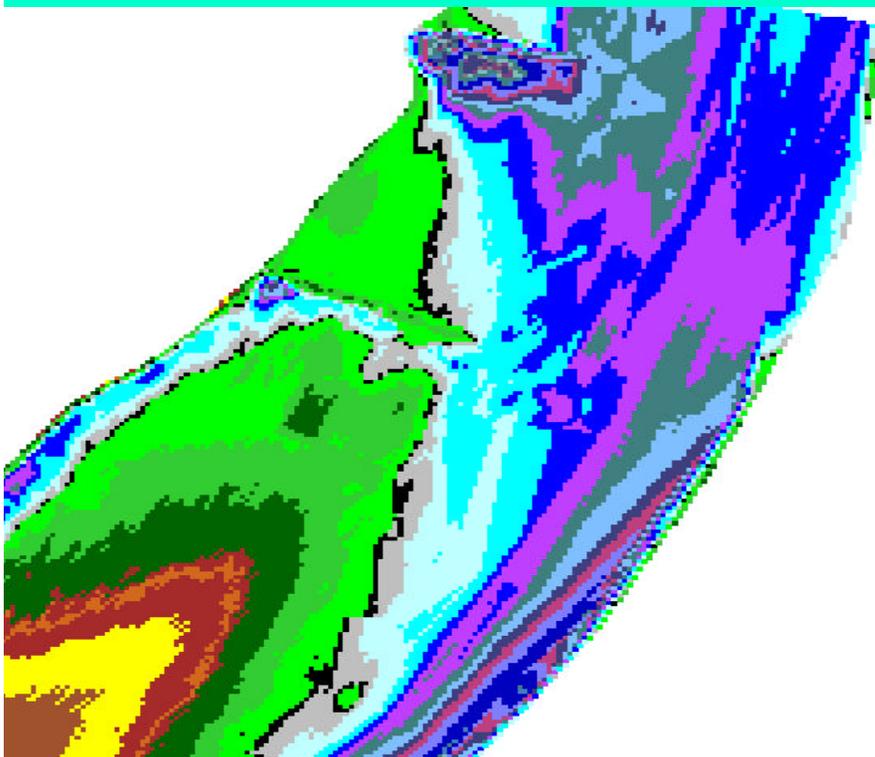




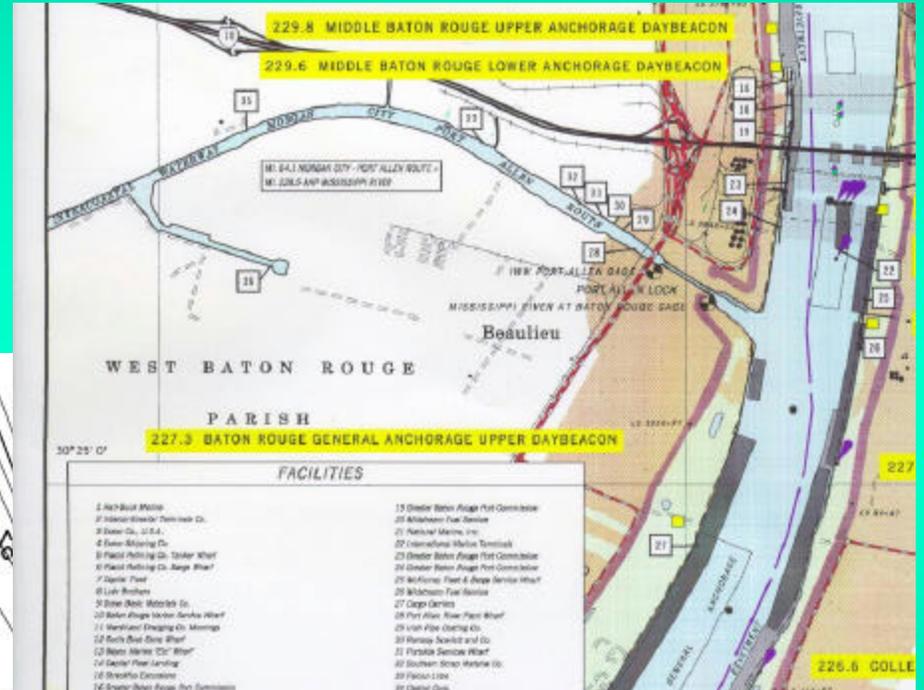
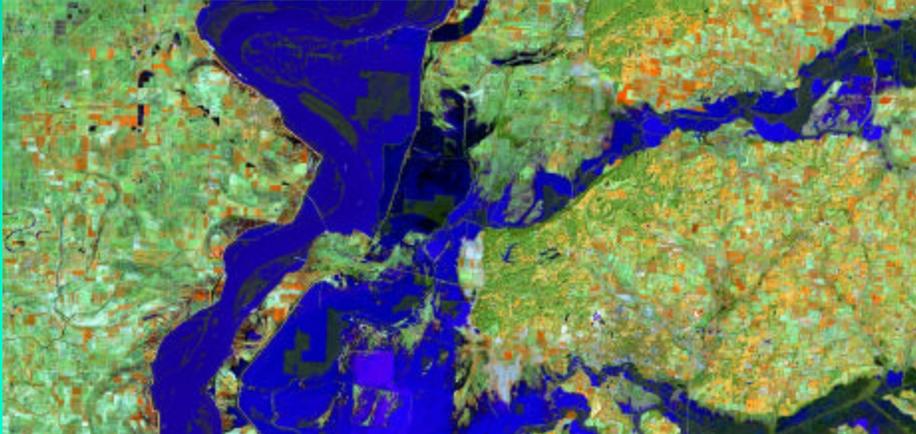
GEOSPATIAL  
INFORMATION  
SYSTEM (GIS)  
SUB-PAT



FINDINGS AND  
RECOMMENDATIONS

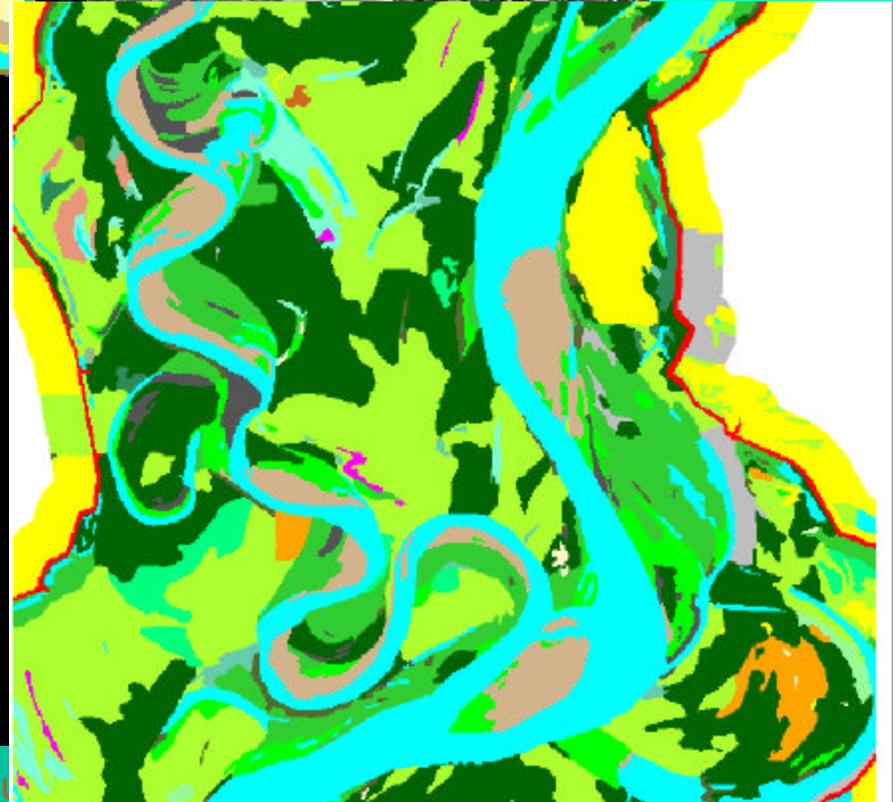
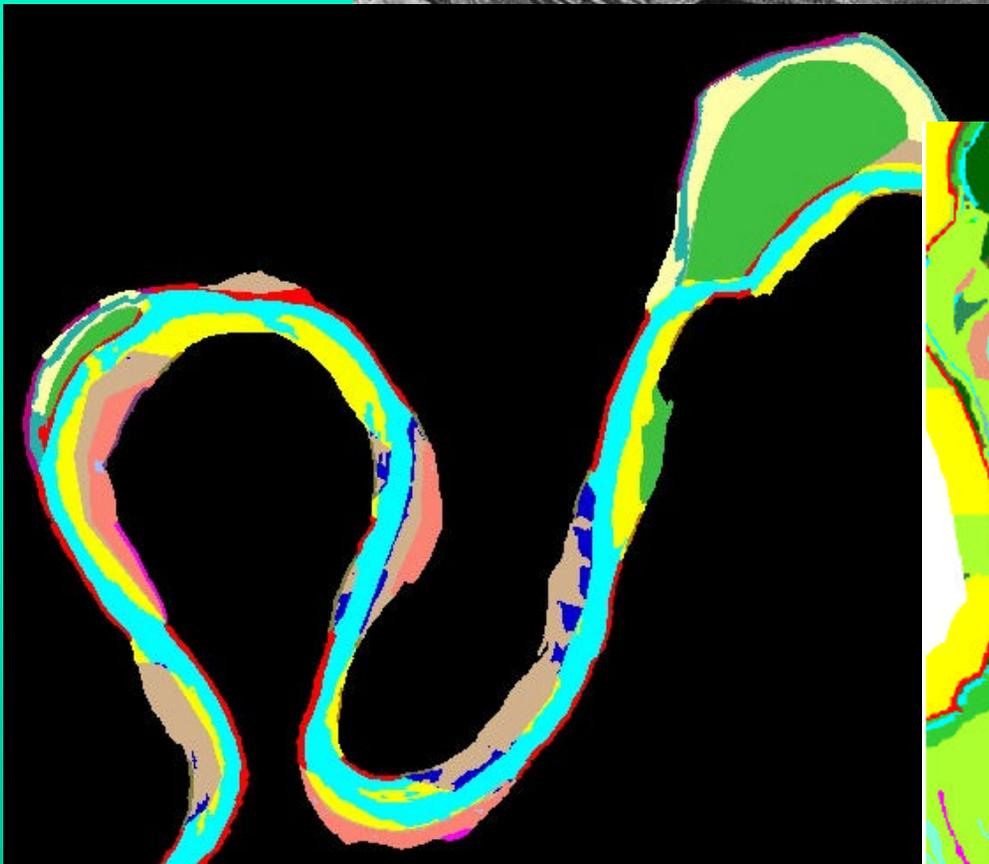
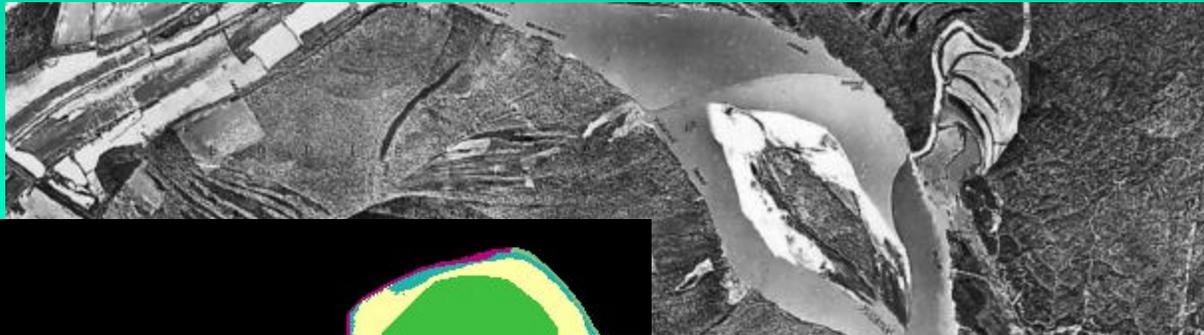


# Common Geospatial Data





# Common Geospatial Data



2/22/01

GIS S



# WHAT ARE GEOSPATIAL INFORMATION SYSTEMS (GIS)?



- ◆ Geospatial Data in Digital Format and the Computer Hardware and Software Required to Generate, Manage, and Use the Data



# WHY SHOULD WE BE CONCERNED ABOUT GIS?

- ◆ Integral part of almost every Corps business process from project planning to operations
- ◆ MVD invests \$25,000,000 annually in Geospatial Data
- ◆ Huge Investment in Existing GIS Data
  - Priceless
  - Irretrievable and is being lost



# Is GIS being Effectively Managed & Used So That Return on the GIS Investment Is Optimum?

**NO!**

GIS is being used, but return on investment is far below the potential.



# Why? GIS Needs and Problems

- Poor Support/Understanding from Management
- Data Not Generally Accessible or Shared
  - ◆ Data Not In Digital Format - major problem!
  - ◆ Not Centralized - Stovepipe Systems
  - ◆ Digital Data Not In Standard Format
  - ◆ Data Acquisition Not Coordinated
  - ◆ Inadequate Hardware & Software
  - ◆ Inadequate Training Data



# GIS Corporate Goal

- ◆ Effective Implementation of GIS Technology and Efficient Use and Sharing of Geospatial Data
  - Must Implement Modern GIS Technologies to Be a Competitive, World Class Engineering Organization in the Future
- ◆ CADD and GPS are analogies

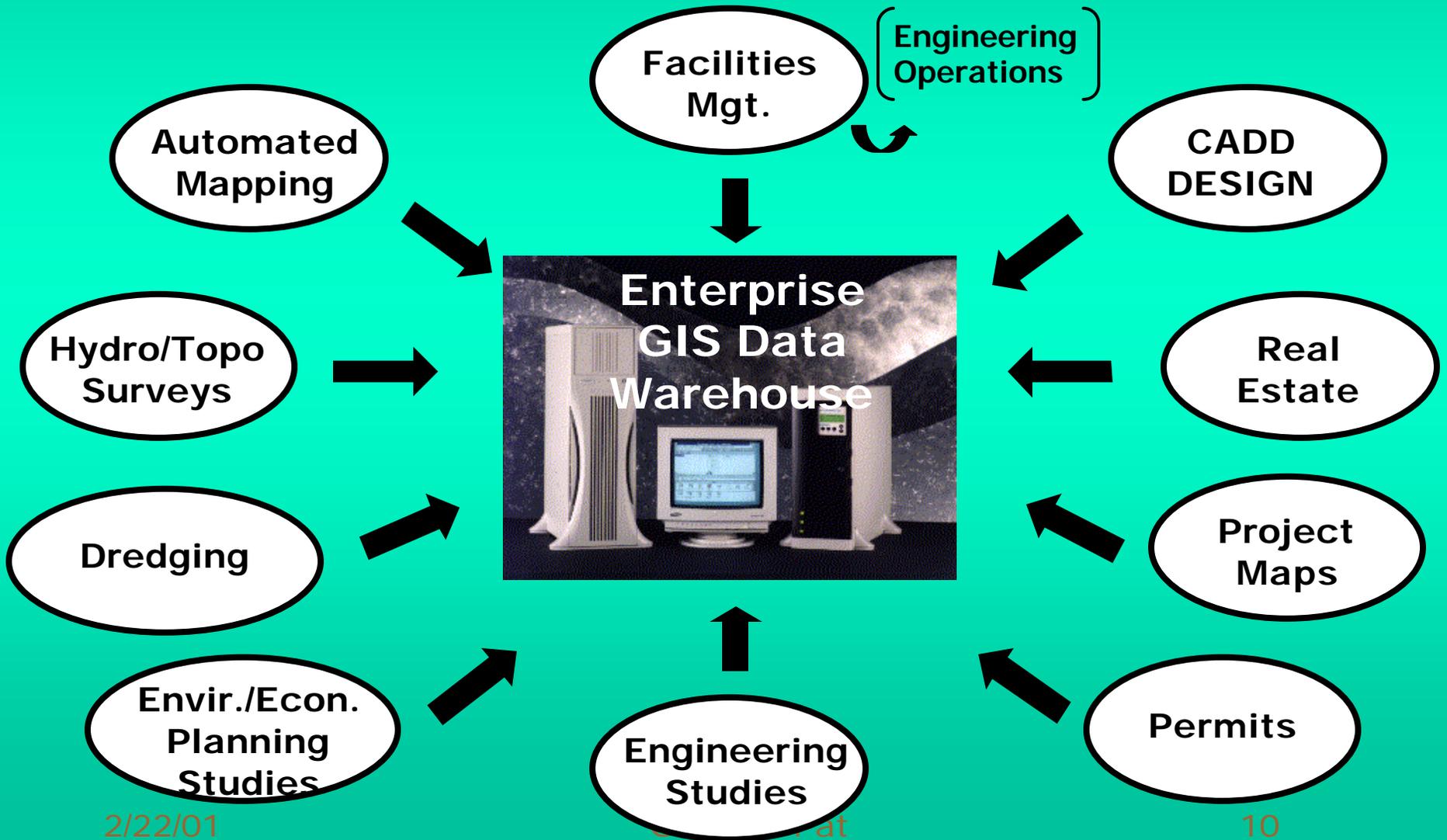


# General Recommendations

- ◆ Develop Enterprise GIS
  - Long-term Strategy
  - Investment in the Future
  - Warehouse of all Geospatial Data
- ◆ GIS to the Desktop
  - Immediate Return on Investment
  - Long-term Strategy



# Enterprise GIS Functions





# GIS ON THE DESKTOP



Enterprise GIS -  
Data Warehouse

Powerful  
Workstations  
PC Data  
Viewers  
Internet  
Browsers



User's Desktop



## Specific Recommendations, FY00: Approved by MVD RMB/BOD April 99

- ◆ Spatial Data Standards for All Geospatial Data
- ◆ Oracle as RDMS for all GIS
- ◆ Develop Enterprise GIS Implementation Plans for Each District/MVD
  - GIS to Desk Top-- User Access
  - Automated Applications/Business Processes
  - Data Input
  - Hardware and Software Requirements



## Specific Recommendations, FY00: Approved by MVD RMB/BOD April 99

- ◆ Use GIS Regulations (ER 1110-1-8156) to Guide Design & Development of the Enterprise GIS
- ◆ Deploy Data Viewers and Web Applications
- ◆ Develop Simple and Easy-to-Use Catalog of GIS Data
  - Need to Know What We Have!
- ◆ Train Users
- ◆ MVD GIS Work Group– steering committee



# FY 2000 Costs/District

## ◆ GIS to the Desktop

■ Data Viewer Software	\$25,000
■ Training	5,000
■ Geospatial Data Catalog	<u>25,000</u>
	<hr/> \$55,000

## ◆ Enterprise GIS

■ Implementation Plan	\$10,000
■ Conversion To Oracle	25,000
■ Convert to TSSDS	<u>25,000</u>
	\$60,000
■ 3.5% of Annual Geospatial Data Expenditure in MVD	



# Enterprise GIS Status

- ◆ Draft Implementation Plans: Complete
  - 5-year program
- ◆ Status Report to RMB: June 00
- ◆ Final Implementation Plans: 15 July 00
- ◆ Brief MVD RMB/BOD – July/August 00
  - Approval of 5-year plans
  - Funding Strategy
- ◆ Initiate Approved Items in 5-Year Plans in FY02



# Enterprise GIS Status

- **Initial Plans for Automation of Entire District**
  - ◆ Complex, lengthy due to large need in areas such as Real Estate, Operations, Engineering: Lots of Interest--Good!
  - ◆ Costly: 0.5-1.0 million/district/year for 5 years
  - ◆ Data Input Major Cost: Paper to Digital
  - ◆ Network Hardware/Communications Upgrade Costly
- **Refining cost/priorities for 5-year plan**
  - ◆ Actual Needs for Total Automation
  - ◆ What can we realistically afford to do?
- **Continue Design, Planning, limited Implementation in FY01**
  - ◆ \$100k/district
- **Implement Approved Plan in FY02-06**



# Enterprise GIS Finance

- New geospatial data funded by projects as acquired
- Automation of Business Process: Funded from overhead, e.g., technical indirect or facilities account
- How do we fund input of needed historic data, e.g., Boring Logs, Real Estate, Hydrosurveys?
  - ◆ Developed over year by many projects
  - ◆ Many need some additional funds to develop the Enterprise concept in FY02

