with your work?  Has helped in daily activities. Use GPS and dig. Photography. Has cut down on amount of time needed to perform specifications.
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  Arch sites, would like to be networked so data is shared. Lessen duplications.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify:
31. Describe the typical workflows in your organization for which CADD/GIS data is utilized or produced:  N/A
32. What other flows do you believe would be improved by applying a GIS?  All within COE lessen duplications.
33. Which workflows would you like to see GIS exercise during a demonstration project?
34. Please describe these workflows:
35. Which study projects performed by of the Mobile District?s responsibility would provide the most diverse examples of your application for a demonstration GIS project?

Notes:

Rec's, lakes, environmental, etc. initial push.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 28 May 98

Interviewee Name and Title: James A. Wagoner III (Buddy)

Address and/or Location: 7000 (Room) Mobile District Office

Telephone: 334-690-2559 Fax: 334-690-2548 E-mail: James A. Wagoner@sam.usace.army.mil

Operational Unit Name (department/section): Real Estate Management Disposal Branch

1. What is the department/branch/division/code/unit in which you work? Military Management & Disposal Sec
2. What department/branch/division/code/unit do you report to? RE Management & Disposal Branch
3. Briefly describe the mission of your department/section: **Management & disposal of Military Real Property in the Mobile District, handle grants, BRAC, Base Realignment Closer including Central American Base (Panama)**
4. How many people are in your section? **4**
5. How many people are temporary and how many are permanent? **All Perm.**
6. Average number of years (working experience) for personnel: **11-15**
7. Average education level of the people in your unit: **BS/BA**
8. Number of Personnel with CADD experience in your section: **None**
9. Number of Personnel with GIS experience in your section: **None**
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): **None**
11. What Technical GIS Training (if any) have people in your unit had? **None (set in an couple of GIS demos)**
12. Does a centralized Information Management/Technology department presently support your unit? **YES**
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? **4 PCs without any CADD./GIS applications, only word processor, Excel, etc.**
14. To what level do you fund your present CADD/GIS activity? **N/A**
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases **N/A**  
GIS Databases **N/A**  
Non-CADD/GIS Databases **None-RMEIS for about 1 ½ or 2 years**
16. What data do you get from external sources (which provider? what frequency)?: **Real Property information, payment, (terms, leasing or permits) billing cycles for customers which are leasing Real Properties, Base Closures, disposals & BRAC**  
Database: **None**  
CADD System: **None**  
GIS System: **None**

- Sharing by: Hard copy: x (paper - hard copy from client to change leasing terms, etc. or above, (some fax))
17. What information, if any, do you provide to others - and to whom? **Real Estate documents, customer, military branches, provide billings for Real property; MACOM – for FOFSL environmental FOFSL – finding suitability for leasing.**
- Database: **None**
- CADD System: **None**
- GIS System: **None**
- Sharing by: **Hard copy - paper - Final Documents are in hardcopy**
18. What information (content) is portrayed or contained within the data your section uses?
- CADD N/A
- GIS N/A
- Database **REMIS-for internal use within the Corps, Atlantic Division or Washington DC to pull reports or statistics.**
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? **Maps, Aerial Photos, Descriptions (Parcel, Deeds, Survey Information). Reports availability of Real Property, environmental documents, transfer and disposal of Rental Property.**
20. What analysis are performed by your section using these sources?
- CADD N/A
- GIS N/A
- Database **REMIS**
- Hardcopy **Analysis that all regulation are followed, also if there is anything that may need reviewing or checked that appears out of place. Report to Real Property that are going to be disposed of.**
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?
- CADD N/A
- GIS N/A
- Database **REMIS – Real Property Data, Boundary Surveys, etc.**
22. How often are these data sources updated and how are they updated?
- CADD N/A
- GIS N/A
- Database **REMIS – updated as actions are required, such as grant or leases that are terminated, such as changes in leases, backups**
- Hardcopy N/A
23. Briefly describe your section’s CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): 4 PCs and a server
24. Denote your existing software and hardware training with respect to the following:

**Word processing:** Word   x   version   6.0   years of experience   2    
 WordPerfect   x   version   5.0   years of experience   2  

**Spreadsheet:** Excel   x   version   6.0   years of experience   2  

**CADD:**   None  

**Databases:** Access   x   version   6.0   years of experience   2    
 ORACLE   REMIS   version   Corp   years of experience   2  

**GIS:**   None  

25. What personnel do you envision requiring GIS training? **3 of the 4 (Realty Experts) to use viewing tool for GIS.**
26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: **Maps, plans, (Real Estate), Agriculture (growers, farmers leases) , both hard copy/soft copy**  
 Images: **Aerial Photos , both hard copy/soft copy**  
 Other data: **possible use of ther state agency information for Real Porperty date and Reports in hard copy/soft copy**
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
**N/A**
28. How do you believe a GIS will help (or hinder) you with your work? **Help by tracking Real Property across sections, BRAC issues for property disposals, LRA Local Reuse Authority, (Community Committees for help in reuse of military facilities.)**
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
 Project Management Documents and/or database for read only for budgets, and leasing information for funding in Planning Division. Insurance issues, utilities, etc. for real property released to public or private firms.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: **titles, of properties in County and City throughout the District.**
31. Describe the typical workflow in your organization for which CADD/GIS data is utilized or produced:  
**N/A**
32. What other flows do you believe would be improved by applying a GIS? **The use of CADD/GIS for internal work up of REMIS and Real Property changes in lease, etc.**
33. Which workflow would you like to see GIS exercise during a demonstration project? **See above.**
34. Please describe these workflows: **See above.**

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 27 May 1998

Interviewee Name and Title: Jim Walker and Meddie Clark

Address and/or Location: P.O. Box 2288 Mobile, AL 36628-0001; 109 St. Joseph Street; Mobile AL 36602-3630  
(Room 7013)

Telephone: 334-694-3712 Fax: 334-694-3725 E-mail:

Operational Unit Name (department/section): OPS Division

1. What is the department/branch/division/code/unit in which you work? Mgmt. Support Branch
2. What department/branch/division/code/unit do you report to? Chief of Operations Division
22. Briefly describe the mission of your department/section: Leaving working relationship with field budget issues and staffing.
23. How many people are in your section? 11
5. How many people are temporary and how many are permanent? All perm.
6. Average number of years (working experience) for personnel: 11-15
7. Average education level of the people in your unit: BS/BA
8. Number of Personnel with CADD experience in your section: 1ArcInfo – Unix platform ArcView.
9. Number of Personnel with GIS experience in your section:
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience:
11. What Technical GIS Training (if any) have people in your unit had? Meddie limited
12. Does a centralized Information Management/Technology department presently support your unit? Yes server
12. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)?
13. To what level do you fund your present CADD/GIS activity? None
14. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases: None  
GIS Databases: would like to connect with external data. Need to know specifics for rights. Land Management and timber management need to see.  
Non-CADD/GIS Databases: RS, etc.
15. What data do you get from external sources (which provider? what frequency)?: Focus on budget and staffing. Primarily on presentations to congress.  
Database: None  
CADD System: None  
GIS System: None

- Sharing by: Hard copy:  
 Electronic: E-mail:   x
16. What information, if any, do you provide to others, and to whom? Field Project  
 Database: None  
 CADD System : None  
 GIS System: None  
 Sharing by: Hard Copy  
 Electronic: E-mail:   x
17. What information (content) is portrayed or contained within the data your section uses?  
 CADD Presentations for Congress  
 GIS Atlas GIS-thematic mapping. Need to put together.  
 Database:
18. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? Buy data and country levels. Population information. Like to know some platform.
18. What analysis are performed by your section using these sources?  
 CADD Really want to know projections arcview and incorpate external data-would like to have county, state, internal (COE as well.  
 GIS. Databases – Access MicroSoft.
20. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?
21. How often are these data sources updated and how are they updated?  
 CADD:  
 GIS  
 Hardcopy:
22. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.):
23. Denote your existing software and hardware training with respect to the following:  
**Word processing:** Word   x   version    years of experience  
 WordPerfect    version    years of experience  
**Spreadsheet:** Excel   x   version    years of experience     
**CADD:** None  
**Databases:** Access   x   version    years of experience     
**GIS:** ESRI ARC/INFO version    years of experience
24. What personnel do you envision requiring GIS training? Meddie-spatial analyst would like ArcView Spatial Analyst “Guru” to manage field office and find sources. USGS.
25. What information do you presently possess or desire for conversion into the GIS: None

26. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?
1. Analysis-sediment, calculations
  2. Forecasting for budget and project coordination.
1. How do you believe a GIS will help (or hinder) you with your work? Will help. Concerned about implementation.
  2. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?
  29. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify:
  3. Describe the typical workflows in your organization for which CADD/GIS data is utilized or produced: N/A
  4. What other flows do you believe would be improved by applying a GIS?
  5. Which work flows would you like to see GIS exercise during a demonstration project
  6. Please describe these work flows:
  7. Which study projects performed by of the Mobile District?s responsibility would provide the most diverse examples of your application for a demonstration GIS project

Notes:

Meddie attended GIS classes on Unix platform. PC ArcInfo. Never determined they could use this. Separate from regulatory. PC 1.0 ArcView and ArcInfo could be implemented for field projects, if one can find info needed. Spatial Analyst. Need to know zone protections, etc. Cursory training include methods of retrieving data-no design training basically learning on his own.

Correspondence attached to locations. Data entry-like regulations. Want to be able to check history archives. Meddie- if to do work, better flood control projects. If works deteriorate, millions worth of funding arguments.

GIS will aid in monetary decision making by showing projected implementation of projects/damage.

Jim-different way of retrieval. Aid arguments for recreational areas, provide trends.

Flood control issue political. Bottom line: will aid in financial arguments. Big help in attaining additional funding. Can use system to enhance funding.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 19 May 1998

Interviewee Name and Title: Kenneth Day, Park Manager

Address and/or Location: P.O. Box 2288 Mobile, AL 36628-0001; 109 St. Joseph Street; Mobile AL 36602-3630  
(Room 7013)

Telephone: 334-694-3724 Fax: 334-694-4264 E-mail: kenneth.day@sam.usace.army.mil

Operational Unit Name (department/section): Mobile District

1. What is the department/branch/division/code/unit in which you work? Operations Division
2. What department/branch/division/code/unit do you report to? Technical Support Branch
24. Briefly describe the mission of your department/section: Natural Resource Management Section to manage and conserve project natural resources, consistent with ecosystem principles, while providing quality public outdoor recreation.
25. How many people are in your section? 6
5. How many people are temporary and how many are permanent? 5 perm/1 tem-student aid.
6. Average number of years (working experience) for personnel: 11-15
7. Average education level of the people in your unit: BS/BA
16. Number of Personnel with CADD experience in your section:
17. Number of Personnel with GIS experience in your section: 0-5
18. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 0-5
19. What Technical GIS Training (if any) have people in your unit had? 16-greater
12. Does a centralized Information Management/Technology department presently support your unit? Yes.
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? Through IM (acquisition of commercial off the shelf)
26. To what level do you fund your present CADD/GIS activity? None
27. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases: None  
GIS Databases: Some projects use ArcInfo  
Non-CADD/GIS Databases: NRMS (Natural Resource Management System)
20. What data do you get from external sources (which provider? what frequency)?: Field Project on as needed basis.  
Database: None  
CADD System: None  
GIS System: None  
Sharing by: Hard copy:

- Soft copy:  
Electronic: E-mail:   x
17. What information, if any, do you provide to others, and to whom? Field Project  
Database: None  
CADD System : None  
GIS System: None  
Sharing by: Hard Copy  
Electronic: E-mail:   x
18. What information (content) is portrayed or contained within the data your section uses?  
CADD None  
GIS None  
Database None
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? maps, charts, aerial photos, brochures, tables and letters/memos
20. What analysis are performed by your section using these sources?
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
Hardcopy None/whatever is available.
22. How often are these data sources updated and how are they updated? Hardcopy: Annually/5 years
23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): PC on NT platform
24. Denote your existing software and hardware training with respect to the following:  
**Word processing:** Word \_\_\_\_\_ version 95/97 years of experience 2/1  
WordPerfect \_\_\_\_\_ version 6.1 years of experience 2  
**Spreadsheet:** Excel \_\_\_\_\_ version 4.0 years of experience \_\_\_\_\_  
**CADD:** None  
**Databases:** None  
**GIS:** None
25. What personnel do you envision requiring GIS training? All expect admin.
26. What information do you presently possess or desire for conversion into the GIS:  
Drawings: Maps, plans, hard copy  
Images: Aerial Photos, hard copy
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
Query project information, Consolidate project information District Summaries.
8. How do you believe a GIS will help (or hinder) you with your work? Will help.
9. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?

All.

30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: At this level, all this is done on a different level. Need all prior data and roll into one for overall or pinpoint specifics.
31. Describe the typical workflows in your organization for which CADD/GIS data is utilized or produced: N/A
32. What other flows do you believe would be improved by applying a GIS?
44. Which workflows would you like to see GIS exercise during a demonstration project? Natural resources of Forest Inventory, cultural.
45. Please describe these work flows:
46. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project

Notes:

Vision-Utopia

Tech interface on project would have GIS and mg if get all input. To show district wide. Natural Resources – Geographic attributes to inventory and catalog. Projects enter information one time with use of theirs not impacting data. Data to be a tool. No burden-benefit.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 4 June 98

Interviewee Name and Title: Ken Huddleston Operations Manager

Address and/or Location: P.O. Box 487 Cartersville, GA 30120

Telephone: 770-382-4700 Fax: 770-386-6758 E-mail: kenneth.e.huddleston@sam.usace.army.mil

Operational Unit Name (department/section): Allatoona Lake

1. What is the department/branch/division/code/unit in which you work? Operations Division
2. What department/branch/division/code/unit do you report to? Operations Division
28. Briefly describe the mission of your department/section: Operate 30 recreation areas, 40 organizational leases, 1,000 specified acts permits on 25,000 acres of land and 12,000 acres of water with a visitation of 5,000,000 people annually.
29. How many people are in your section? 32
5. How many people are temporary and how many are permanent? 30 perm; 2 temp.
6. Average number of years (working experience) for personnel: 11-15
7. Average education level of the people in your unit: BS/BA
21. Number of Personnel with CADD experience in your section: 0-5
22. Number of Personnel with GIS experience in your section: 0-5
23. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 0-5
24. What Technical GIS Training (if any) have people in your unit had? None
12. Does a centralized Information Management/Technology department presently support your unit? Yes.
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? Through our IM office in Mobile.
30. To what level do you fund your present CADD/GIS activity? None
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized? N/A  
CADD Databases N/A.  
GIS Databases N/A  
Non-CADD/GIS Databases Lakeshore permits (Phase III) floating cabin permits (Phase III) RIMS None.
16. What data do you get from external sources (which provider? what frequency)? None  
Database: Access None  
CADD System: None  
GIS System: None
17. What information, if any, do you provide to others and to whom? NRMS (Annual Report)  
Soft copy: x floppy: 3.5"

- Electronic: (Network: E-mail:
18. What information (content) is portrayed or contained within the data your section uses?  
 CADD N/A  
 GIS N/A  
 Database Text only
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? None
20. What analysis are performed by your section using these sources?  
 CADD N/A  
 GIS N/A  
 Database N/A  
 Hardcopy N/A
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
 CADD N/A  
 GIS N/A  
 Database N/A  
 Hardcopy Various, no standard
22. How often are these data sources updated and how are they updated? N/A  
 CADD  
 GIS N/A  
 Database As needed- typically annual for NRMS-5 years for permits.  
 Hardcopy Same as Above
23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): None
24. Denote your existing software and hardware training with respect to the following:
- Word processing:** Word x version 6.0 years of experience 4  
 WordPerfect x version 8.0 years of experience 6
- Spreadsheet:** Excel x version 5.0 years of experience 4
- CADD:** None
- Databases:** Access x version 2.0 years of experience 4  
 dBASE III+ version III+ years of experience 12
- GIS:** None
25. What personnel do you envision requiring GIS training? Most Rangers, construction Rep. & supervisors
26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: Topo Maps and As-built drawings, hard copy/soft copy: 1+ Format: 24x36 Media: paper

27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
Don't have sufficient knowledge to Evaluate
10. How do you believe a GIS will help (or hinder) you with your work? Insufficient Knowledge.
11. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
Real Estate Boundary Maps.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: Not sure what is out there
31. Describe the typical workflows in your organization for which CADD/GIS data is utilized or produced: N/A
32. What other flows do you believe would be improved by applying a GIS? N/A
47. Which workflows would you like to see GIS exercise during a demonstration project?
48. Please describe these work flows:
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project.

Notes:

We operate 30 recreation areas with a total of 688 campsites, 500 picnic sites, beaches, boat ramps, etc. We have 40 areas under lease to city government, county and state government, private groups, churches, scouts etc. All of our info is for internal use and would have very limited use for others. We do generate an annual report (NRMS) detailing these activities with the cutback in staffing levels at our project. (50% in last 15 years) and additional workload imposed by CEFMS we will not participate in any program requiring additional input or increasing workload with our limited knowledge of GIS it is difficult to see how our information can be useful to other.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 29 May 1998

Interviewee Name and Title: Karen F. Williams/Civil Engineer William M. Youngman/Landscape Archit.

Address and/or Location: District Mobile (Room 2000)

Telephone: 334-690-4141 Fax: 334-690-2424 E-mail: susan.i.rees@sam.usace.army.mil

Operational Unit Name (department/section): Coastal Environmental Section

1. What is the department/branch/division/code/unit in which you work? Environmental Resource Branch/Planning Division.
2. What department/branch/division/code/unit do you report to? Environmental Resource Branch/Planning Division
3. Briefly describe the mission of your department/section: Respond to all Environmental Complaints Control Civil Works Activity/Military (No Hazardous/Toxic Waste)
4. How many people are in your section? 7
5. How many people are temporary and how many are permanent? 7 perm. 2 temp.
6. Average number of years (working experience) for personnel: 16-greater
7. Average education level of the people in your unit: High School, BS/BA, MS/MA, Ph.D (various)
8. Number of Personnel with CADD experience in your section: one (1) with six (6) years experience
9. Number of Personnel with GIS experience in your section: one (1) with seven (7) years experience
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): Same as above
11. What Technical GIS Training (if any) have people in your unit had? ESRI Courses (Bishop College Course) ongoing (30 Hrs.)
12. Does a centralized Information Management/Technology department presently support your unit? NO
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? In-house assessment for 4D/SW
14. To what level do you fund your present CADD/GIS activity?  
9 None 9 Actual (estimated annual \$ amt.) 5,000 9 Planned (estimated annual \$ amt.) 5,000 15.

What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?

CADD Databases N/A

GIS Databases Env. Compliance Database (Fed & State Regulators)

Non-CADD/GIS Databases Ocean Disp. Database (WES) for Headquarter.

16. What data do you get from external sources (which provider? what frequency)? Biology dated/chemical

CADD System: AutoCAD and MicroStation

GIS System: NONE

Sharing by: Hard copy: Paper

- Soft copy: various
- Electronic: Network, internet (rare)
17. What information, if any, do you provide to others - and to whom? Take information from 16 dod data to these files and issue back to public and state agencies in hard copy form.
- Database: None
- CADD System: None
- GIS System: None
- Sharing by: Hard copy: Paper
- Soft copy: various
18. What information (content) is portrayed or contained within the data your section uses?
- CADD Monita Data, Sediment Analysis Data, Creation of Wetlands (Design ) and over
- GIS See Above
- Database Long term assessment of a construction of Wetlands, etc.
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? Table, USGS maps, chart , Aerial photos, maps drawing
20. What analysis are performed by your section using these sources?
- CADD See 17&18 above
- GIS See 17 & 18 above
- Database None
- Hardcopy None
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?
- CADD Various scale and depends on project.
- GIS Same as CADD, Database Same, Hardcopy Same
22. How often are these data sources updated and how are they updated?
- CADD one time except of the one year or 5year updates.
- GIS See Below and above
- Database Compliance database is updated as the Pif in received (daily, weekly, etc.) basically as the date comes in.
- Hardcopy Various updated based off project.
23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): TD-20, Intel processor, 3 Pentium and other 486's GIS equip covered PD-ER interview
24. Denote your existing software and hardware training with respect to the following:
- Word processing:** Word Ξ version 97 years of experience 3 mos.
- WordPerfect Ξ version 5.1&6.0 years of experience 10
- Spreadsheet:** Excel Ξ version 97 years of experience 50.6

**CADD:** MicroStation  $\Xi$  version 95 years of experience 6

**Databases:** Access  $\Xi$  version 97 years of experience 3  
 dBASE  $\Xi$  version 4&5 years of experience 4

**GIS:** None and no experience

25. What personnel do you envision requiring GIS training? Karen (one Person) others in Section in use in a Viewing tool such as GISExplore.
26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: Maps, Charts, Etc. (hard copy)  
 Images: Aerial Photos (hard copy)
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
 1. Would like to see Demo for GIS for other Sections
28. How do you believe a GIS will help (or hinder) you with your work? Helpful
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
 Would like better electronic communication, with field offices. The ability from Master Plan & Electronic Format
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: None at this time
31. Describe the typical workflow in your organization for which CADD/GIS data is utilized or produced:  
See pg. 2-2-2-3 for this information
32. What other flows do you believe would be improved by applying a GIS? See page 2-2-2-3 The use of a viewing tool for meeting and the ability to do on the fly precautions with existing data.
33. Which work flows would you like to see GIS exercise during a demonstration project? Like to see CADD&GIS Data and with manager for meetings & presentation. To Have Compliance database access manager and other to review the data for status reports and presentations, etc
34. Please describe these work flows: See previous pages and above
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? Bill is working on another database for World Wide project, budget and data to be linked to a GIS.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 22 June 98

Interviewee Name and Title: Linda Brown-Landscape Architect

Address and/or Location: Rt. 1 Box 176 Fort Gaines, GA 31751

Telephone: 912-768-2516 Fax: 912-768-2809 E-mail: linda.t.brown@sam.usace.army.mil

Operational Unit Name (department/section): Operations

1. What is the department/branch/division/code/unit in which you work? OP-AC
2. What department/branch/division/code/unit do you report to? CESAM-OP-AC
3. Briefly describe the mission of your department/section: **Natural Resource Management; Lakeshore Management; Recreation**
4. How many people are in your section? 25
5. How many people are temporary and how many are permanent? 25
6. Average number of years (working experience) for personnel: 11-15
7. Average education level of the people in your unit: **BS/BA**
25. Number of Personnel with CADD experience in your section: 0-5
26. 9. Number of Personnel with GIS experience in your section: 0-5
27. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 0-5
28. 11. What Technical GIS Training (if any) have people in your unit had? **ESRI - ArcView ; 3 People**
12. Does a centralized Information Management/Technology department presently support your unit? **Yes**
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? **Operational Funding FY94**
31. To what level do you fund your present CADD/GIS activity? **\$25,000; \$50,000**
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases **None**  
GIS Databases **None**  
Non-CADD/GIS Databases **None**
16. What data do you get from external sources (which provider? what frequency)?: **Annually. Resource Management Inc.**  
Database: **ARC/INFO**  
CADD System: None  
GIS System: **ARC/INFO**  
Sharing by: **Hard copy - paper**  
Soft copy: **floppy 3.5**

Electronic: Network E-mail

17. What information, if any, do you provide to others - and to whom? None

18. What information (content) is portrayed or contained within the data your section uses?

CADD None

GIS Aquatic Plant Surveys

Database None

19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? Maps, Spreadsheets, aerial photos, as-built drawings

20. What analysis are performed by your section using these sources?

CADD None

GIS Acreage Calculations, agriculture practices, rates of erosion, lakeshore Management (proposed).  
Currently aquatic vegetation survey.

Database N/A

Hardcopy N/A

21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?

CADD None

GIS horizontal accuracy within 15'

Database None

Hardcopy None

22. How often are these data sources updated and how are they updated? N/A

CADD None

GIS information gathered by GPS systems arrival aquatic weed survey.

Database None

Hardcopy None

23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): PC with ARC/INFO working 6.1 and ArcView version 3.1 for Windows.

24. Denote your existing software and hardware training with respect to the following:

**Word processing:** Word 97 version 6.0 years of experience 2

**Spreadsheet:** Excel 97 version 97 years of experience 2

**CADD:** AutoCAD R13 version R13 years of experience 6

**Databases:** ORACLE CEFMS (only) version \_\_\_\_\_ years of experience \_\_\_\_\_

**GIS:** ESRI ARC/INFO PC version dbase 4 years of experience \_\_\_\_\_

ESRI ArcView PC/Windows version 3.1 years of experience \_\_\_\_\_

25. What personnel do you envision requiring GIS training? All need ArcView training some need ARC/INFO training.

26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: As-builts in hardcopy  
 Images: Aerial Photos in hard copy  
 Databases: None  
 Other data: None
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)? Lakeshore Management Plan including Lakeshore use permits, As built drawings; soil surveys; recreational area maps, Forest Resources, Inventories Management; rates of erosion and sediment
12. How do you believe a GIS will help (or hinder) you with your work? Help - In use now
13. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
Not sure.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: soil surveys; USGS topographic maps; NWI Inventory
31. Describe the typical workflow in your organization for which CADD/GIS data is utilized or produced: No Current
32. What other flows do you believe would be improved by applying a GIS? Not Sure
49. Which workflow would you like to see GIS exercise during a demonstration project? Natural resource Management, dredging projects; recreational areas; lakeshore management; forestry inventories; endangered species inventories
34. Please describe these workflow:
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? AEC River System. Lake projects-natural resource management, locks, and powerhouses.

**Mobile District CoE**  
**GIS Needs Assessment Questionnaire**

Date: 8 June 98

Interviewee Name and Title: LuAnn Lackey, Site Manager

Address and/or Location: Carters project, P.O. Box 96, Oakman, GA 30732 .

Telephone: 706-334-2248 Fax: 706-334-2213 E-mail:

Operational Unit Name (department/section): Carter's Project

1. What is the department/branch/division/code/unit in which you work? CESAM-OP\_CA
2. What department/branch/division/code/unit do you report to? CESAM-OP
32. Briefly describe the mission of your department/section: Hydropower Production, Flood Damage reduction, recreation and natural resources management.
33. How many people are in your section? 33
5. How many people are temporary and how many are permanent? 33 perm.
6. Average number of years (working experience) for personnel: 16 greater
7. Average education level of the people in your unit: High School
29. Number of Personnel with CADD experience in your section: 0-5
30. 9. Number of Personnel with GIS experience in your section: 0-5
31. Average CADD/GIS knowledge level of the people in your unit (yrs/experience):
32. 11. What Technical GIS Training (if any) have people in your unit had? None
12. Does a centralized Information Management/Technology department presently support your unit? Yes.
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? Through Information Management Division.
34. To what level do you fund your present CADD/GIS activity? None
35. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized? N/A  
CADD Databases N/A.  
GIS Databases N/A  
Non-CADD/GIS Databases N/A
16. What data do you get from external sources (which provider? what frequency)? Plans and Specs (hardcopy Regulations, Documents (Word/e-mail) Water Management Data.  
Database: Access None  
CADD System: None  
GIS System: None  
Soft copy: \_\_\_ (floppy 3.5)
17. What information, if any, do you provide to others - and to whom? Annual Report (NRMS, FoxPro) Powerhouse

Log sheets (hardcopy), Financial Reports (CFMS), User Fee reports (AUPS), Property Inventory (RAPPMS), Citation Tracking CRM.

Database: Oracle (CFMS)

18. What information (content) is portrayed or contained within the data your section uses?

CADD N/A

GIS N/A

Database See 17

19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? Real Estate maps, construction drawings (plans and as-builts), aerial photos, brochures.

20. What analysis are performed by your section using these sources?

CADD N/A

GIS N/A

Database N/A

Hardcopy N/A

21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?

CADD N/A

GIS N/A

Database N/A

Hardcopy Various, no standard

22. How often are these data sources updated and how are they updated? N/A

CADD Schedule as set by the COE and the State of FL.

GIS N/A

Database N/A

Hardcopy N/A

23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): 1 Workstation w/MicroStation.

24. Denote your existing software and hardware training with respect to the following:

**Word processing:** Word \_\_\_\_\_ version 6.0 years\_of experience \_\_\_\_\_

**Spreadsheet:** Excel \_\_\_\_\_ version 5.0 years of experience \_\_\_\_\_

**CADD:** None

**Databases:** None

**GIS:** None

25. What personnel do you envision requiring GIS training? Management, Admin. Staff, Natural Resource Mgt. Staff, Powerhouse staff (selected members of each) minimum: 4 people.

26. What information do you presently possess or desire for conversion into the GIS:

Drawings: Maps; plans, brochures, hard copy & soft copy: \_\_\_\_ Format: DWG

Images: . aerial photos, terr. photos, hard copy

Other data: hard copy/soft copy: land use, geologic, forest types

27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?
14. Share information with other Federal, State, local agencies
  15. Access Mobile District Database files
  3. Manage Natural Resources
16. How do you believe a GIS will help (or hinder) you with your work? Probably help. We have major concerns regarding training and funding.
17. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS? Probably, but unaware of what is available.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: Unknown.
31. Describe the typical workflows in your organization for which CADD/GIS data is utilized or produced: N/A
32. What other flows do you believe would be improved by applying a GIS? N/A
50. Which workflows would you like to see GIS exercise during a demonstration project? Any. Project personnel have not had any demonstrations of GIS capabilities.
34. Please describe these workflows:
35. Which study projects performed by of the Mobile District?s responsibility would provide the most diverse examples of your application for a demonstration GIS project. Not sure what is out ther

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 27May 98

Interviewee Name and Title: Linda S. Lillycrop

Address and/or Location: Mobile District, 109 St. Joseph St., Mobile, AL 36602-3630

Telephone: 334-690-2593 Fax: 334-694-4264 E-mail: linda.s.lillycrop@sam.usace.army.mil

Operational Unit Name (department/section): Oper OPT OP-TN

1. What is the department/branch/division/code/unit in which you work? CESAM-OP-TN
2. What department/branch/division/code/unit do you report to? OP-S
3. Briefly describe the mission of your department/section: **Responsible for Dredging, flood control, lock and dams, floating plant, water management**
4. How many people are in your section? **11**
5. How many people are temporary and how many are permanent? **1**
6. Average number of years (working experience) for personnel: **11-15**
7. Average education level of the people in your unit: **BS/BA**
8. Number of Personnel with CADD experience in your section: **0-5**
9. Number of Personnel with GIS experience in your section: **0-5**
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): **0-5**
11. What Technical GIS Training (if any) have people in your unit had? **None**
12. Does a centralized Information Management/Technology department presently support your unit? **YES, IM – support in-house design for HW/SW in some cases.**
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? **Some out source (ex. WES, DMSMART for dredger/disposal app.) in development stage (ArcView or other Software)**
14. To what level do you fund your present CADD/GIS activity? **N/A**
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases **None – Dredging information Database (DMSMART) Headquarters want to move to Oracle format..**  
GIS Databases **see previous, 15 above**  
Non-CADD/GIS Databases **see previous, 15 above**
16. What data do you get from external sources (which provider? what frequency)? **Field offices, bathymetric surveys, inspection reports, photos, schedules.**  
Database: **Oracle**  
CADD System: **None**

- GIS System: ArcView
- Sharing by: Hard copy, paper - blueprint, photos
- Soft copy: floppy: 3.5", and zip disk
- Electronic: Network, E-mail, modem, or Internet [ftp]
17. What information, if any, do you provide to others - and to whom? Information in #16 to Headquarters, division, safety, contracting, construction, Engineering, Planning
- Database: None
- CADD System: None
- GIS System: None
- Sharing by: Hard copy, paper - blueprints, photos
- Soft copy: floppy: 3.5" or zip disk
- Electronic: Network, E-mail, modem, or Internet [ftp]
18. What information (content) is portrayed or contained within the data your section uses?
- CADD None
- GIS DMSMART
- Database Dredging Information System and DMSMART
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? full and 1/2 size project drawings, digital photos and slides.
20. What analysis are performed by your section using these sources?
- CADD N/A
- GIS N/A
- Database scheduling
- Hardcopy quantity computations, budget, placement
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?
- Various
22. How often are these data sources updated and how are they updated?
- CADD N/A
- GIS N/A
- Database DIS – database-monthly Dredging Information System
- Hardcopy all updating on a monthly basis field office and internal files.
23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): N/A (would like CADD/GIS capability)
24. Denote your existing software and hardware training with respect to the following:
- Word processing:** Word x version 97 years of experience 1
- WordPerfect x version 5.1 & 8 years of experience 5-6

**Spreadsheet:** Excel x version 97 years of experience 1  
Quattro Pro x version 3.0 & 8 years of experience 6-7  
other Lotus version 5.0 years of experience 8

**CADD:** None

**Databases:** ORACLE DMSMART & CEFMS

**GIS:** None

25. What personnel do you envision requiring GIS training? **Engineers, technicians, supervisors**
26. What information do you presently possess or desire for conversion into the GIS:  
Drawings: **maps, plans, etc, in both hard copy and softcopy**  
Images: **Photos, hard copy/soft copy (They want digital photos)**
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
**See all items above**
28. How do you believe a GIS will help (or hinder) you with your work? **Help organization/communicate! hinder by additional training/costs/lost productivity through learning course. Downtime for personal to train in GIS use.**
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
**Not sure what is out there**
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: **Not sure what is out there**
31. Describe the typical workflow in your organization for which CADD/GIS data is utilized or produced: **N/A**
32. What other flows do you believe would be improved by applying a GIS? **Survey information, bathimetric, topographic (field data in generate)**
33. Which work flows would you like to see GIS exercise during a demonstration project? **Survey information and field data (ALL)**
34. Please describe these work flows: **Hydrographic Survey information collected/processed by field office to be put in GIS System for access. DMSMART Dredging GIS to incorporate it into District's GIS.**
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? **Mobile Harbor (Pilot Area) continue to dredging.**

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 26MAY98

Interviewee Name and Title: Michael T. Abeln, P.E., Chief, Military/SFO Programs

Address and/or Location: Room 3000E, Mobile District Office

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Telephone: 334-690-2325 Fax: 334-690-2327 E-mail: michael.t.abeln@sam.usace.armt.mil

Operational Unit Name (department/section): PM - Programs/Project Management Division

1. What is the department/branch/division/code/unit in which you work? Program Management Division
2. What department/branch/division/code/unit do you report to? EN- Engineering
3. Briefly describe the mission of your department/section: Single point of contact for Military installation, Design and Construction, in-house or A/~E firm selection, and needs requirement for installations.
4. How many people are in your section? 29
5. How many people are temporary and how many are permanent? 29 permanent
6. Average number of years (working experience) for personnel: 16 or greater
7. Average education level of the people in your unit: BS/BA
8. Number of Personnel with CADD experience in your section: Engineers trained in MicroStation, limited use
9. Number of Personnel with GIS experience in your section: None
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): None
11. What Technical GIS Training (if any) have people in your unit had? None

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12. Does a centralized Information Management/Technology department presently support your unit? YES
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? Evaluation in-house, order through IM.
14. To what level do you fund your present CADD/GIS activity? ?
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized? No drawings are produced in this department, but add information to spreadsheets, etc.
16. What data do you get from external sources (which provider? what frequency)? Request from installation foe services or Project Management get information from installation (Military), installation needs (warehouse, hanger, etc.) and Project Management directs the location (or area) in which to accomplish the project in-house or A/E firm.
17. What information, if any, do you provide to others - and to whom? Provide the suggested budget, schedule for project (Military) installation.
18. What information (content) is portrayed or contained within the data your section uses? N/A
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings,

etc.)? PROMISE - Project Management Information System, Dikes, levees, etc.

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20. What analysis are performed by your section using these sources? N/A

21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
N/A

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22. How often are these data sources updated and how are they updated? N/A

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23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): None

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24. Denote your existing software and hardware training with respect to the following:

**Word processing:** Word  X  version  6.0  years of experience

**Spreadsheet:** Excel  X  version   years of experience

**CADD:**  N/A

**Databases:** Access  X  version  ?  years of experience

ORACLE  CEFMS  version   years of experience

**GIS:**  N/A

25. What personnel do you envision requiring GIS training? Undecided, waiting to see what the District is going to incorporate.

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26. What information do you presently possess or desire for conversion into the GIS? N/A

27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
N/A

28. How do you believe a GIS will help (or hinder) you with your work? N/A

29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
N/A

30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: N/A

31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced:

Engineering and/or A/E contractor may return work in design file (MicroStation) or other to past on to the installation.

32. What other flows do you believe would be improved by applying a GIS? Not Sure
33. Which work flows would you like to see GIS exercise during a demonstration project? Would access installation GIS or AM/FM data through GIDS and/or database information.
34. Please describe these work flows: To keep from duplicating work that the installation may have already developed, such as design files, database, etc.
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- 
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? N/A - Civil side may have better handle of what to have as demonstration.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 28 May 98

Interviewee Name and Title: Kevin Marek - cartographer

Address and/or Location: 7000 (Room) Mobile District Office

Telephone: 334-690-3110 Fax: 334-690-2948 E-mail: kevin.m.marek@sam.usace.army.mil

Operational Unit Name (department/section): Cadastral Section

1. What is the department/branch/division/code/unit in which you work? **Real Estate Division/Planning Control Branch**
2. What department/branch/division/code/unit do you report to? **Planning Central**
3. Briefly describe the mission of your department/section: **Mapping (Real Estate), Legal Description, Boundary Survey Contract, Lease exchanges (Reserving, Boundary Design).**
4. How many people are in your section? **3**
5. How many people are temporary and how many are permanent? **3**
6. Average number of years (working experience) for personnel: **(23, 10, and 1 yrs. Experience)**
7. Average education level of the people in your unit: **BS/BA**
8. Number of Personnel with CADD experience in your section: **(all three limited, one class other self taught)**
9. Number of Personnel with GIS experience in your section: **0-5**
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): **(2-3 years)**
11. What Technical GIS Training (if any) have people in your unit had? **None**
12. Does a centralized Information Management/Technology department presently support your unit? **YES**
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? **IM, they request Hardware/Software through IM**
14. To what level do you fund your present CADD/GIS activity? **No Idea.**
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases **Left Blank.**  
GIS Databases **Left Blank**  
Non-CADD/GIS Databases **Left Blank**
16. What data do you get from external sources (which provider? what frequency)?: **In-house records deed records, also receive information from Contractor, and in some cases city and country.**  
Database: **Left Blank**  
CADD System: **MicroStation and AutoCAD – from other government agencies - occasionally**  
GIS System: **Left Blank**  
Sharing by: **Hard copy - paper (mainly)**

- Soft copy: Left Blank  
 Electronic: Left Blank
17. What information, if any, do you provide to others - and to whom? Legal Descriptions, Boundary data (coordinate maps), Boundary Survey Maps, Computation Sheet (Boundary).  
 Database: Left Blank  
 CADD System: Left Blank  
 GIS System: Left Blank  
 Sharing by: Left Blank  
 Soft copy: Left Blank  
 Electronic: Left Blank
18. What information (content) is portrayed or contained within the data your section uses?  
 CADD Left Blank  
 GIS Left Blank  
 Database Left Blank
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? Hard Copy maps – various scale
20. What analysis are performed by your section using these sources?  
 CADD digitizing segment maps as time permits
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)? Left Blank
22. How often are these data sources updated and how are they updated?  
 CADD Frequent partial updates
23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): Left Blank
24. Denote your existing software and hardware training with respect to the following:
- |                         |                           |                            |                                       |
|-------------------------|---------------------------|----------------------------|---------------------------------------|
| <b>Word processing:</b> | Word <u>  x  </u>         | version <u>  4.0  </u>     | years of experience <u>  4  </u>      |
|                         | WordPerfect <u>  x  </u>  | version <u>          </u>  | years of experience <u>  1  </u>      |
| <b>Spreadsheet:</b>     | Excel <u>  x  </u>        | version <u>          </u>  | years of experience <u>  .5  </u>     |
| <b>CADD:</b>            | AutoCAD <u>          </u> | version <u>          </u>  | years of experience <u>          </u> |
|                         | MicroStation <u>  x  </u> | version <u>  various  </u> | years of experience <u>  1  </u>      |
| <b>Databases:</b>       | dBASE <u>  x  </u>        | version <u>          </u>  | years of experience <u>  .5  </u>     |
| <b>GIS:</b>             | <u>None</u>               |                            |                                       |
25. What personnel do you envision requiring GIS training? Many
26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: maps – bothe hard copy and softcopy (Such as: maps, plans, etc.)

Databases: Coordinates, boundaries, ownership – (Hardcopy – paper)

Media: Physical features (off terrain)

27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?
1. I would like referencing that would allow access obtained by inputting coordinates, tracts, ownership, counties, states, military installations, labs projects, date of acquisition.
  2. I would like to eliminate usage of insets on mapping
28. How do you believe a GIS will help (or hinder) you with your work? Getting started will be a hindrance. In the end efficiency should prevail.
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS? Probably, but I'm really not sure of who has what.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: Perhaps information from USGS as base maps.
31. Describe the typical workflow in your organization for which CADD/GIS data is utilized or produced: Left Blank
32. What other flows do you believe would be improved by applying a GIS? Left Blank
33. Which workflow would you like to see GIS exercise during a demonstration project? Left Blank
34. 34. Please describe these work flows: Left Blank
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? Left Blank

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 15 June 98

Interviewee Name and Title: Michael Nelson, Civil Engineer

Address and/or Location: U.S. Army Corps of Engineers 1706 E. 5<sup>th</sup> St. P.C. Florida 32401-4399

Telephone: 850-763-2881 Fax: 850-785-0909 E-mail:

Operational Unit Name (department/section): ECP-PC

1. What is the department/branch/division/code/unit in which you work? OP-PE
2. What department/branch/division/code/unit do you report to? OP-P
36. Briefly describe the mission of your department/section: Surveying and Maintenance OE OP-PE Projects
37. How many people are in your section? 25
5. How many people are temporary and how many are permanent? 25
6. Average number of years (working experience) for personnel: 16 greater
7. Average education level of the people in your unit: High School
33. Number of Personnel with CADD experience in your section: 0-5
34. 9. Number of Personnel with GIS experience in your section: 0-5
35. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 6-10
36. 11. What Technical GIS Training (if any) have people in your unit had? GIS-Project course Army COE
12. Does a centralized Information Management/Technology department presently support your unit? No. May but we have no experience with the DoD.
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? We write the spec for the computers and CADD and the District orders the items.
38. To what level do you fund your present CADD/GIS activity? Planned; \$20,000-5yrs.
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized? AutoCADD R-12 and R-14  
CADD Databases None.  
GIS Databases None  
Non-CADD/GIS Databases C-Base of X,Y,Z Control within OP-PE
16. What data do you get from external sources (which provider? what frequency)?  
Database: Access None  
CADD System: None  
GIS System: None  
Sharing by: Hard copy:     (paper, fax, or           )  
Soft copy:     (floppy 3.5)  
Electronic:     (Network:                   , E-mail:       )

17. What information, if any, do you provide to others - and to whom? None  
 Database: 9 Oracle 9SQL 9 Informix 9Sybase 9Access 9Other \_\_\_\_\_  
 CADD System \_\_\_\_\_  
 GIS System: 9ARC/INFO 9ArcView 9GeoMedia 9MGE 9Other \_\_\_\_\_  
 Sharing by: Hard copy: \_\_\_ (paper, fax, or paper (letter))  
 Soft copy: \_\_\_ (floppy: 3.5" or 5.25", tape: 8mm, 4mm, or \_\_\_\_\_ )  
 Electronic: \_\_\_ (Network: \_\_\_\_\_, E-mail: x, modem, or Internet [ftp] \_\_\_\_\_)
18. What information (content) is portrayed or contained within the data your section uses?  
 CADD x,t,z Points  
 GIS \_\_\_\_\_  
 Database x,y,z data and descriptions of control points.
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)?
20. What analysis are performed by your section using these sources?  
 CADD Models of Nav. Mile 36.5 on the ACF and ES ranges Nav. Mile IDS to 5 on the ACF river system.  
 GIS N/A  
 Database N/A  
 Hardcopy N/A
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
 CADD \_\_\_\_\_  
 GIS \_\_\_\_\_  
 Database \_\_\_\_\_  
 Hardcopy \_\_\_\_\_
22. How often are these data sources updated and how are they updated? N/A  
 CADD Schedule as set by the COE and the State of FL.  
 GIS N/A  
 Database N/A  
 Hardcopy N/A
23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.):  
 \_\_\_\_\_
24. Denote your existing software and hardware training with respect to the following:  
**Word processing:** Word \_\_\_\_\_ version \_\_\_\_\_ years of experience \_\_\_\_\_  
 WordPerfect \_\_\_\_\_ version \_\_\_\_\_ years of experience \_\_\_\_\_  
 other MicroSoft version 4.0 years of experience 5  
**Spreadsheet:** Excel \_\_\_\_\_ version \_\_\_\_\_ years of experience \_\_\_\_\_

	Quattro Pro _____	version _____	years of experience _____
	other _____	version _____	years of experience _____
<b>CADD:</b>	AutoCAD _____	version <u>12/14</u>	years of experience <u>10</u>
	MicroStation _____	version _____	years of experience _____
	other _____	version _____	years of experience _____
<b>Databases:</b>	Access _____	version _____	years of experience _____
	ORACLE _____	version _____	years of experience _____
	dBASE _____	version _____	years of experience _____
<b>GIS:</b>	ESRI ARC/INFO <u>PC</u>	version <u>dbase 4</u>	years of experience _____
	ESRI ArcView <u>PC/Windows</u>	version <u>3.1</u>	years of experience _____
	Intergraph MGE _____	version _____	years of experience _____
	Intergraph GeoMedia _____	version _____	years of experience _____
	Other _____	version _____	years of experience _____

25. What personnel do you envision requiring GIS training? All need ArcView training some need Arc/Info training.

26. What information do you presently possess or desire for conversion into the GIS:

Drawings: As built, hard copy/soft copy: hard, Format: \_\_\_\_\_ Media: \_\_\_\_\_

(Such as: maps, plans, etc.)

Images: Aerial Photos, hard copy/soft copy: hard, Format: \_\_\_\_\_ Media: \_\_\_\_\_

(Such as: aerial photographs, satellite images, terrestrial photos, etc.)

Databases: N/A, Format: \_\_\_\_\_, Media: \_\_\_\_\_ (Such as: Coastal/Environmental remediation, engineering, etc.)

Other data: \_\_\_\_\_, hard copy/soft copy: \_\_\_\_\_, Format: \_\_\_\_\_ Media: \_\_\_\_\_

(Such as: land usage, geologic, soils, other thematic type, etc.) Lotus Notes

27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?

18. Lakeshore Management Plan including Lakeshore use permits

19. As built drawings; soil surveys; recreational area maps

3. Forest Resources, Inventories Management; rates of erosion and sediment

20. How do you believe a GIS will help (or hinder) you with your work? \_\_\_\_\_

21. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?

Not sure.

30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: soil surveys; USGS topographic maps; NWI Inventory

31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced: N/A

32. What other flows do you believe would be improved by applying a GIS? N/A

51. Which work flows would you like to see GIS exercise during a demonstration project? Natural res. Management. Dredging projects; recreational areas; lakeshore management; forestry inventories; endangered species inventories
34. Please describe these work flows:
35. Which study projects performed by of the Mobile District?s responsibility would provide the most diverse examples of your application for a demonstration GIS project? AEC River System. Lake projects-natural resource management; locks; powerhouses.

Notes:

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**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 28 May 1998

Interviewee Name and Title: Mike Nettles

Address and/or Location: Mobile.

Telephone: -334-694-3769 Fax: E-mail: 334-694-3767 E-mail: thomas.m.nettles@sam.usace.army.mil

Operational Unit Name (department/section): new Spatial Data Branch

1. What is the department/branch/division/code/unit in which you work? Engineering/OPS Division
2. What department/branch/division/code/unit do you report to? Jeff Lillycrop (WES employee)
39. Briefly describe the mission of your department/section: Surveying, mapping..
40. How many people are in your section? 2.5-3. Rose partially sp & EN
5. How many people are temporary and how many are permanent? Permanent
6. Average number of years (working experience) for personnel: 16-greater
7. Average education level of the people in your unit: BS/BA
37. Number of Personnel with CADD experience in your section: 0-5
38. Number of Personnel with GIS experience in your section: 0-5
39. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 0-5
40. What Technical GIS Training (if any) have people in your unit had? None. Self taught – 0; Basic GIS class at Creel. Seven years ago..
12. Does a centralized Information Management/Technology department presently support your unit? YES.
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)?IM-none planned; no overhead. Through Information Management. None planned in this area. No overhead directed for CADD/GIS Systems.
41. To what level do you fund your present CADD/GIS activity? None.
42. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases: Intergraph MicroStation DSS Engineering Water Management  
GIS Databases: ;  
Non-CADD/GIS Databases: Excell; project up-keep; dBase-monument control.
41. What data do you get from external sources (which provider? what frequency)? NWS, USGS, NOAA, NOAA-control.  
Soft copy: x  
Electronic: x (Network: web, E-mail: ftp)
17. What information, if any, do you provide to others, and to whom? CADD files (Auto or Int) topo survey sent to mil installation; rare aerial photos to USGS, NWS, etc. Mapping done for PCC color photos maps etc.

- Database: None
- CADD System : AutoCAD; MicroStation
- GIS System: None
- Sharing by: Hard Copy
- Soft copy: x floppy: 3.5", tape: 8mm and CDROM
- Electronic: x Network, E-mail, & modem, or Internet [ftp]
18. What information (content) is portrayed or contained within the data your section uses?  
 CADD Topo mapping, survey mapping, photos of area.  
 Database descriptions x,y & z= on dBase; Excell non –graphic info pertaining to project.
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? Remote Sensing (GPS) etc.
20. What analysis are performed by your section using these sources?  
 CADD N/A at present . Make sure specifications followed.  
 GIS None  
 Database Update. Contractors will do this in future.
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
 CADD: Most maps 1:=30' for EN DSN ORWGS. All kinds of scales.
22. How often are these data sources updated and how are they updated?\_  
 CADD: No need in EN; base maps – project sites no more than about a year.  
 GIS N/A  
 Hardcopy: as needed.
23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): NT Platform – 2 PC's MicroStation; Rose has Intergraph W' station.
24. Denote your existing software and hardware training with respect to the following:
- Word processing:** Word x version      years of experience
- Spreadsheet:** Excel x version      years of experience
- CADD:** AutoCAD x version      years of experience       
 MicroStation x version      years of experience
- Databases:** Access x version      years of experience
- GIS:** None
25. What personnel do you envision requiring GIS training? All.
26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: Maps, plans, hard copy/soft copy: x Format: x Media: x  
 Images: . Aerial Photos, hard copy/soft copy: x, Format: x Media: x  
 Databases: inspections, Format: x, Media: x

Other data: , hard copy/soft copy:    x    , Format:    x    , Media: x

(Such as: land usage, geologic, soils, other thematic type, etc) sometimes.

27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?
  22. Open up public domain on internet; also give control data to public and project sites.
  23. Dbase with all photos of mission flown.
24. How do you believe a GIS will help (or hinder) you with your work? Will help.
25. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
Engineering, Planning, Operations, Environmental, Operations and Maintenance.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: Contractors, USGS, NOAA, NGS
31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced: design work comes from project manager of particular installation. Comes to design EN 1<sup>st</sup>. Specifications and bid package for contractor to bid on job. Then it goes to construction.
32. What other flows do you believe would be improved by applying a GIS? This flow? Yes-all would probably be improved. Updated version, quick retrieval, assured of accuracy.
52. Which workflows would you like to see GIS exercise during a demonstration project? EM Design flow
53. Please describe these work flows:
54. Which study projects performed by of the Mobile District?s responsibility would provide the most diverse examples of your application for a demonstration GIS project Anniston – any. Anniston need GIS organizational assessment done.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 2 June 1998

Interviewee Name and Title: Mark C. Seitz Cartographer

Address and/or Location: BW & S/Alabama Project Mgt. Office (OP-BA)

Telephone: \_\_\_ Fax: \_\_\_ E-mail: \_\_\_\_\_

Operational Unit Name (department/section): Navigation Unit Cartographic Unit

1. What is the department/branch/division/code/unit in which you work? OP-BA
2. What department/branch/division/code/unit do you report to? Operations
3. Briefly describe the mission of your department/section: **Dredging Maintenance on the Alabama, and BWT River Systems**
4. How many people are in your section? **3 office with CADD ability; 4 surveyors (water Hydro Surveyor)**
5. How many people are temporary and how many are permanent? **3 perm. 2 temp.**
6. Average number of years (working experience) for personnel: **16-greater**
7. Average education level of the people in your unit: **BS/BA**
42. Number of Personnel with CADD experience in your section: **0-5**
43. 9. Number of Personnel with GIS experience in your section: **0-5**
44. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): **0-5**.
45. 11. What Technical GIS Training (if any) have people in your unit had? **Intergraph GIS Training, GIS Contract Management.**
12. Does a centralized Information Management/Technology department presently support your unit? **Yes**
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? **We plan for it, purchase it. 5 year plan for HP/SW**
43. To what level do you fund your present CADD/GIS activity? **None; Actual \$50,000' Planned \$100,000**
44. 15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases **AutoCadd (Microstation on 2500, but not used)**  
GIS Databases **Excel, Dbase IV (Dredge Reports), Access**  
Non-CADD/GIS Databases
16. What data do you get from external sources (which provider? what frequency)?: **CEFMS**  
Database: **Oracle (CEFMS only)**  
CADD System: **AutoCAD; MicroStation**  
GIS System: **MGE; Not in Use**
17. What information, if any, do you provide to others - and to whom? **CADD files, to district and constructors.**  
Database: **Access**

CADD System: AutoCAD

Soft copy: CD-ROM

Electronic: Network, E-mail

18. What information (content) is portrayed or contained within the data your section uses?

CADD River Representation, Monumentation, Base Map Data

GIS None

Database Dredge Records (Excel and Access)

19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? maps, charts, aerial photos, drawings, etc.

20. What analysis are performed by your section using these sources?

CADD Dredge Cuts, upland design (disposal)

GIS None

Database Analyze dredging frequencies, trends

Hardcopy Report published yearly of all dredge data

21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?

CADD CADD Standards (Corps of Engineering/Tri Services)

GIS None

Database None

Hardcopy None

22. How often are these data sources updated and how are they updated?

CADD Updated as needed or as info is received. In process of storing on CD media.

GIS: None

Database None

Hardcopy as needed

23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): 3 CADD platforms; 1 possible GIS workstation

24. Denote your existing software and hardware training with respect to the following:

<b>Word processing:</b>	Word _____ x _____	version _____ years of experience	<u>4</u>
	WordPerfect <u>x</u> _____	version _____ years of experience	<u>4</u>
<b>Spreadsheet:</b>	Excel <u>X</u> _____	version _____ years of experience	<u>1</u>
<b>CADD:</b>	AutoCAD _____	version _____ years of experience	<u>4</u>
<b>Databases:</b>	Access _____	version _____ years of experience	<u>1</u>
	ORACLE <u>CEFMS</u> _____	version _____ years of experience	_____
	dBASE _____	version _____ years of experience	<u>1</u>
<b>GIS:</b>	Intergraph MGE _____	version _____ years of experience	<u>1/2</u>

Intergraph GeoMedia \_\_\_ version \_\_\_\_\_ years of experience 1/2

25. What personnel do you envision requiring GIS training? CADD operators.
26. What information do you presently possess or desire for conversion into the GIS:  
Drawings: DWG's, Photos .hard copy/soft copy  
Images: None  
Databases: None  
Other data: None
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)? Manage our project (all process in the Lock and Dam, Dredging and database information in a format that require less translation from HP to AutoCAD, etc.)
26. How do you believe a GIS will help (or hinder) you with your work? Estimating dredge access.
27. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
Not Using
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: USGS, Gage reading on locks (electronic) Hand R, P.M.S (lock and dam instrumentation), SMART (monument database)
31. Describe the typical workflows in your organization for which CADD/GIS data is utilized or produced: Survey, convert data, plot, dredge setup.
32. What other flows do you believe would be improved by applying a GIS? Management of their project maintenance historic record, planning, etc.
55. Which workflows would you like to see GIS exercise during a demonstration project? Not Sure
34. Please describe these workflows: N/A
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? Not Sure what is out there  
Notes: Photo Science & Earth Tech is in the process of producing LIDAR for the 6 sites, also digital photo for 1,000' past the top bank, Alabama, Black Warrior River.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 27 May 1998

Interviewee Name and Title: Paul Warren –OP-PW

Address and/or Location: Investigator Area Office.

Telephone: -957-6019 Fax: E-mail:

Operational Unit Name (department/section):     

1. What is the department/branch/division/code/unit in which you work? Operations Dir. Physical Support OP-P
2. What department/branch/division/code/unit do you report to? Pat Langlan
45. Briefly describe the mission of your department/section: Branch primarily maintains federal navigation channels along MS AL FL coast. .
46. How many people are in your section? 6 in two offices
5. How many people are temporary and how many are permanent? 5 temp.
6. Average number of years (working experience) for personnel: 16-greater
7. Average education level of the people in your unit: High School
46. Number of Personnel with CADD experience in your section: 0-5
47. Number of Personnel with GIS experience in your section: 0-5
48. Average CADD/GIS knowledge level of the people in your unit (yrs/experience):
49. What Technical GIS Training (if any) have people in your unit had? GIS Orientation; 2 vo-tech; sent people off to training and seminars.
12. Does a centralized Information Management/Technology department presently support your unit? Server in each office; LAN connected.
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)?Worked within district IM-Information Management
47. To what level do you fund your present CADD/GIS activity? Funded with own budget request.
48. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?
49. CADD Databases: AutoCAD and MicroStation  
GIS Databases: Intergraph Machines  
Non-CADD/GIS Databases: contractors. Coastal Emergency Radio System. Operate maintenance Site – Microwave Radio System to Mission to Central America.
50. What data do you get from external sources (which provider? what frequency)? Contractors – maps, digital data of surveys, aerial photography.  
Database: Access  
CADD System: AutoCAD

- GIS System: None
- Soft copy: becoming more topo quad.
- Electronic: X (Network E-mail and ftp)
17. What information, if any, do you provide to others, and to whom? Contracts soft to district engineering firms contractors.
- Database: None
- CADD System : None
- GIS System: None
- Sharing by: Hard Copy
- Soft copy: x (floppy: 3.5" or 5.25", tape: 8mm, 4mm, or \_\_\_\_\_ )
- Electronic: x (Network: Web, E-mail: x, modem, or Internet [ftp] Metadata)
18. What information (content) is portrayed or contained within the data your section uses?
- CADD: Web page info- dredging schedules getting involved silent inspector. Automated process that collects info about performance of dredged plant, historic, real time, analysis, forecasting, trends.
- GIS: None
- Database: Anticipate commercial people will be interested in those. Concerning navigational and aquatic. About to enter into Waterways Exp. Station DOER COE National program
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? maps, charts, aerial photos, brochures, tables and letters/memos DMSMART- different double of information interlaced through ArcInfo and ArcView where all historical dredged data will be stored.
20. What analysis are performed by your section using these sources?
- CADD Analysis-condition of channel., Yardage computations of removal. Cost estimates
- GIS: Steve-Needs Survey; Paul –Design Dikees; Predict on Contractors based (shoaling)
- Database Suspended Sediment; Monumentation Research needs to be upgraded.
- Hardcopy Change in shorelines/Trends.
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?
- CADD: Carol – Survey more or less .2 vertical cm level-1 mi. horizontal maps – 1/2 foot according to standard.
- GIS COE Standards.
22. How often are these data sources updated and how are they updated?.
- CADD: Updated daily, weekly, monthly, etc. training annually; program planning 5-10 years..
23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.); NT operating system with pentiums. 14-nt's, Not Unix, 1/2 = 15 PC NT platform. Essentially all word.
24. Denote your existing software and hardware training with respect to the following:
- Word processing:** Word x version     years of experience
- WordPerfect x version     years of experience

**Spreadsheet:** Excel   x   version \_\_\_\_\_ years of experience \_\_\_\_\_

**CADD:** AutoCAD   x   version \_\_\_\_\_ years of experience \_\_\_\_\_  
MicroStation   x   version \_\_\_\_\_ years of experience \_\_\_\_\_

**Databases:** Access   x   version \_\_\_\_\_ years of experience \_\_\_\_\_

**GIS:** ESRI ARC/INFO   x   version \_\_\_\_\_ years of experience \_\_\_\_\_  
Intergraph MGE   x   version \_\_\_\_\_ years of experience \_\_\_\_\_

25. What personnel do you envision requiring GIS training? Everyone
26. What information do you presently possess or desire for conversion into the GIS:  
Drawings: Maps, plans, hard copy  
Images: Aerial Photos, hard copy  
Databases: inspections, Format: Access
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
28. Reports-accessible web  
29. Survey Data 3-D model
30. How do you believe a GIS will help (or hinder) you with your work? Will help.
31. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
All.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: USGS, NWS, NOAA, Coast Guard. A&E Contractors, Port Authorities, Commercial Shipping..
31. Describe the typical workflows in your organization for which CADD/GIS data is utilized or produced: Offices – Survey, engineering, inspection, administration, excluding elect. Adm – planning, assignments; Survey and inspection – gather data. Engineers analyze.
32. What other flows do you believe would be improved by applying a GIS? Flow of information would be quicker, more accurate more timely.
56. Which workflows would you like to see GIS exercise during a demonstration project? Everything at one time.
57. Please describe these work flows:
58. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project Mobile Harbor.

Notes:

Vision-Utopia

Tech interface on project would have GIS and mg if get all input. To show district wide Natural Resources – Geographic attributes to inventory and catalog. Projects enter information one time with use of theirs not impacting data. Data to be a tool. No burden benefit.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 29 May 98

Interviewee Name and Title: Robert "Bob" Bond – Chief Civil Work Project Mgr.

Address and/or Location: Room 3012 Mobile District Office

Telephone: 334-690-3216 Fax: 334-690-3208 E-mail: robert.m.bond@sam.usace.army.mil

Operational Unit Name (department/section): Civil Works Programs and Project Management Branch

1. What is the department/branch/division/code/unit in which you work? Civil Works Programs and Project Management Branch
2. What department/branch/division/code/unit do you report to? Chief of Program & PM (Div. Chief & Deputy)
3. Briefly describe the mission of your department/section: **Program & PM to Civil Projects Budget they submit to congress (funding Ref.) Schedule & Cost of Civil Project Project Act. By Congress.**
4. How many people are in your section? **14**
5. How many people are temporary and how many are permanent? **All Perm.**
6. Average number of years (working experience) for personnel: **(24+25 years.)**
7. Average education level of the people in your unit: **BS/BA**
8. Number of Personnel with CADD experience in your section: **None**
9. Number of Personnel with GIS experience in your section: **None**
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): **0-5**
11. What Technical GIS Training (if any) have people in your unit had? **None**
12. Does a centralized Information Management/Technology department presently support your unit? **YES**
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? **Assess their needs and order it from IM**
14. To what level do you fund your present CADD/GIS activity? **None**
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases **N/A**  
GIS Databases **N/A**  
Non-CADD/GIS Databases **N/A**
16. What data do you get from external sources (which provider? what frequency)? **Varys**  
Database: **Access, Excel, Lotus from Headquarters or Division**  
CADD System: 9AutoCAD 9MicroStation 9Other **N/A**  
GIS System: 9ARC/INFO 9ArcView 9GeoMedia 9MGE 9Other **N/A**  
Sharing by: **Hard copy, paper - (internal only)**  
Soft copy: **floppy (rarely)**  
Electronic: **Network, E-mail, modem, or Internet [ftp] (Budgets, etc. from outside source.)**

17. What information, if any, do you provide to others - and to whom? **Update the Access, Lotus and E-mail Data to Headquarter/Division**  
 Database: N/A  
 CADD System: N/A  
 GIS System: N/A  
 Sharing by: N/A  
 Electronic: **Network, E-mail, modem, or Internet [ftp]**
18. What information (content) is portrayed or contained within the data your section uses?  
 CADD N/A  
 GIS N/A  
 Database **updates of information received in databases from time to time (Access)**
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? **Limited use for Project Manager Navigation Charts, Aerial Photos; Brief District Command may use Aerial Photo, Charts, etc. to explain status of the ongoing projects used for visual tool.**
20. What analysis are performed by your section using these sources?  
 CADD N/A  
 GIS N/A  
 Database N/A  
 Hardcopy **Aerial Photo construction progress (% complete) also for Visual Reports and reviews. PM may track status of projects.**
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
 CADD N/A  
 GIS N/A  
 Database N/A  
 Hardcopy N/A
22. How often are these data sources updated and how are they updated?  
 CADD N/A  
 GIS N/A  
 Database **Headquarter files: maybe quarterly, at different times of the year**  
 Hardcopy **Headquarter files: maybe quarterly, at different times of the year**
23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): **14 PCs P.M. maintenance status report CEFMS and secretary use, E-mail, etc.**
24. Denote your existing software and hardware training with respect to the following:  
**Word processing:** Word x version 6.0 years of experience 2  
**Spreadsheet:** Excel x version 6.0 years of experience 2

other Lotus version 6.0 years of experience 10

**CADD:** None

**Databases:** Access x version 6.0 years of experience 2

**GIS:** None

25. What personnel do you envision requiring GIS training? **1 person-maybe (Map book data)**
26. What information do you presently possess or desire for conversion into the GIS:
- Drawings: None
- Images: None
- Databases: None
- Other data: **Project review report in Lotus Notes that can be accessed by people in the District (Read Only)**
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)  
**N/A See Above**
- 28.** How do you believe a GIS will help (or hinder) you with your work? **Limited impact, PRU report help with Project Management, on overview project.**
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS? Prism Database is project management. There are several databases in Headquarters that would be nice to have easy access to.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: **Might have database from state?, Project Manager is the Primary Contact for Cost feasibility study (jointly with operations), so there could be a need to access outside Database for feasibility studies.**
31. Describe the typical workflow in your organization for which CADD/GIS data is utilized or produced: N/A
32. What other flows do you believe would be improved by applying a GIS? See 30.
33. Which workflow would you like to see GIS exercise during a demonstration project? **See 30**
34. Please describe these work flows: See 30
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? **(Dog River) Feasibility Phone Study, Metro Atlantic Feasibility Study.**

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 5 May 1998

Interviewee Name and Title: Robert Chamblee

Address and/or Location: COE, Mobile

Telephone: 694-2685 Fax:      E-mail:

Operational Unit Name (department/section): Geotechnical and Dam Safety EN-GG

1. What is the department/branch/division/code/unit in which you work? Chief of Engineering
2. What department/branch/division/code/unit do you report to? Hal Smith Chief of Engineering
50. Briefly describe the mission of your department/section: Several different missions . Support district civil works, HTW, managing dam safety programs, locks, etc. Instrumentation with project and reporting. Making sure project functions and subsurface investigation.
51. How many people are in your section? Geotechnical supports Civil Works.
5. How many people are temporary and how many are permanent? All Permanent
6. Average number of years (working experience) for personnel: 16-greater
7. Average education level of the people in your unit: BS/BA; few with MS/MA
51. Number of Personnel with CADD experience in your section: 6-10, 2 with MicroStation
52. Number of Personnel with GIS experience in your section: 0-5
53. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 5-6
54. What Technical GIS Training (if any) have people in your unit had? To date, none. One employee going to GIS class.
12. Does a centralized Information Management/Technology department presently support your unit? Yes, server for engineering.
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? Goes through IM for acquiring purchases.
52. To what level do you fund your present CADD/GIS activity? Still trying to find way to fund.
53. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases: Excel Spreadsheets for maintaining instrumentation.  
GIS Databases: Ask mark.  
Non-CADD/GIS Databases:
55. What data do you get from external sources (which provider? what frequency)? USGS maps, SCS maps and data, aerial photography.  
Database: Access  
CADD System: MicroStation

- GIS System: Arc/INFO  
 Sharing by: Hard copy paper  
 Soft copy: 5.25
17. What information, if any, do you provide to others, and to whom? Subsurface investment foundation reports with recommendations for both military and civil COE. Ground water studies-reports. Central and South America aquifers and possible sites for wells.  
 Database: Excell  
 CADD System: AutoCAD; MicroStation  
 GIS System: N/A  
 Sharing by: Email, floppy  
 Soft copy: floppy: 3.5"  
 Electronic: Network E-mail
18. What information (content) is portrayed or contained within the data your section uses?  
 CADD: geotechnical-geologic; present information on borings, cross sections in military construction several bases in house system.  
 GIS Applicable with military bases where we can see what has been done, being  
 Database geologic profiles; narrative write-ups; design analysis; dam safety includes plots of instrument data; monthly readings from projects for updated reports done in graphical form.  
 Database
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? AutoCAD
32. What analysis are performed by your section using these sources?  
 CADD Subsurface-see previous page.
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
 CADD In planview 1":30'; 1:100, 1:50  
 GIS In graphic views for reports, time line plotted months/years vs. boring log information=vertical scale 1:18".  
 Database N/A  
 Hardcopy N/A
22. How often are these data sources updated and how are they updated? N/A  
 CADD: Function of design, etc. most frequent, once per quarter.  
 GIS instrument report 1/4  
 Hardcopy
23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): GIS
24. Denote your existing software and hardware training with respect to the following:

**Word processing:** Word   x   version \_\_\_\_\_ years of experience \_\_\_\_\_

**Spreadsheet:** Excel   X   version \_\_\_\_\_ years of experience \_\_\_\_\_

**CADD:** AutoCAD   X   version \_\_\_\_\_ years of experience \_\_\_\_\_

MicroStation   X   version \_\_\_\_\_ years of experience \_\_\_\_\_

**Databases:** Access   X   version \_\_\_\_\_ years of experience \_\_\_\_\_

**GIS:** None

25. What personnel do you envision requiring GIS training? John Baker and Ron Nettles need to see how much application. Possibly CADD technician.
26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: USGS quad, hard copy  
 Images: : aerial photographs, hard copy  
 Databases: Excel and some Access
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?
33. Potential application in documenting boring and geological information, although already have one in place. Instrumentation work.
34. How do you believe a GIS will help (or hinder) you with your work? Will help, but have concerns. Hard to say, not a lot of information.
35. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS? All with engineering and design. Within all areas of interfacing. EN, PLG, OPS, and possibly construction, accessing information, files within EN-because of working.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: Other COE districts – USGS – SCS – from field office (for construction)
31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced: In terms of CADD-EN, techs – EN put together project a product own drawings – technicians – check and correct by EN.
32. What other flows do you believe would be improved by applying a GIS?
33. Which workflows would you like to see GIS exercise during a demonstration project?
34. Please describe these work flows:
35. Which study projects performed by of the Mobile District?s responsibility would provide the most diverse examples of your application for a demonstration GIS project Application Civil Wroks projects and locating instrumentation and projects.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 5/26

Interviewee Name and Title: Reid S. Ferrill, Realty Specialist/Systems Administrator

Address and/or Location: Mobile District, 109 St. Joseph Street, Mobile, AL 36628-0001

Telephone: 334-694-3648 Fax: 334-690-2548 E-mail: reid.s.ferrill@sam.usace.army.mil

Operational Unit Name (department/section): Real Estate

1. What is the department/branch/division/code/unit in which you work? Real Estate Division
2. What department/branch/division/code/unit do you report to? Real Estate Division
3. Briefly describe the mission of your department/section: Maze Ercums boss to John Crowley
4. How many people are in your section? 6 (Audio Section)
5. How many people are temporary and how many are permanent? 6-permanent
6. Average number of years (working experience) for personnel: 16-greater
7. Average education level of the people in your unit: High School (1 with Masters)
8. Number of Personnel with CADD experience in your section: 0-5
9. Number of Personnel with GIS experience in your section: 0-5
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 0-5
11. What Technical GIS Training (if any) have people in your unit had? Informal hands on
12. Does a centralized Information Management/Technology department presently support your unit? YES
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? 6 yrs ago, didn't have computer
14. To what level do you fund your present CADD/GIS activity? No Budget
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases 2 CADD – Intergraph; MicroStation; Real Estate Division  
GIS Databases Land Plates  
Non-CADD/GIS Databases Ownership
16. What data do you get from external sources (which provider? what frequency)?: Various providers at Various times  
Database: Other REMIS Basic System on now.  
CADD System: MicroStation  
GIS System: N/A  
Sharing by: Hard copy - paper  
Soft copy: N/A  
Electronic: Network, E-mail, modem, or Internet [ftp]

17. What information, if any, do you provide to others - and to whom?  
 Database: **Other Engineering & BPS is sharing**  
 CADD System: **MicroStation**  
 GIS System: **N/A**  
 Sharing by: **Hard copy - paper**  
 Soft copy: **floppy: 3.5" or Zip Disk**  
 Electronic: **Network, E-mail, modem, or Internet [ftp]**
18. What information (content) is portrayed or contained within the data your section uses?  
 CADD **EN takes total sta in field**  
 GIS **want to, but things-external.**  
 Database
19. What is the format (hard copy) of other data that is used by your section? **maps, charts, aerial photos, and drawings (NO RS)**
20. What analysis are performed by your section using these sources?  
 CADD **Real Estate Ownership Maps.**  
 GIS **N/A**  
 Database **Kevin Marek**  
 Hardcopy **yes, produced**
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
 CADD **Various**  
 GIS **N/A**  
 Database **Various**  
 Hardcopy **Various**
22. How often are these data sources updated and how are they updated?  
 CADD **updated, as needed**  
 GIS **critical. A lot are ink.**  
 Database **hard copy sitting in drawer**  
 Hardcopy **hard copy sitting in drawer**
23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): **Left Blank**
24. Denote your existing software and hardware training with respect to the following:
- |                         |                          |                  |                           |
|-------------------------|--------------------------|------------------|---------------------------|
| <b>Word processing:</b> | Word <u>4.3</u>          | version <u>6</u> | years of experience _____ |
| <b>Spreadsheet:</b>     | Excel <u>x</u>           | version _____    | years of experience _____ |
| <b>Databases:</b>       | Access <u>x</u>          | version _____    | years of experience _____ |
|                         | ORACLE <u>REMIS only</u> | version _____    | years of experience _____ |

- GIS: Intergraph MGE x version \_\_\_\_\_ years of experience \_\_\_\_\_
25. What personnel do you envision requiring GIS training? Kevin Merah
26. What information do you presently possess or desire for conversion into the GIS: all  
 Drawings: Both hard copy/soft copy , Media: Various  
 Images: Both hard copy/soft copy (aerial photographs, satellite images, terrestrial photos)  
 Databases: N/A  
 Other data: None
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
printed maps – updated, need to satisfy customer/client needs, in mylar. Re Employees drew maps, redundancy in map making.
28. How do you believe a GIS will help (or hinder) you with your work? Helps by putting info into dig format for ease of extraction.
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
Up to date data. Operations, EN, a lot of leased land, good for report making.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: Cultural information, Yes cost. A lot of people in COE wanting connection with state info.
31. Describe the typical workflow in your organization for which CADD/GIS data is utilized or produced:  
See Mission statement and answers on previous pages.
32. What other flows do you believe would be improved by applying a GIS? Show what can be done.
33. Which work flows would you like to see GIS exercise during a demonstration project? Dog and Pony show in Real Estate
34. Please describe these work flows: Just simply wants digital information
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? Map overlays
- Notes: Overlay map over digital photos. Fundamental planning reports. Appraisers. Timber and Value

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 28MAY98

Interviewee Name and Title: Ron Nettles, Civil Engineer

Address and/or Location: Room EN-66, Mobile District Office

Telephone: 334-690-3437 Fax: 334-690-2674 E-mail: Ronald.L.Nettles@SAM.USACE.MIL

Operational Unit Name (department/section): EN-GG Dam Safety & Soil Design Section

1. What is the department/branch/division/code/unit in which you work? Geotechnical & Hazardous Waste Branch
2. What department/branch/division/code/unit do you report to? EN-GG
3. Briefly describe the mission of your department/section: Preform subsurface investigation, investigation of structure (dam, Lock, etc.), Geotechnical Design (foundation of Building, etc.)
4. How many people are in your section? 10 soil section & 5 geotechnical (total of 15)
5. How many people are temporary and how many are permanent? 1 co-op, 14 permanent
6. Average number of years (working experience) for personnel: 11-15
7. Average education level of the people in your unit: BS/BA
8. Number of Personnel with CADD experience in your section: 6-10
9. Number of Personnel with GIS experience in your section: No one
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 4 to 5 years
11. What Technical GIS Training (if any) have people in your unit had? None to date
12. Does a centralized Information Management/Technology department presently support your unit? Yes
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? They ask IM for what they need.
14. To what level do you fund your present CADD/GIS activity? None
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases ASCII use MDL files that reads data, draws boring logs.  
GIS Databases Boring (soil or rock) GIS database, X & Y(state Plane N & E) MDL loads cells for boring locations, started load into pdf format over thea month period (future method for borings), Lock / Dam instruments (resources).

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Non-CADD/GIS Databases Managers

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at the Lock & Dam use MDL to plot into MicroStation, also in Excel spreadsheets for the majority of this data.)

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16. What data do you get from external sources (which provider? what frequency)?: Hardcopy - They want to receive this data in pdf format as they are scanning into pdf to control the amount of paper.
- 

Database: N/A

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CADD System: Survey information in CADD format

GIS System: None at this time

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Sharing by: Hard copy: paper

Soft copy: CDROM and floppy(rare)

Electronic: X (Network: X, E-mail: Rare, modem, or Internet [ftp] X )

17. What information, if any, do you provide to others - and to whom? Provide appendix to specifications for most contracts (not all), foundation report, boring logs, lab test data in WordPerfect (Word), they produce inspection reports of the Lock & Dams includes Word documents, charts, photos (digital).
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- 

Database: N/A

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CADD System: Location Maps, earthwork projects, etc.

GIS System: N/A

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Sharing by: Hard copy: (paper - foundation reports)

Soft copy: floppy: 3.5" (Rare)CRDROM (they need WORM drive)

Electronic: X (Network: Local/WAN, E-mail: X)

18. What information (content) is portrayed or contained within the data your section uses?

CADD Subsurface modeling (is contain in the boring logs), early into project 50% to 60% complete on a project (the earlier the better.)

GIS N/A Database N/A

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19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? Aerial Photos, and USGS (rarely used), surface logs and paper (by fax or mail)
-



GIS: N/A

25. What personnel do you envision requiring GIS training? Possible Engineers and Technicians. Need GPS training for field personnel for data collection

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26. What information do you presently possess or desire for conversion into the GIS:

Drawings: CADD files , Images: Aerial Photos Databases: N/A

Other data: Boring Logs

27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?

1. Rock, Ground Water (all subsurface information)

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28. How do you believe a GIS will help (or hinder) you with your work? Ability to pull data quickly including historic data from 1970's & 80s(microfishe, etc.) Scanning microfishe (Historic data), they have about a need for some of this data and existing projects.

29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS? Hydraulic data for pool (lake levels), they would like the daily information for the lake levels, they new pull this data monthly or as needed from a bulletin board or Web Site.

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30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS?

Please identify: Could use informtion for soil boring if the exist, test data soil sample, might be able to use soil data for counties in the District area.

31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced:

Soil boring data (on paper), run MDL to insert boring into MicroStation, then convert to pdf file.

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32. What other flows do you believe would be improved by applying a GIS? See Previous pg. 2-5

33. Which work flows would you like to see GIS exercise during a demonstration project? See previous page 2-5.

34. Please describe these work flows: See Previous page 2-5 and above 31.

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35. Which study projects performed by of the Mobile District?s responsibility would provide the most diverse examples of your application for a demonstration GIS project? Quicker turn around on projects.

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Notes: Database for lab data - Triaxid (shear test reports - (3 types: 1. unconsolidated undrain 2. consolidated undrain 3. drained) and consolidated test (cost are high for these tests.) Test reports Hard copy - developed in-house and/or OTS software (WES organizer). The reports take to long to receive data, need quicker turn-around.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 27 May 98

Interviewee Name and Title: Roger Simmons, Chief Strategic Initiatives Branch

Address and/or Location:

Telephone: 334-694-3830 Fax: ? E-mail: Roger N. Simmons@USACE.SAM.Army.mil

Operational Unit Name (department/section): Strategic Initiatives & SFO Project Management Branch

1. What is the department/branch/division/code/unit in which you work? Sam-PM-I
2. What department/branch/division/code/unit do you report to? Sam-PM-I
3. Briefly describe the mission of your department/section: Marketing and Project Management and Environmental Support for others and latin America Projects. Marketing for
4. How many people are in your section? 15
5. How many people are temporary and how many are permanent? All permanent.
6. Average number of years (working experience) for personnel: 16-greater
7. Average education level of the people in your unit: BS/BA
8. Number of Personnel with CADD experience in your section: None
9. Number of Personnel with GIS experience in your section: None
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): None
11. What Technical GIS Training (if any) have people in your unit had? None
12. Does a centralized Information Management/Technology department presently support your unit? YES
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? N/A
14. To what level do you fund your present CADD/GIS activity? None
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases N/A  
GIS Databases N/A  
Non-CADD/GIS Databases Amperes (being replaced by PROMIS), PROMIS, OUTREACH
16. What data do you get from external sources (which provider? what frequency)? : N?A  
Database: N/A  
CADD System: 9AutoCAD 9MicroStation 9Other N/A  
GIS System: Other Viewer (for Proj. Mgrs.)  
Sharing by: Hard copy: Paper Drawing, spec, maps, contractor  
Electronic: Network , E-mail, modem, and Internet [ftp]
17. What information, if any, do you provide to others - and to whom? PRB Reports (Oracle?)

- Database: Ξ Oracle  
 CADD System: N/A  
 GIS System: N/A  
 Sharing by: Hard copy: paper mainly  
 Electronic: Network, E-mail, modem, and Internet [ftp]
18. What information (content) is portrayed or contained within the data your section uses?  
 CADD N/A  
 GIS N/A  
 Database Cost, schedules, staus, project description and percent complete (contract)
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc. Briefing Charts (PowerPoint)
20. What analysis are performed by your section using these sources?  
 CADD N/A  
 GIS N/A  
 Database Updates, Review, Status, Upward Reporting (electronic)  
 Hardcopy Updates, Review, Status, Upward Reporting (electronic)
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
 CADD N/A  
 GIS N/A  
 Database N/A  
 Hardcopy 8 1/2" X 11" PAPER
22. How often are these data sources updated and how are they updated?  
 CADD Monthly by individual project managers and budget analysis.  
 GIS N/A  
 Database See bottom of previous page.
23. Briefly describe your sections? CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): None
24. Denote your existing software and hardware training with respect to the following:
- |                         |   |
|-------------------------|---|
| <b>Word processing:</b> | Word <u>Ξ</u> version _____ years of experience <u>3</u>            |
|                         | WordPerfect <u>Ξ</u> version _____ years of experience <u>3</u>     |
| <b>Spreadsheet:</b>     | Excel <u>Ξ</u> version _____ years of experience <u>1</u>           |
|                         | other <u>Power Point</u> version _____ years of experience <u>2</u> |
| <b>CADD:</b>            | <u>N/A</u>  |
| <b>Databases:</b>       | <u>Utilized in software such as PROMISE, AMPERES, etc.</u>          |
| <b>GIS:</b>             | <u>N/A</u>  |

25. What personnel do you envision requiring GIS training? None
26. What information do you presently possess or desire for conversion into the GIS: N/A
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
None - Possible Marketing
28. How do you believe a GIS will help (or hinder) you with your work? Open to GIS to help with Marketing Etc.
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
Could not say, not sure what is out there.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS?  
Please identify: Not sure what is out there
31. Describe the typical workflow in your organization for which CADD/GIS data is utilized or produced: See Mission on page one.
32. What other flows do you believe would be improved by applying a GIS? Not Sure
33. Which workflow would you like to see GIS exercise during a demonstration project? \_\_?
34. Please describe these workflow: \_\_?
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? Not sure what is out there

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 2 June 1998

Interviewee Name and Title: Tony Palmer (Project Forester) and D. Allen Brewer (P.E. Civil Engineer)

Address and/or Location: Columbus Area Office 3606 W. Plymouth Road; Columbus, MS 39701

Telephone: 601-327-2142 Fax: 601-328-8766 E-mail:           

Operational Unit Name (department/section): CSAM-OP-CO Navy Natural Resources

1. What is the department/branch/division/code/unit in which you work? CSAM-OP-CO
2. What department/branch/division/code/unit do you report to? CSAM-OP
3. Briefly describe the mission of your department/section: Natural Resource Wildlife Support Group – support Wildlife (Habitat, species)
4. How many people are in your section? 5 - Natural Resource (Wildlife Support) / 6 - Navigation
5. How many people are temporary and how many are permanent? All Permanent
6. Average number of years (working experience) for personnel: 6-10
7. Average education level of the people in your unit: BS/BA
56. Number of Personnel with CADD experience in your section: 6-10
57. 9. Number of Personnel with GIS experience in your section: Nat. Res. (none); Navigation 2 years (1)
58. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): Navigation: 0-5 yrs; Natural Resource 0-5 yrs.
59. 11. What Technical GIS Training (if any) have people in your unit had? Nat. Res. (3 people), Navigation (1)
12. Does a centralized Information Management/Technology department presently support your unit? Yes
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? In-house assessment of HD/SW, then IM purchase HD/SW, then Navig. & Nat. Res. Hydrology Survey (HGS Software) data collection runs with AutoCad.
54. To what level do you fund your present CADD/GIS activity? AutoCAD rel. 14 GG Funds-GIS
55. 15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?
56. CADD Databases: Dredging Surveys (since 1995) digital, and maintenance on locks.
57. GIS Databases: Nat Reg. – Contractor/Subcontractor; 13 Habitat Types, Habitat 12 species model. Base Maps (Property Line, Roads, Waterway) used in Development of GIS for Habitat other Base Map info was from MARIS ( such as USGS, County Maps), such as GPS locations on wood duck, box, multi-species videography on CD-ROMs.

Non-CADD/GIS Databases: Material from Disposal area in EXCEL Spreadsheet (Volume in Disposal Areas, etc.)

16. What data do you get from external sources (which provider? what frequency)?: **Data from MARIS (as needed or as it is updated), other data from Alabama (county map data).**  
 Database: N/A  
 CADD System: Alabama ADOT  
 GIS System: MARIS Data  
 Sharing by: Hard copy – Paper , fax  
 Soft copy: Internet  
 Electronic: Internet [ftp] – MARIS and ADOT
17. What information, if any, do you provide to others - and to whom? **None-Data Provided to contracts for (dredging) survey for material removed.**  
 Database: N/A  
 CADD System: N/A  
 GIS System: N/A  
 Sharing by: Hard copy - paper and fax (rare)  
 Soft copy: floppy: 3.5"  
 Electronic: Rare
18. What information (content) is portrayed or contained within the data your section uses?  
 CADD Dredging data, survey data (see 15 for details)  
 GIS Habitat, specific, etc. for Nat. Res. (See 15) .  
 Database See 15 above
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? **USGS Quad in Raster (.tif) Hardcopy Quads Aerial photos (they are scanning Aerial Photo as they need them).**
20. What analysis are performed by your section using these sources?  
 CADD Background, and/or location, of project (land owner Flooding etc.)  
 GIS Background (Base Mapping).  
 Database N/A  
 Hardcopy Same As Above for CADD and GIS
21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
 CADD NAD 83 (same translation for NAD 27) Dredging submeter on DGPS data.  
 GIS Same as Above  
 Database N/A  
 Hardcopy N/A
22. How often are these data sources updated and how are they updated? N/A  
 CADD On an as-need Basis (GPS for Dredgin almost daily)

GIS ? On an as need basis.

Database N/A

Hardcopy N/A

23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): 2 PCs AutoCAD (Window 95) MicroStation on WNT; Nat. Res. (1) Sparc Workstation (ARC/INFO update Solaris 2.6, PC Arc/Info (not install), CalComp Plotter, Yamaha CD-Writer HP 75 Scan Plotter, HP Scanner, Digital Cameras

24. Denote your existing software and hardware training with respect to the following:

**Word processing:** Word  x  version  6.0  years of experience  2   
WordPerfect  x  version   years of experience  2   
other  MultiMate  version  4  years of experience  2

**Spreadsheet:** Excel  x  version  6.0  years of experience  2   
Quattro Pro  x  version   years of experience    
other  Lotus 123  version   years of experience  5-6

**CADD:** AutoCAD  x  version  14  years of experience  6 or 7   
MicroStation  x  version   years of experience  0

**Databases:** Access  x  version  6.0  years of experience  2   
dBASE  x  version  3  years of experience  4or 5

**GIS:** ESRI ARC/INFO  x  version   years of experience  1   
ESRI ArcView  x  version   years of experience  1

25. What personnel do you envision requiring GIS training? 11 people or more if you include rangers .

26. What information do you presently possess or desire for conversion into the GIS:

Drawings: USGS Quads, Road Data, Contour Data, Survey data (dredging) Navig. Aids.

Such as: maps, plans, etc.)

Images: Aerial Photos, both hard copy/soft copy - digital if possible, Wetland Data, culture data (arch)

Databases: None

27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?.

Sec. 15, 25 etc., Habitat box, (to tract Wildlife use of Box and non use) of Box, to be able to move to locations that might make box more useful. (Road Management signs, camp-ground, track contours, Permitting (Permits- Boat docks, Ramps, Bulk Head etc.)

1. How do you believe a GIS will help (or hinder) you with your work? See above
2. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS? District wetlands data, environmental Data (regulations, etc.), Aerial Photo, etc.
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: MARIS, ADOT, MDOT, MDEQ, Alabama Environmental Department Management

31. Describe the typical workflows in your organization for which CADD/GIS data is utilized or produced: **See 15, 16, 25, 26, 27, 28 & 29**
32. What other flow do you believe would be improved by applying a GIS? **Same as above heavy in 28 and 29.**
35. Which workflow would you like to see GIS exercise during a demonstration project? **Habitat is on-going (being developed now).**
34. Please describe these workflow: **27, 28, 29 (see these for workflow.)**
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? **Habitat GIS that is being developed would be a good example**

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 5MAY98

Interviewee Name and Title: Van McWhorter – Park Ranger

Address and/or Location: USCOE P.O. Box 98, Collinsville, MS 39325

Telephone: 601-626-8431 Fax: 601-626-8750 E-mail: ?

Operational Unit Name (department/section): OP-OL (Okatibbee Lake)

1. What is the department/branch/division/code/unit in which you work? OP-OL
2. What department/branch/division/code/unit do you report to? CESAM-OP-OL
3. Briefly describe the mission of your department/section: **Natural Resource management and Park operations**
4. How many people are in your section? **10**
5. How many people are temporary and how many are permanent? **9 Permanent, 1 seasonal**
6. Average number of years (working experience) for personnel: **16-greater**
7. Average education level of the people in your unit: **BS/BA**
8. Number of Personnel with CADD experience in your section: **1 (just a class in GIS/CADD)**
- 9.** 9. Number of Personnel with GIS experience in your section: **1 (just a class in GIS/CADD)**
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): **very little**
- 11.** 11. What Technical GIS Training (if any) have people in your unit had? **See above**
12. Does a centralized Information Management/Technology department presently support your unit? **No**
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? **None**
14. To what level do you fund your present CADD/GIS activity? **None**
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases **None**  
GIS Databases **None**  
Non-CADD/GIS Databases **None**
16. What data do you get from external sources (which provider? what frequency)? **None**  
Database: **None**  
CADD System: **None**  
GIS System: **None**  
Sharing by: **None**  
Soft copy: **None**  
Electronic: **None**
17. What information, if any, do you provide to others - and to whom? **None**

Database: N/A

CADD System: N/A

GIS System: N/A

Sharing by: Hard copy - (letter)

Soft copy: None

Electronic: Network E-mail

18. What information (content) is portrayed or contained within the data your section uses?

CADD: None

GIS: None

Database: None

19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? See above - None

20. What analysis are performed by your section using these sources?

CADD: None

GIS: None

Database: None

Hardcopy: None

21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?

CADD: None

GIS: None

Database: None

Hardcopy: None

22. How often are these data sources updated and how are they updated? N/A

CADD: None

GIS: None

Database: None

Hardcopy: None

23. Briefly describe your section's CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): None

24. Denote your existing software and hardware training with respect to the following:

**Word processing:** Word 97 version 6.0 years of experience 2

**Spreadsheet:** Excel 97 version 97 years of experience 2

**CADD:** None

**Databases:** ORACLE CEFMS (only) version \_\_\_\_\_ years of experience \_\_\_\_\_

**GIS:** None

25. What personnel do you envision requiring GIS training? **Park Rangers Staff**
26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: **Map (Base Maps) in hard copy**  
 Images: **Aerial Photos, in hard copy**  
 Databases: **None**  
 Other data: **Landuse - Maintenance, campsite, and habitat for wildlife data, in hard copy or non-existence**
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
**Project wide forest inventory and management program**
28. How do you believe a GIS will help (or hinder) you with your work? **Help to keep track of data**
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
 Not what is out there
30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify: **Mississippi fisheries and Parks, Power Company Lease (Right-of-Way) information, lease of Marina (boat ramps, etc.), Meridian Naval Station (Master Plan)**
31. Describe the typical workflow in your organization for which CADD/GIS data is utilized or produced: **N/A**
32. What other flows do you believe would be improved by applying a GIS? **N/A**
33. Which workflow would you like to see GIS exercise during a demonstration project? **TENN-TOM Natural Resource GIS that is being developed in ARC/INFO and ArcView**
34. Please describe these workflows: **See Above**
35. Which study projects performed by of the Mobile District's responsibility would provide the most diverse examples of your application for a demonstration GIS project? **Any Water Shed studies being performed within the District.**

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 26MAY98

Interviewee Name and Title: Karl Burgamy and Glenn Coffee

Address and/or Location: Mobile District Office

Telephone: 334-690-2729 Fax: 334-690-2731 E-mail: glenon.l.coffee

Operational Unit Name (department/section): PD-E Environmental Resources Branch

1. What is the department/branch/division/code/unit in which you work? CESAM-PD-E
2. What department/branch/division/code/unit do you report to? Planning Division
3. Briefly describe the mission of your department/section: We are responsible for evaluating the environmental impacts of a variety of civil, military and international projects as well as managing project implementation.
4. How many people are in your section? 30+-
5. How many people are temporary and how many are permanent? all permanent
6. Average number of years (working experience) for personnel: 16+
7. Average education level of the people in your unit: MS/MA
8. Number of Personnel with CADD experience in your section: 0-5
9. Number of Personnel with GIS experience in your section: 0-5
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 0-5
11. What Technical GIS Training (if any) have people in your unit had? some
12. Does a centralized Information Management/Technology department presently support your unit? NO
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? UNIX workstation purchased with overhead
14. To what level do you fund your present CADD/GIS activity? 3-4K for maintenance
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized? Computer \$ was used to upgrade LAN  
CADD Databases Division took section computer\$ to upgrade maps for master plans – management facilities, cultural, Recreationj master plan, watershed model from local city and county study.  
GIS Databases  
Non-CADD/GIS Databases Recreation master plan database by Bruce Excel Spreadsheet from project status for

reports. Recording master planning done by Bruce in Excel spreadsheet from projects to generate project status reports.

16. What data do you get from external sources (which provider? what frequency)? Depends on project watershed, SHPO, USGS, wetlands, Military installations updated and merged.
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CADD System AutoCAD

GIS system: ARC/INFO

Sharing by: Hard copy: (paper) and softcopy and electronic: Email

17. What information, if any, do you provide to others - and to whom? Military installations, civil – field office and internal – see above
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18. What information (content) is portrayed or contained within the data your section uses? Bill – assigned with coastal – working on compliance database. Information deals primarily with dredging and environmental compliance.

19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? see answer to question 16.

20. What analyses are performed by your section using these sources?

CADD: Recreation – visitation to park, maintenance / general – routine

GIS: same as facilities management (grounds and utilities)

Database: Archeologist data related to cultural sites, ie. Indian site, age of site and how government needs to handle.

21. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?

CADD: Military – CADD standards for Intergraph (1:100 and/or 1:400 scale), utilities (major and minor)

GIS: Not detailed

Database: Recreational (1:200 Scale), good enough for planning decisions, yet not detailed

22. How often are these data sources updated and how are they updated? As required throughout life of project.

CADD: Military side – when base requires every 5 years, but not being followed because of RIF (Reduction in Force)

GIS: Architecture and civil – usually have annual requirements with COE properties at Military's request

Database: Recreation by regular basis (5 year), Recreational by regulations of 5 years, but lack of funding preventing requirements to be enforced.

23. Briefly describe your sections CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.): UNIX (SparcII) with SUN operating system, ARC/INFO, Intergraph MicroStation, Bernolli storage,

AutoCAD, ArcView Note: Intergraph and AutoCAD are not being used.

24. Denote your existing software and hardware training with respect to the following:

**Word processing:** Word  X  version \_\_\_\_\_ years of experience  
WordPerfect  X

**Spreadsheet:** Excel  X  version \_\_\_\_\_ years of experience \_\_\_\_\_  
Quattro Pro  X

**CADD:** AutoCAD, MicroStation

**Databases:** Access

**GIS:** ARC/INFO and ArcView

25. What personnel do you envision requiring GIS training?  Bill Youngman – Goal – management personnel to use ArcExplorer to retrieve and review data as they need it. Use data to produce GIS solutions..

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26. What information do you presently possess or desire for conversion into the GIS: IMAGES:  aerial photos, satellite images, terrestrial photos, USGS quads, and Historic data, DATABASES: Coastal, environmental remediation

27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
Spatial analysis, GIS with project, ie. Utility analysis, real property records, Installation station report. ftp shared info, working well downloading files, dbase – connect database with GIS.

28. How do you believe a GIS will help (or hinder) you with your work?  Help. Will allow everyone to be able to deal with projects, increase availability of data in other Divisions.

29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS?  
 Engineering and Planning.

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30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS? Please identify:  USGS, city, county, field reports, etc.

31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced:  See mission statement.

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32. What other flows do you believe would be improved by applying a GIS?  Anaysis of acreage dedicated to recreation.

33. Which work flows would you like to see GIS exercise during a demonstration project?  Communication is required (very big need)

34. Please describe these work flows:  See mission statement.

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35. Which study projects performed by of the Mobile District?s responsibility would provide the most diverse examples of your application for a demonstration GIS project? Mobile Bay project.

Notes: three sections to be made, 1. Military Master Plan data in Intergraph MicroStation to be placed on CDROM, backups on JAZZ, etc. 2. Archeological overlays with archeological potential could be a large amount of information referring to Archeological sites basically field maps. 3. Civil Works – recreation sites, need to identify need for this data, but keeps getting pushed back. Have manually made maps using various methods.

**Mobile District CoE  
GIS Needs Assessment Questionnaire**

Date: 26MAY98

Interviewee Name and Title: Ed Burkett, Chief Water Management Section

Address and/or Location: Mobile District office

Telephone: 334-690-2737 Fax: 334-694-4058 E-mail: ?

Operational Unit Name (department/section): OP-TH Water Management Section

1. What is the department/branch/division/code/unit in which you work? OP-TH
2. What department/branch/division/code/unit do you report to? Howard Whittington
3. Briefly describe the mission of your department/section: Oversee recreation (Civil Works) water project, help from James Hawthorn and contracting work in private sector.
4. How many people are in your section? 10
5. How many people are temporary and how many are permanent? 2 temp and 8 permanent
6. Average number of years (working experience) for personnel: 16+
7. Average education level of the people in your unit: BS/BA
8. Number of Personnel with CADD experience in your section: 0-5.
9. Number of Personnel with GIS experience in your section: 0-5
10. Average CADD/GIS knowledge level of the people in your unit (yrs/experience): 0-5
11. What Technical GIS Training (if any) have people in your unit had? CADD limited & GIS a dream
12. Does a centralized Information Management/Technology department presently support your unit? YES
13. How do/did you acquire hardware/software/network, etc. for your CADD/GIS systems (if any system is planned or exists)? IM (Engineering Branch support with hardware/software), weekly meeting with IM (on the committee).
14. To what level do you fund your present CADD/GIS activity? 10K or less
15. What Existing CADD/GIS and Database data are internally produced? What are the CADD/GIS Database systems utilized?  
CADD Databases: DSS (Corps developed) suppose to be moving to Oracle database.  
GIS Databases MicrStation  
Non-CADD/GIS Databases DSS
16. What data do you get from external sources (which provider? what frequency)?: Mostly NWS, USGS shared, ftp exchange, SE Power, ASCII data  
CADD System MicroStation Sharing by: Hard copy: (paper), but more & more electronic
17. What information, if any, do you provide to others - and to whom? NWI, USGS, Alabama Power Company

18. What information (content) is portrayed or contained within the data your section uses? See above
19. What is the format (hard copy) of other data that is used by your section (i.e., maps, charts, aerial photos, drawings, etc.)? Large floods aerial photography, shared photos and mapping form aerial photography. Interested in web page provisional data.
20. What analyses are performed by your section using these sources?  
 CADD: Problems with surveys, finding monuments over 10 years old, sediment data, spots on shores  
 GIS: flood, time series, sediment deposits.
36. What are the requirements for the data produced and used by your section (e.g., scale, levels of accuracy, etc.)?  
Levels of accuracy are of importance when dealin with flood and flood gauges.
37. How often are these data sources updated and how are they updated? As required throughout life of project.
38. Briefly describe your sections CADD/GIS platforms and configurations (no. of workstations, operating systems, etc.):     
 Database: updated every few hours

**Hardcopy: updated manuals and sediment surveys every 10 years. Regulations are 10 years Corps wide**

24. Denote your existing software and hardware training with respect to the following:
- |                         |                       |                   |                     |
|-------------------------|-----------------------|-------------------|---------------------|
| <b>Word processing:</b> | Word <u>  X  </u>     | version <u>  </u> | years of experience |
| <b>Spreadsheet:</b>     | Excel <u>  X  </u>    | version <u>  </u> | years of experience |
| <b>CADD:</b>            | MicroStation <u>X</u> | version <u>  </u> | years of experience |
| <b>Databases:</b>       | Oracle (DSS) <u>X</u> | version <u>  </u> | years of experience |
| <b>GIS:</b>             | N/A                   |                   |                     |
25. What personnel do you envision requiring GIS training? James Hawthorne, want to do RS like SHOALS.
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26. What information do you presently possess or desire for conversion into the GIS:  
 Drawings: Historic data, EXCEL spreadsheets of section  
 Images: in survey section  
 Databases: DSS and to move to Oracle
27. Provide examples of what you would like to do with your GIS System (existing users, give present applications)?  
 Storage of data, such as drawings, spreadsheets, see above, etc.
28. How do you believe a GIS will help (or hinder) you with your work? Help
29. Are there existing databases within other sections of the Mobile District that you wish to integrate with a GIS? Not sure what exists within the District that we could utilize.
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30. Are there other databases from external organizations (partners) that you wish to integrate with a GIS?  
 Please identify: See Above
31. Describe the typical work flows in your organization for which CADD/GIS data is utilized or produced: See

previous pages.

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32. What other flows do you believe would be improved by applying a GIS? Based off drawings from project, lead estimator assigns tasks, then estimation is ran through MCASCS and report generated, submitted tp each section within which project requires services from. A/E firm completes part or whole if A/E firm is required.

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33. Which work flows would you like to see GIS exercise during a demonstration project? A/E Design, A/E estimators

34. Please describe these work flows: See above and on previous pages.

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35. Which study projects performed by of the Mobile District?s responsibility would provide the most diverse examples of your application for a demonstration GIS project? Not sure what has been performed.