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# eGIS Workshop

Division: MVD  
Participant Team:  
Jim Gutshall MVD  
Jerry Skalak MVR  
Bryon Williams MVP  
Paul Clouse MVS  
Jacks Smith MVK  
Nathan Dayan MVN

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## Mississippi Alluvial Valley



41% of U.S. Flows Through the  
"Body of the Nation"



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# Success Story 1

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- MVP

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Mississippi Valley Division  
St. Paul District  
Byron Williams  
EGIS Project Manager

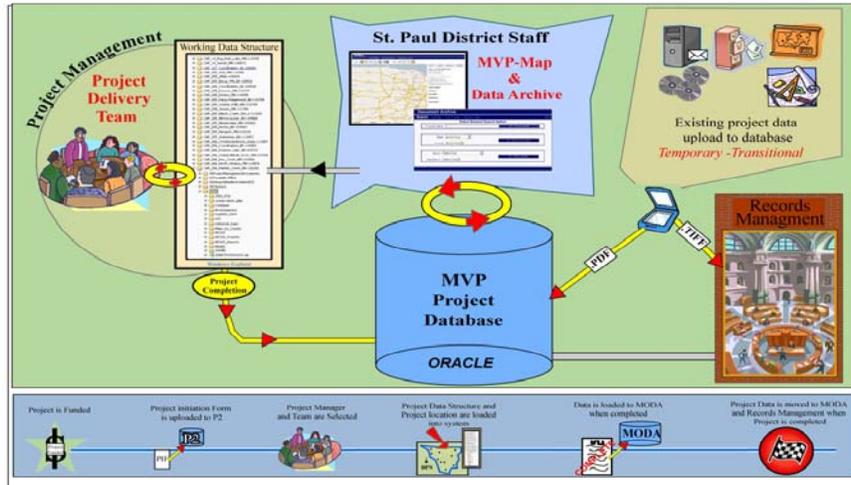
Success story for EGIS Workshop  
Denver, Co.  
29 July 2008

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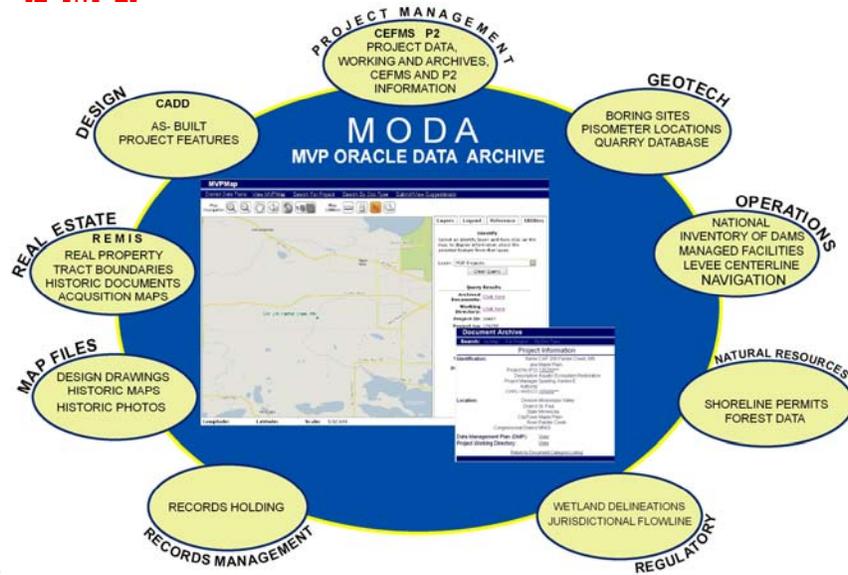


# Project Documents



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# Data to the Desktop

**US Army Corps of Engineers WEB - MAP**

**WORKING FILES**

Name	Size	Type	Date Modified
00ProjectManagementDocum...		File Folder	5/7/2007 12:00 PM
01Feasibility(FFA)		File Folder	7/11/2007 10:27 AM
02Design&Implementation(DI)		File Folder	4/26/2007 2:02 PM
98Closeout		File Folder	4/26/2007 2:02 PM
03Data		File Folder	11/7/2007 11:32 AM
MPFG_meetingnotes_agendas		File Folder	12/10/2007 9:54 AM
Projectwise_working_folders		File Folder	4/26/2007 2:02 PM
Reports_from_MCWD		File Folder	4/26/2007 2:04 PM

**PROJECT INFORMATION**

**CEFMS and P2**

**MINNESOTA RIVER AT CHASKA, MINNESOTA FLOOD CONTROL PROJECT**

DESIGN MEMORANDUM NO. 1  
CHASKA CREEK  
DECEMBER 1984

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# MVD Map

## Mississippi Valley Division Map



A map source for the six interdependent districts covering the entire length of the Mississippi River from St. Paul, MN, to New Orleans, LA. MVD

Map Navigator

Map Utilities

**Layers** | Legend | Reference | Utilities

**MVD Data**

- USACE Office
- MVD Civil Boundary
- MVD Projects (C)
- Congressional Districts - 110th (C)

**Engineering**

**Base Data (Non-USACE)**

**Imagery**

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## Success Story 2

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## MVS eGIS Implementation

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*“...[GD&S] success is measured by the degree to which it becomes integrated into, and a part of, an organization's overall information resources infrastructure over the long term.”*

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## MVS 'Back in the Day' February 2000

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- Bill Clinton was President
- St. Louis Rams won the Super Bowl
- Gas was \$1.31 a gallon
- MVS had 3 people working with GIS
- MVS GIS was based on Intergraph MGE
- REEGIS was the data standard
- 100 GB of vector and raster data
- MVS created its Enterprise GIS vision and implementation plan

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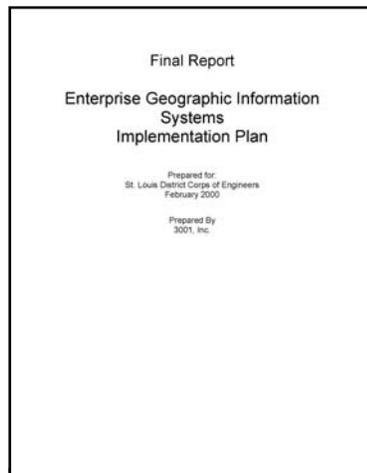
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## MVS EGIS Implementation Plan

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- Part of Mississippi Valley Division EGIS implementation plan
- Improve geospatial data availability
- Facilitate the exchange of data between Branches and Districts
- Based on Oracle and SDS
- Convert existing REEGIS data
- Assist individual branches develop GIS expertise
- Data to the desktop
- Workflow innovation
- Implementation schedule
- Implementation strategy
- Needs assessment: Infrastructure, Data, People, Training

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## MVS Now July 2008

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- George W. Bush is President
- New York Giants are current Super Bowl Champions
- Gas is \$3.96 a gallon
- MVS has almost 100 people using GIS
- MVS EGIS is Oracle / ESRI based and easily accessed through client software
- SDSFIE is the data standard
- 5.5 TB of vector and raster data
- MVS has executed the Enterprise GIS vision and implementation plan
- Numerous workflow innovations
- Consumer needs are always being evaluated: Data accuracy, data availability, training, and infrastructure
- EGIS has been deemed a mission critical system

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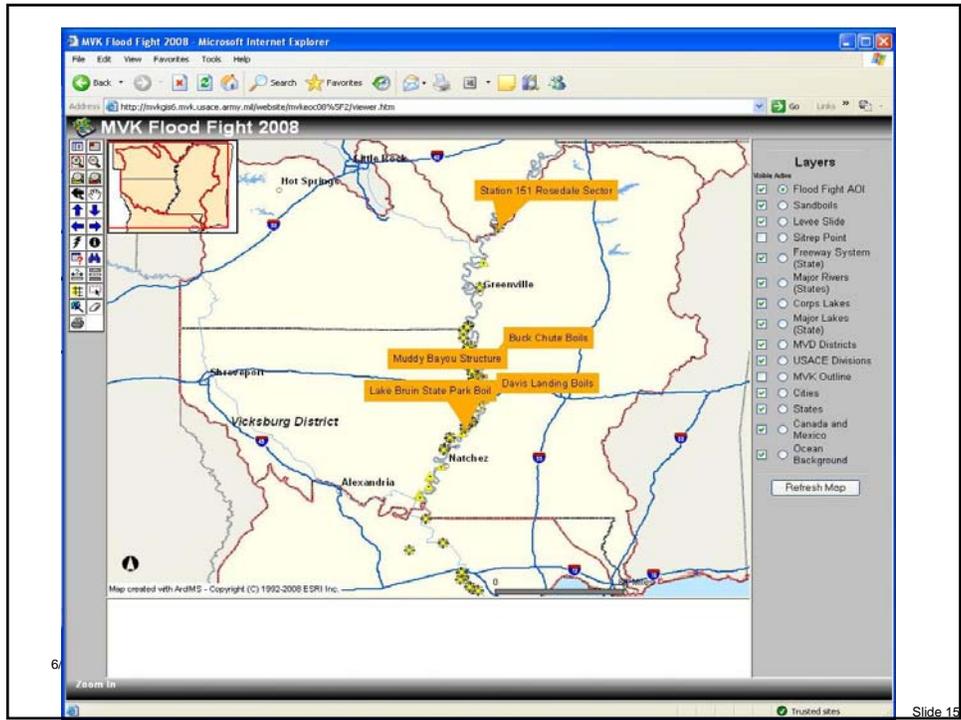
## Success Story 3

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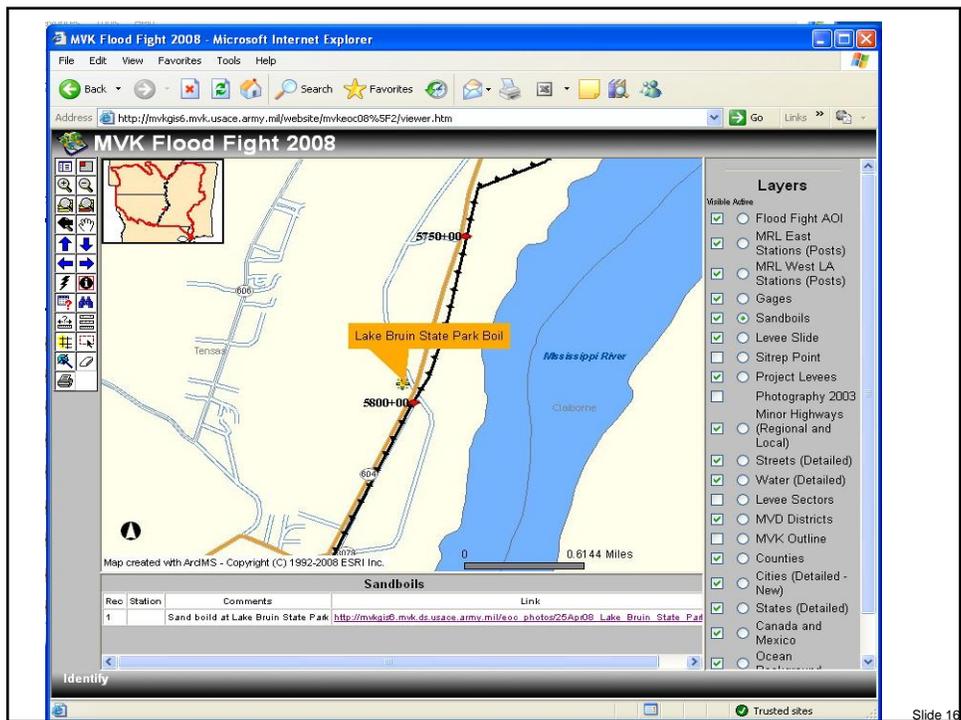
- MVK

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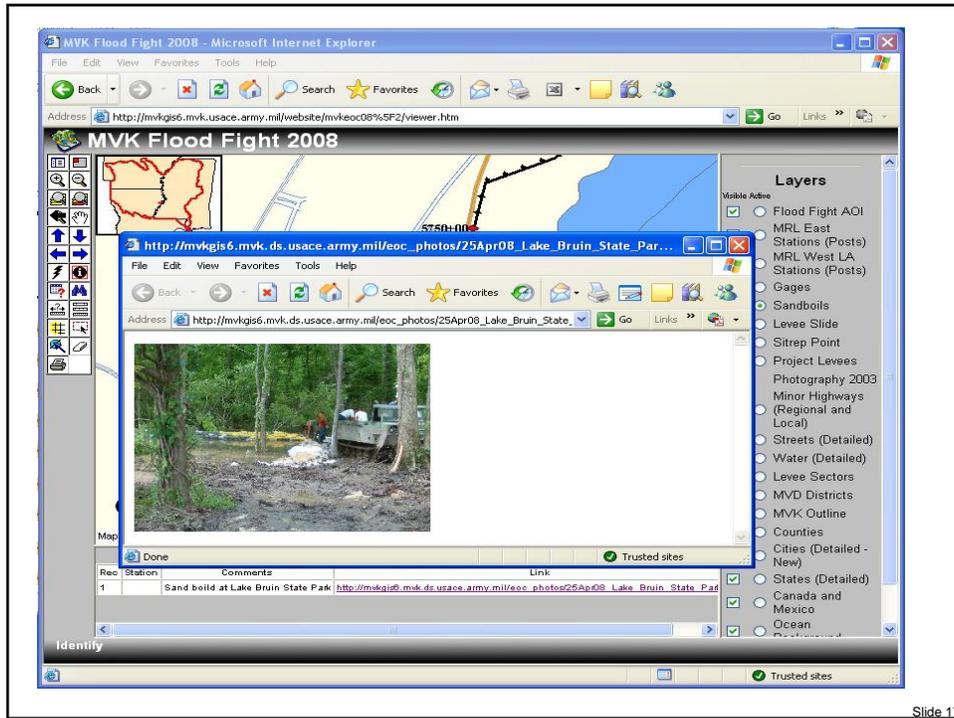
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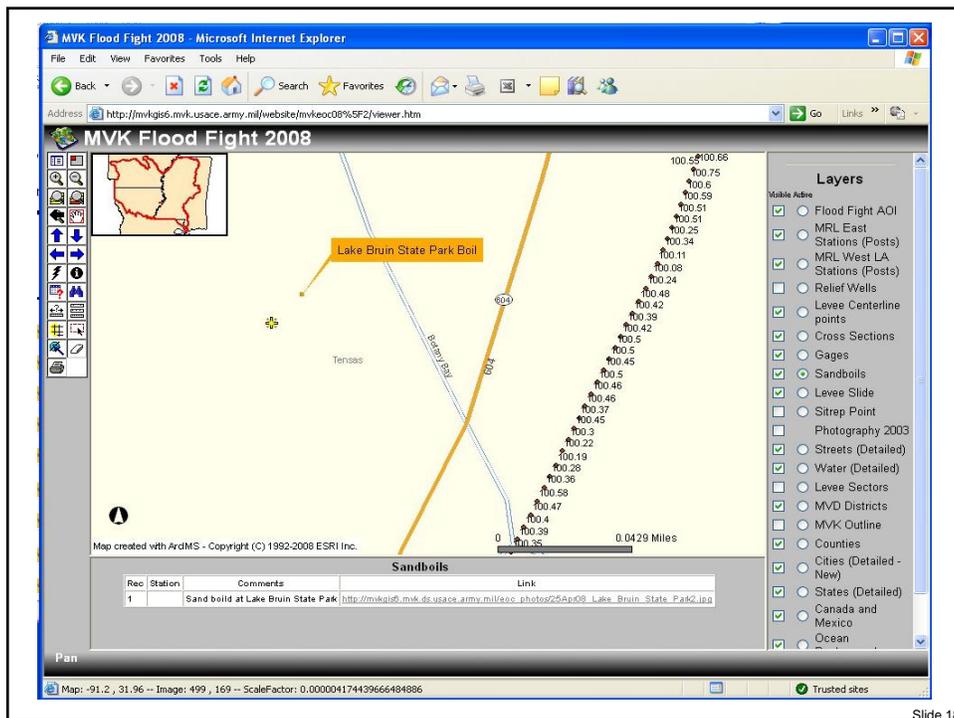
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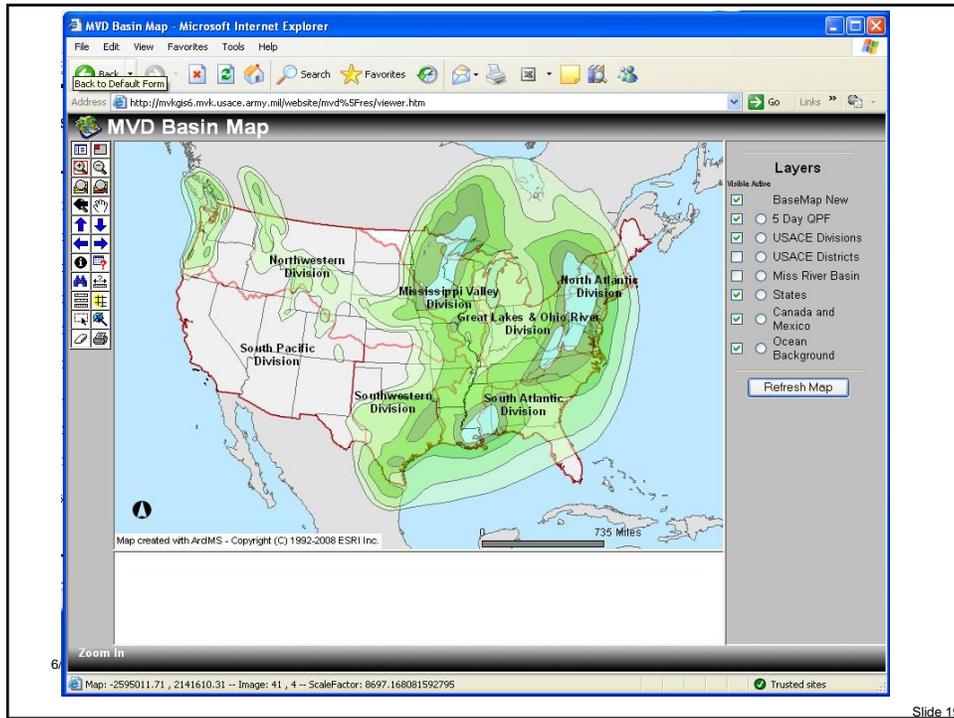
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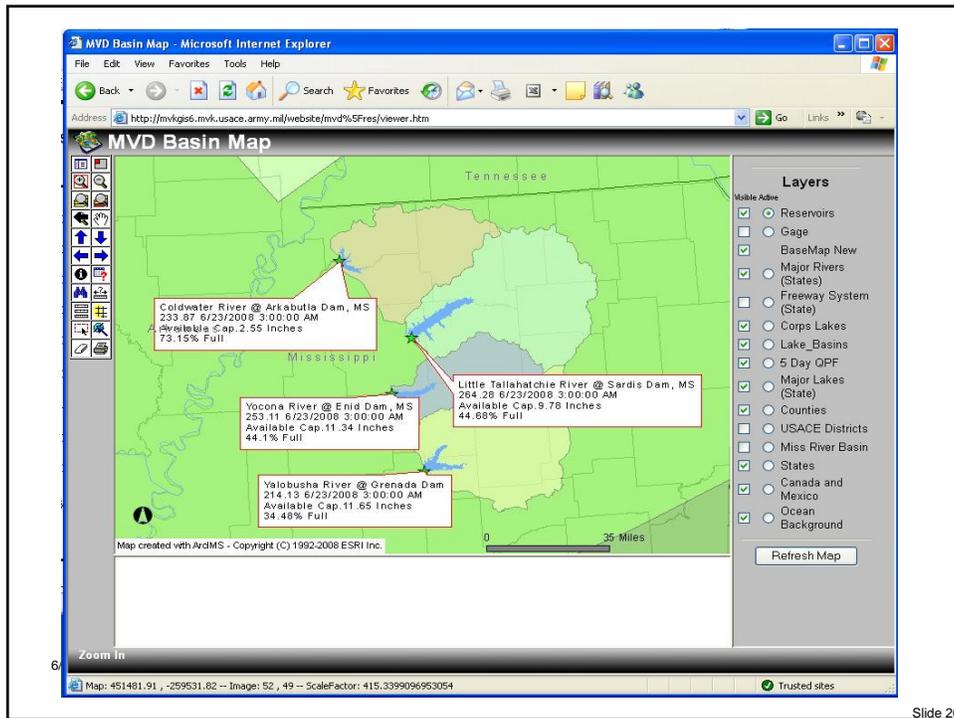
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## Biggest Challenges MVP

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- **Identify district challenges in the use of advanced GIS tools?**
- The primary challenges in the fully utilizing advanced GIS Tools in the St. Paul district involve limited processing power, contracting issues, and lack of investment on the part of users.
- **What are the five biggest challenges?**
  - 1. Lack of Training
  - 2. Lack of perceived value on the part of project management.
  - 3. Inadequate computer processing capacity.
  - 4. Inadequate user commitment to learn.
  - 5. Spatial Data Standards
- **What are the obstacles you must overcome?**
- District perceptions of the value of GIS and national initiatives that are hindering functionality.

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## Biggest Challenges MVR

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- **Identify district challenges in the use of advanced GIS tools?**
- Training
- Time
- Funding
- Data
- Resolution of management and decision support data needs vs. capabilities of advanced tools
- **What are the five biggest challenges?**
- SDS compliance
- Metadata
- Quantification of benefits
- Need for Corps-wide cartographic standards
- Funding the development of "generic" data sets that support multiple District and regional projects and programs
- **What are the obstacles you must overcome?**
- ACE-IT (need further clarification of all roles and responsibilities)
- More flexible EGIS implementation and maintenance funding
- Sponsor/partner support to database development
- Equitable distribution of EGIS implementation and operation and maintenance costs
- Real Estate database development and transitioning of Real Estate to a digital operational environment

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# Biggest Challenges MVS

- **Identify district challenges in the use of advanced GIS tools?**
- ACE-IT
- Training the right people with the right products.
- **What are the five biggest challenges?**
- ACE-IT
- True interoperability of GIS and CAD
- Maintaining a mission critical District resource and not knowing how ACE-IT will operate in the future.
- Increasing the geographic knowledge of all personnel and emphasizing the importance of accurate geospatial information.
- **What are the obstacles you must overcome?**
- ACE-IT
- Data storage integrity. The need for reliable, uninterrupted data access is critical.
- SDSFIE is cumbersome, hard to use, and not intuitive for the average GIS user.
- Acquiring and validating internal geospatial data from other sections.
- Getting the right personnel to handle the increased demand for geospatial products.
- Doing management metrics.

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# Biggest Challenges MVN

- **Identify district challenges in the use of advanced GIS tools?**
- 1) Training.
- 2) provide access to software to a broader base so that more people can become proficient
- 3) Plan now for a broader scope of use for the future - the broadest application possible.
- 4) The GIS team needs to be an independent entity that helps PMS, Ems and RE people input the necessary data into a district-wide system
- 5). Advanced tools? Try ANY tools.
- **What are the five biggest challenges?**
- 1) Funding is minimal, and is project-specific - this NEEDS to be an overhead cost, as it affects every project in the district. The application is not mandated. P2 is mandatory, and is used on every project. Project budgets are mandated. Schedules are mandated. Input to GIS is not, and until it is, will not become a successful part of our mission. Exhibit how GIS will improve business process, Quantify cost saving or efficiencies. (Economic Section estimated cost savings of using a Geospatial Floodplain Inventory Tool that was developed in New Orleans and further adapted for use by other Districts.) Provide understanding of other advantages using GIS application such as storing data, ease of updating data, better visual displays of results etc.
- 2) The people most able to address our dearth of GIS capability are overloaded and cannot spend the time to develop the application. Developing skills that combines GIS manipulation with programming. Establishing position within PPPMD or Planning Office or through co-location of ED personnel. Continuity of personnel: the risk is that once a GIS-Programmer learns all the specific applications necessary to meet study objectives, that individual will advance to other opportunities and the skill-set will need to be developed anew.
- 3) Institutional resistance - the benefits are obvious, once you have seen the application. But overcoming the "my-files-my-project-my-data" idea will be the hardest part of all
- 4) Making sure that the data are secure will be a big, but not insurmountable challenge.
- 5). Data layers are not easy to find. No easy system of organization that an end user can find.
- **What are the obstacles you must overcome?**
- 1) My limited abilities
- 2) My task list that grows daily
- 3) My mental block against using it
- 4) The computer limitations - especially when cost savings are calculated for the "will you really use that extra RAM" for each person on the district
- 5) Access to outside data (USGS, universities, etc.). Access to internal data
- 6) Communication issues/Organizational stovepipes.
- 7). Overcoming resistance to change.

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## Biggest Challenges

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- **DID WE MENTION ACE-IT??**

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## District eGIS Vision MVP

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- **What will your district eGIS look like in 3 years?**
- The MVD does not have a eGIS program. EGIS means Enterprise Geographic Information Systems Not electronic. Please consult 5 year plan.
- **How would you describe eGIS in 2011?**
- Much more coordination between HQ, Divisions and Districts

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## District eGIS Vision MVR

- **What will your district eGIS look like in 3 years?**
- District will have in place the system architecture (hardware, software, network capabilities, etc.) necessary to provide for the efficient and effective development, maintenance, and security of District geospatial data resources and ready access to those resources by the entire spectrum of active and potential users.
- District will have protocols in place that address all database replication requirements.
- SOPs for all EGIS management, database development and maintenance, and related support activities will be in place. This documentation is critical to clearly defining roles and responsibilities and assuring seamless transitioning when staffing or other changes occur.
- A detailed catalog of District and regional geospatial data will be in place and routinely maintained.
- **How would you describe eGIS in 2011?**
- Increased automation of database maintenance and updating efforts (e.g. levee inspections tool and NLD)
- Increased use of imagery and image processing in the accomplishment of District missions and functions.
- More "canned" routines supporting specific missions and functions will be available to the user community
- Analytical capabilities of GIS will be used more routinely as part of evolving decision support systems
- Current, regional geospatial data coverages at appropriate resolution(s) for select data types and themes will be in place.

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## District eGIS Vision MVS

- **What will your district eGIS look like in 3 years?**
- It should look very similar as today with significantly more data, resources, and users.
- It will continue to be a part of the District's overall mission critical information infrastructure.
- **How would you describe eGIS in 2011?**
- EGIS will meet and exceed the organizational requirements for the collection, management, analysis, display, and distribution of geographic information.
- EGIS will be integrated into the organization's overall information infrastructure.
- EGIS will be another desktop tool and as common and easy to use as e-mail.

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## District eGIS Vision MVN

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- **What will your district eGIS look like in 3 years?**
- Unless there is a sea-change, it will look exactly the same. Some GIS savvy people and some who can see the benefits will be championing the use of the system, while we continue with our old print-and-ward mentality
- **How would you describe eGIS in 2011?**
- The most powerful tool we can develop. More important than supercomputer modeling is to hydraulics - it will be the way that communication about projects happens.
- Goal is to have in-house capability with vast socio-economic, environmental, project etc. data layers at disposal. GIS fully integrated into business processes.

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## District eGIS Vision

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- **DID WE  
MENTION  
ACE-IT??**

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