

Conservation & Transportation AZ Workshop 2006

Day 2: Other Tools Session

Who and What:

National & State Case Studies: Kimberly Majerus, FHWA-Resource Ctr

AZ Geospatial Data Sources, Contacts, and Examples: K. Majerus

Environ Review Online Tool: Sabra Schwartz, AZ Heritage Data Management Systems

Handout: other references and web sites and AGIC **Contacts**

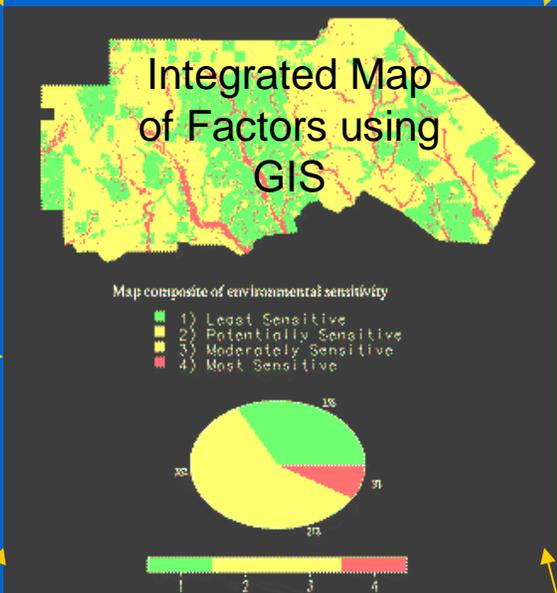


**Transportation
Decisions,
Programs,
& Projects**

**Integrate Information,
People, and Decisions**



**Wildlife, Fish,
Ecology,
Wetlands,
Water**



**Community
Values
and Public
Involvement**

**Contaminants/
Haz Waste**

**Agency
Coordination**

**Air Quality
and Noise
and other Issues**

**Cultural
Resources,
Federal & Tribal
& State Lands**

For Info Needs - What Data is Already Available?

National Spatial Data Infrastructure (NSDI)

www.geodata.gov

Develop, Exchange, Use -Data at Various Levels

Regional & National



State/County/Parish



Local Data & Uses

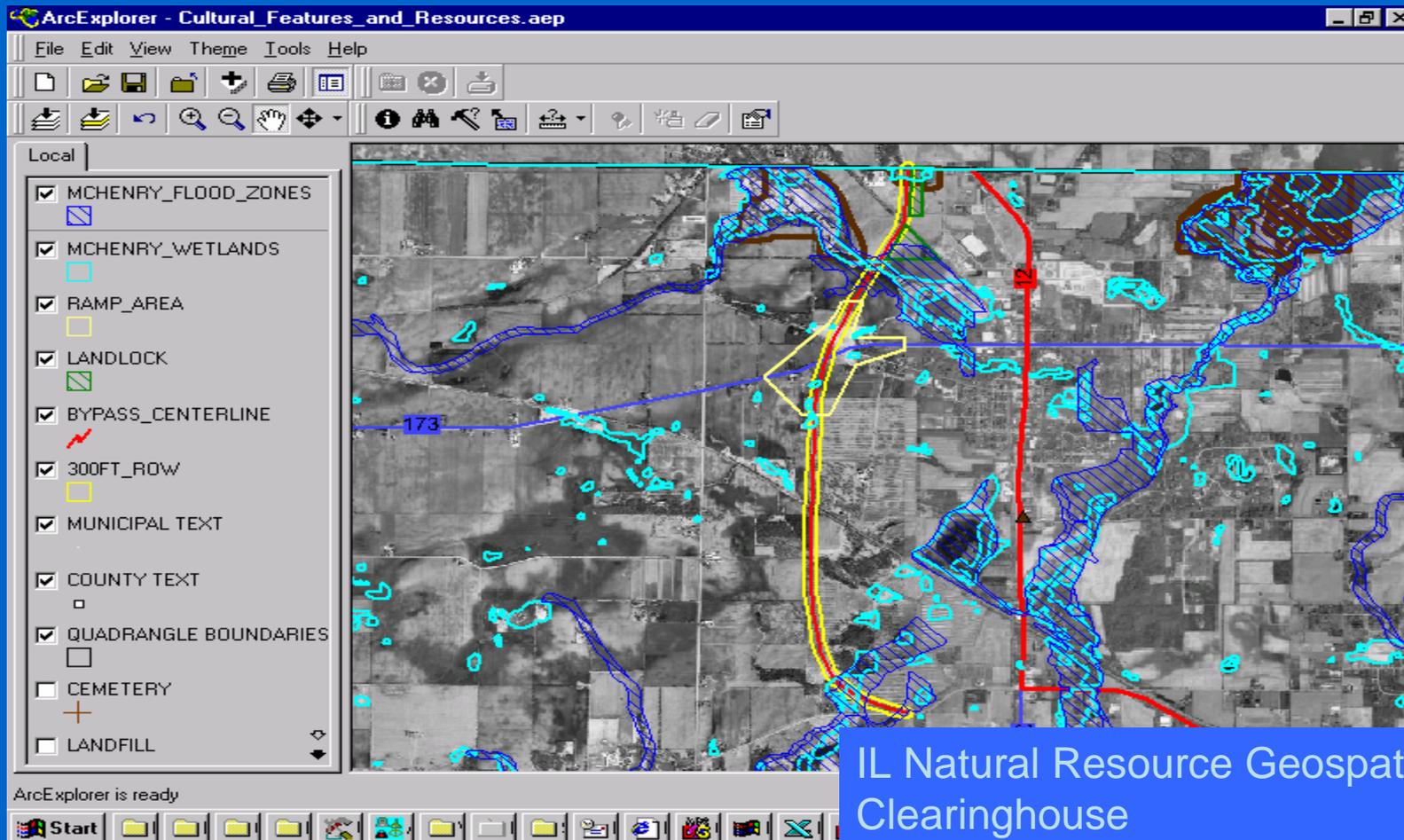
NSDI Available for:

- Various Data Owners & Users
- Data exchange,
- Aggregation,
- Multi-level, multi-purpose
- Data across jurisdictions, states

IL MPO and IL DOT example uses of NSDI Free Environmental GIS Data on Web

Map Overlays for LRP for Project Delivery

Integrate Avail Data -NWI Wetlands, Hydric Soils, Floodplains, & Orthophotos



Imagery Example: Orthophotographs

Geographically referenced to the earth

(black/white or color of various scales)

Available:
Pima Assoc of
Govs (PAG)

Future: Statewide
AZ imagery

Nationwide initiative
“Imagery for the Nation”



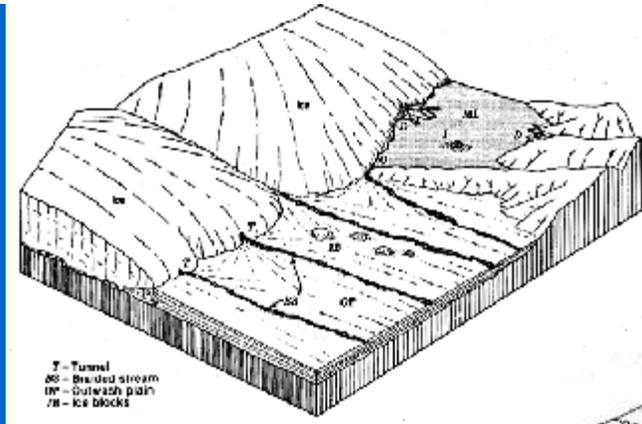
Download from IL Geospatial
Data Clearinghouse

Needed Information for Decisions:

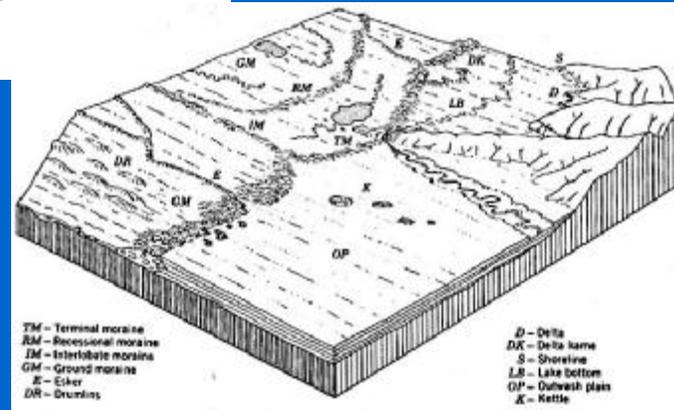
Natural Environment,

IL- 10,000 yrs ago - Landforms

Natural Foundation



Weathering through time



Existing: Oak Savanna

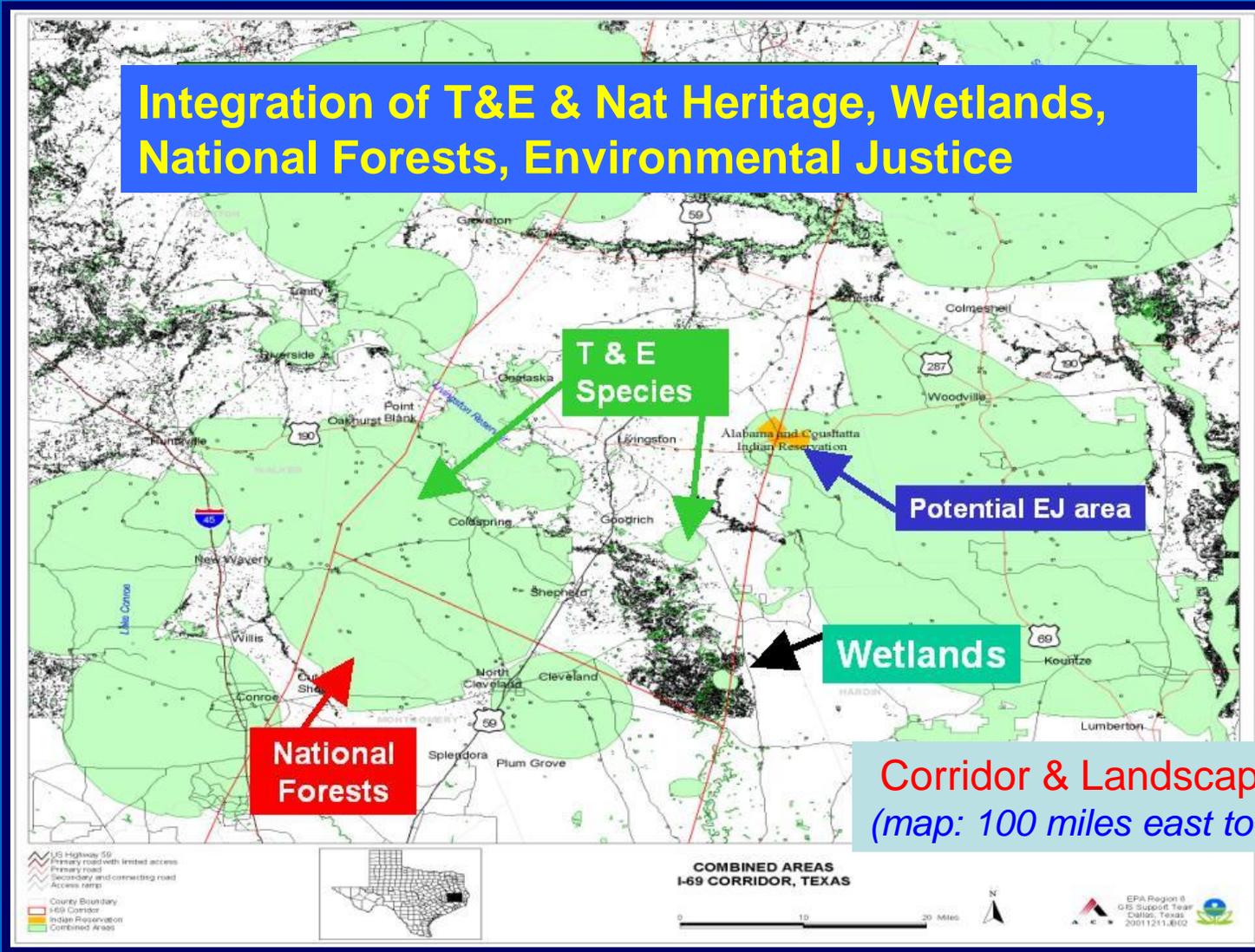


Natural Environment

- **Topography**
- **Slope**
- **Soils**
- **Parent Material & Geology**
- **Hydrology & Drainage**
- **Vegetation (example, wetlands)**

Texas GIS Environ Screening Tool

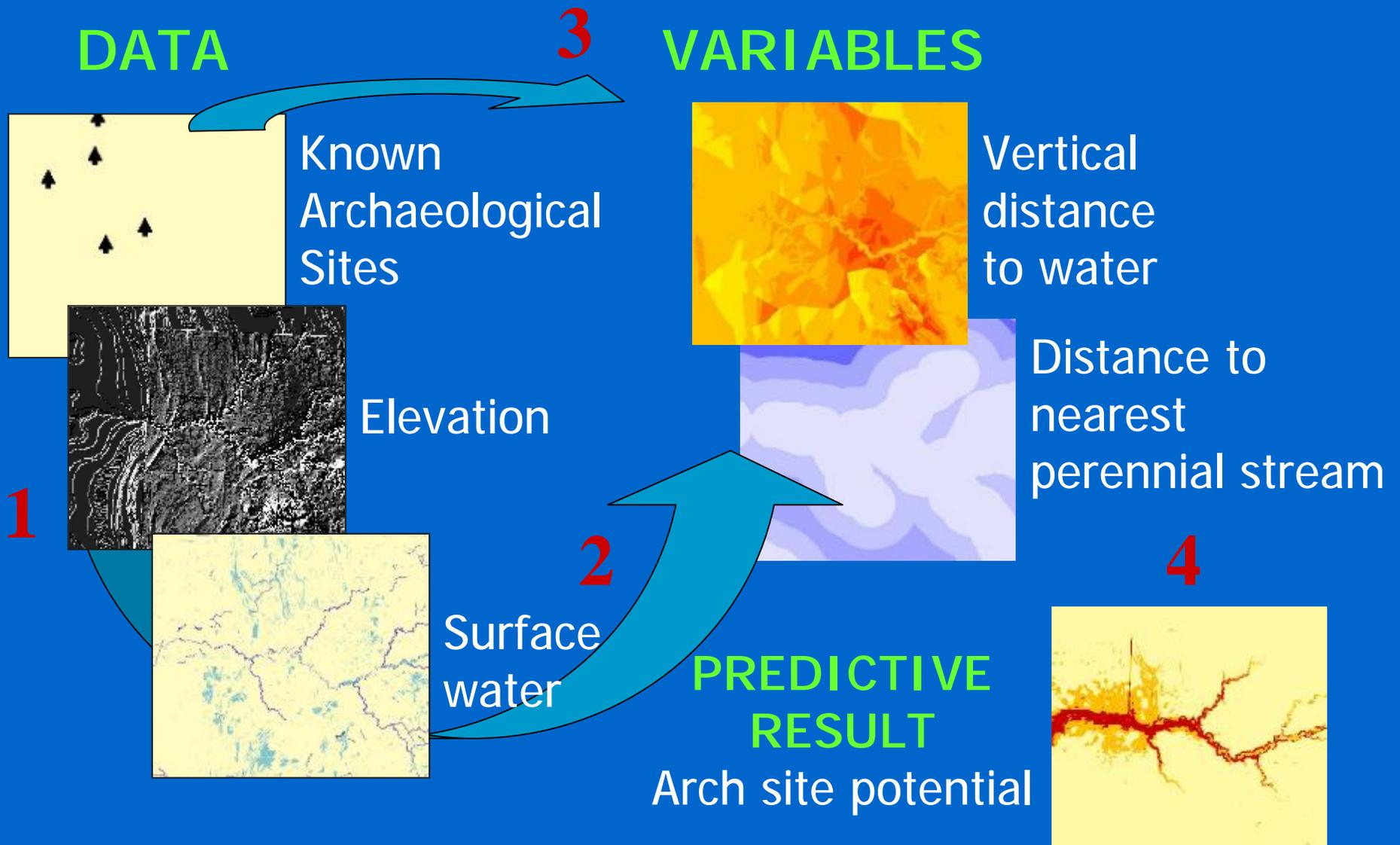
Integration of T&E & Nat Heritage, Wetlands, National Forests, Environmental Justice



From US EPA's GISST animated demo

<http://www.epa.gov/4dnpesa/69/corridor/010202.html>

Power Tools – GIS Analysis – MnModel GIS Predictive Modeling



Power Tools: GIS Analysis

IL GIS Simulation, Predictive Modeling for Impact Assessment, Mitigation, and Monitoring

GIS Model Simulations:

Baseline before construction

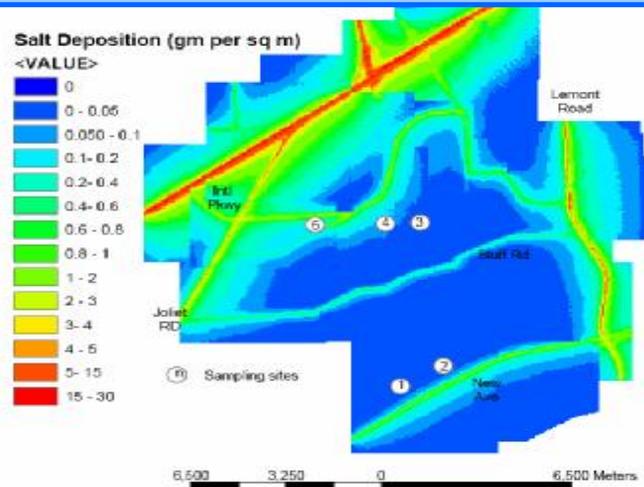
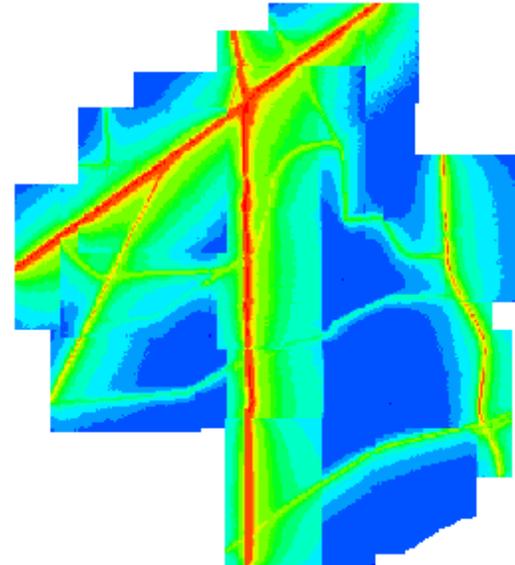


Figure 13. Model Simulations of Salt Deposition Near the Sampling Sites

Predicted Model Results: After construction

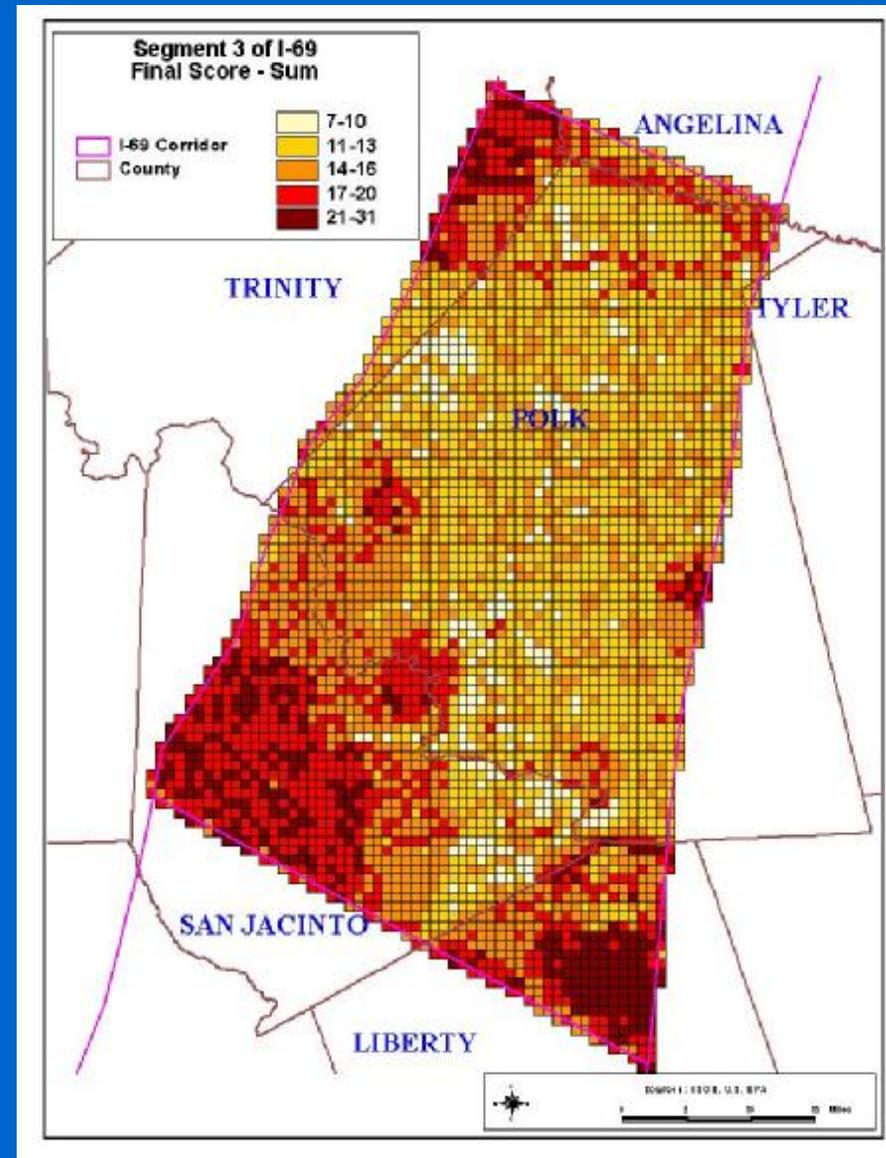


↑ Proposed
Trans

Visualization

GIS can do
what no other tool
can do –

Calculated GIS Surface
combining
Multiple Factors



TRB DISCUSSION OF DATA AND GIS: SAFETEA-LU TRB Data Conference

White Paper for SAFETEA-LU Provisions
for Planning, Policy, and Environment

Downloadable at:

<http://www.trb.org/Conferences/ReauthorizationData/Planning-Policy-Environment.pdf>

Arizona

Other Methods, Data and Tools

Considerations to Support AZ Efforts Underway
(examples highlighted in this workshop)

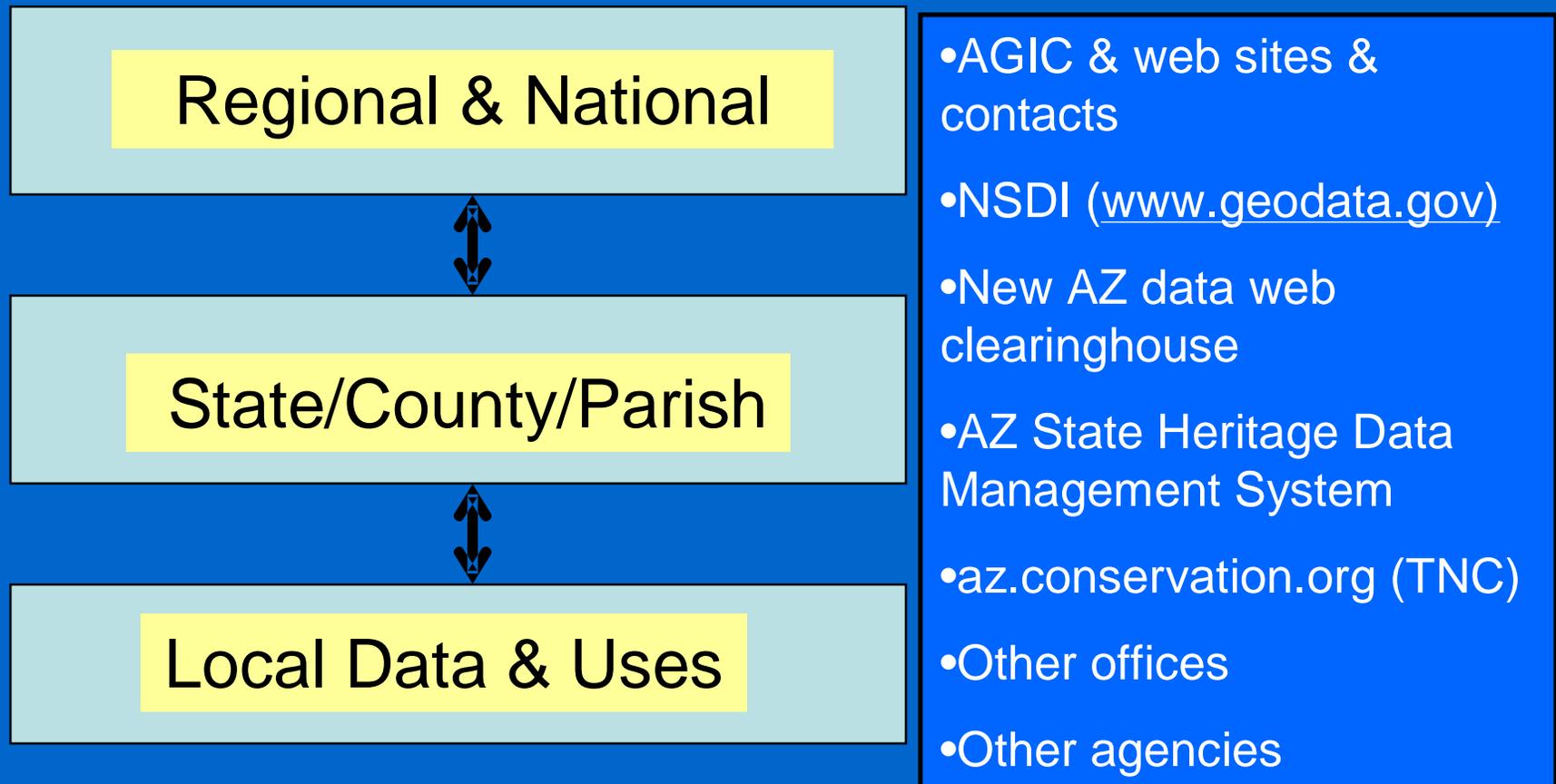
and AZ Linking Planning & NEPA Recommendations

- Needs assessment
- Visualization
- Data exchange
- AGIC

AZ information needs & uses–

AZ What info/data is available?

AZ Ways to make data avail/share?



AZ Data & Contacts for AZ Geog Info Council (AGIC) <http://agic.az.gov>

The screenshot displays the AGIC website interface. The main content area is titled "AGIC Executive Management Board" and includes a table of board members. The table is organized by sector: State Government, State Universities, Federal Government, County Government, Municipal Government, Private Sector, Regional Surveying Consortia, and Regional GIS Consortia. Each entry lists the organization, the member's name, their position, and their contact information. A sidebar on the left contains navigation links such as "ABOUT AGIC", "CONFERENCE", "COUNCIL", "GIS RESOURCES", "PARTICIPATION", "PUBLICATIONS", and "LINKS".

Agency	Member	Position	Alternate
Arizona Department of Administration	Adam Stee	WEI GIS Project Coordinator	Not designated
Arizona Department of Economic Security	Lisa Banks	Director of Economic Research and Information	Emeraj Lopez
Arizona Department of Education	Patricia Kelly	(Pending appointment)	Not designated
Arizona Department of Environmental Quality	Victor Saxe	GIS Coordinator	Lisa Banks
Arizona Department of Health Services	Chris Newton	Epidemiologist	Tim Coburn
Arizona Department of Public Safety	Sharon Nicholson, President	GIS Manager	Not designated
Arizona Department of Revenue	Kirk Olson	Manager, Property Valuation and Equalization Division	Boyd Larkin
Arizona Department of Transportation	Jami Garrison	GIS Manager, Transportation Planning Division	Not designated
Arizona Department of Water Resources	Drew Eastland	WIC GIS Analyst	Susan Smith
Arizona Game and Fish Department	(Pending appointment)		Not designated
Arizona Geological Survey	Lee Allison	Director and State Geologist	Richard Trapp
Arizona State Cartographer's Office	Gene Trobia	State Cartographer	Scott Howard
Arizona State Land Department	Gary Birch, Secretary	GIS Manager	Emeraj Buckley
Arizona State Parks	Bradley S. Hurdell	Chief of Information Services, Administrative Services	Tom Tyndall

- See handout - Can talk to AGIC contact, For example: ADOT can talk to Jami Garrison, note - AZ State Land Dept
- Disc of this wkshop, present to AGIC; coordinate for AZ web clearinghouse

ADOT Regional Transportation Profile Guidelines

Table 3.1 MoveAZ Long-Range Goals and Factors

Long-Range Goal	Description	Performance Factors
Access and Mobility	A reliable and accessible multimodal transportation system that provides for the efficient mobility of people and goods throughout the State	Mobility Reliability Accessibility Connectivity
Economic Vitality	A multimodal transportation system that improves Arizona's economic competitiveness and provides access to economic opportunities for all Arizonans	Economic Competitiveness Accessibility
Safety	A safe transportation system for the movement of people and goods	Safety
Stewardship	A balanced, cost-effective approach that combines preservation with necessary expansions and coordinates with local and regional transportation and land use planning	Preservation Mobility
Environmental Sensitivity	A transportation system that enhances Arizona's natural and cultural environment	Resource Conservation

Source: MoveAZ Plan, December 2004.



Regional Transportation Profile Guidelines

Environmental Sensitivity	A transportation system that enhances Arizona's natural and cultural environment	Resource Conservation
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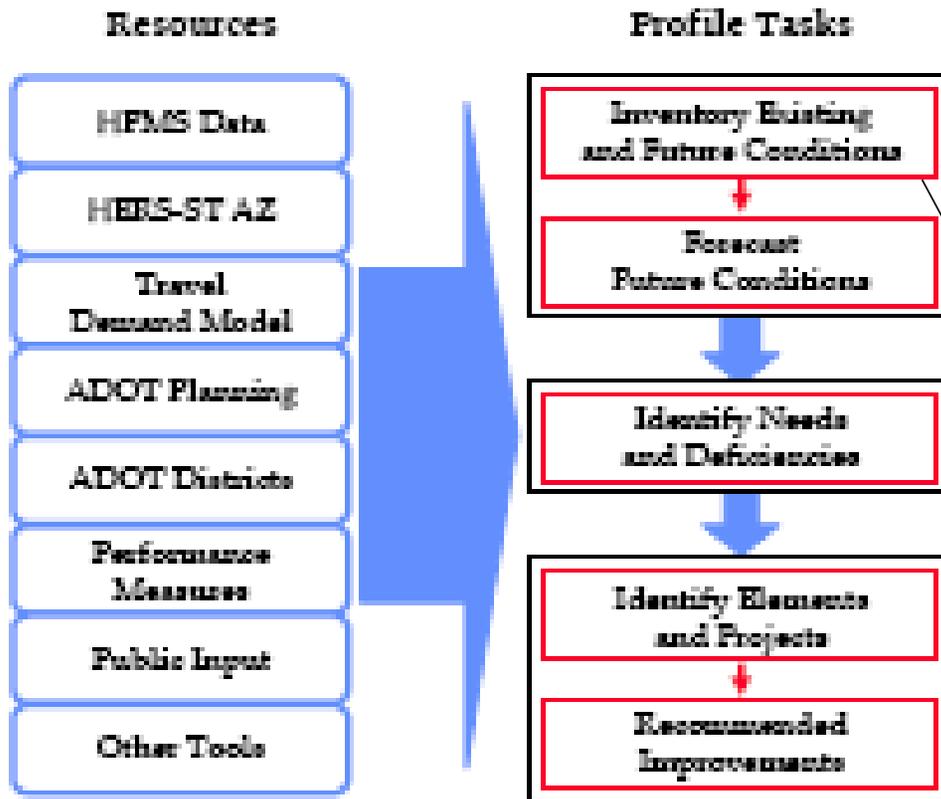
Source: MoveAZ Plan, December 2004.

3.2 Develop Base and Future Horizon Years

Based on Federal transportation planning regulations and ADOT's long-range planning process, the adopted MoveAZ Plan considered a 20-year planning horizon to the future year of 2025. A 20-year planning horizon from the Plan's date of approval will be used to implement the updated MoveAZ Plan.

ADOT Regional Transportation Profile Guidelines

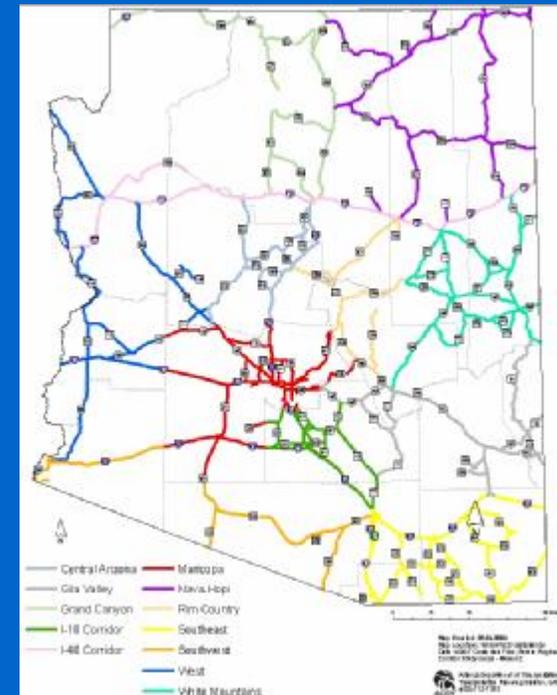
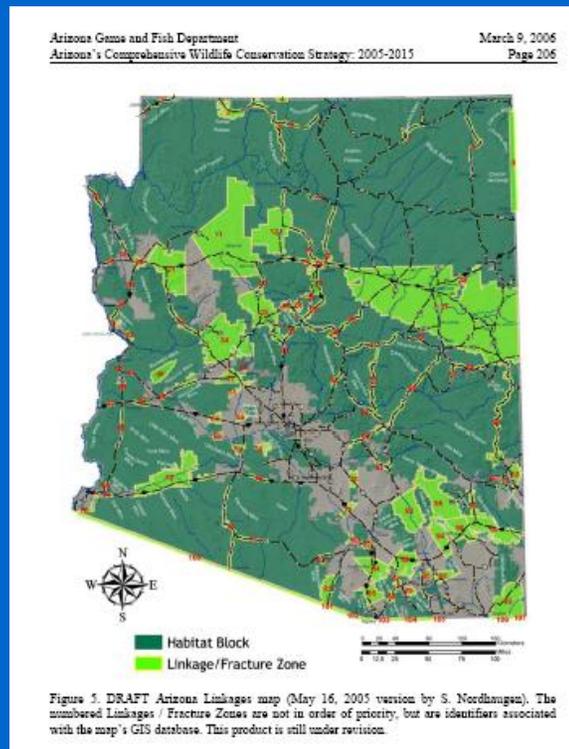
Figure 2.1 Major Profile Tasks and Guideline Resources



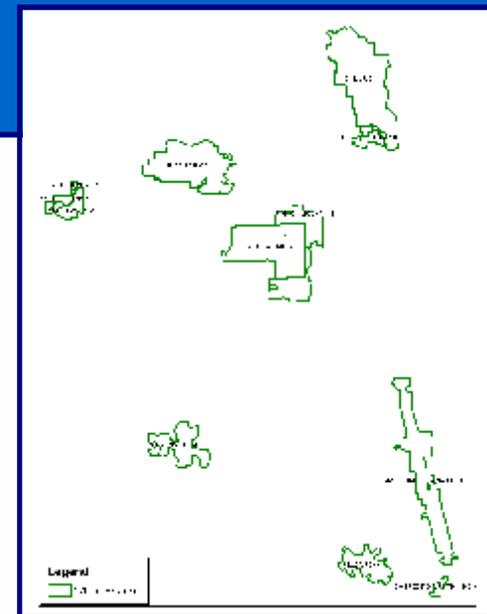
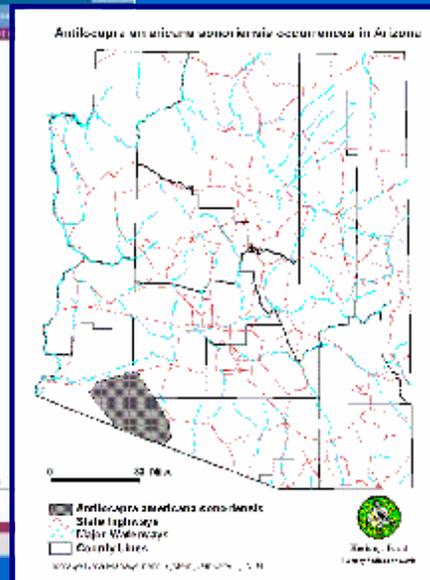
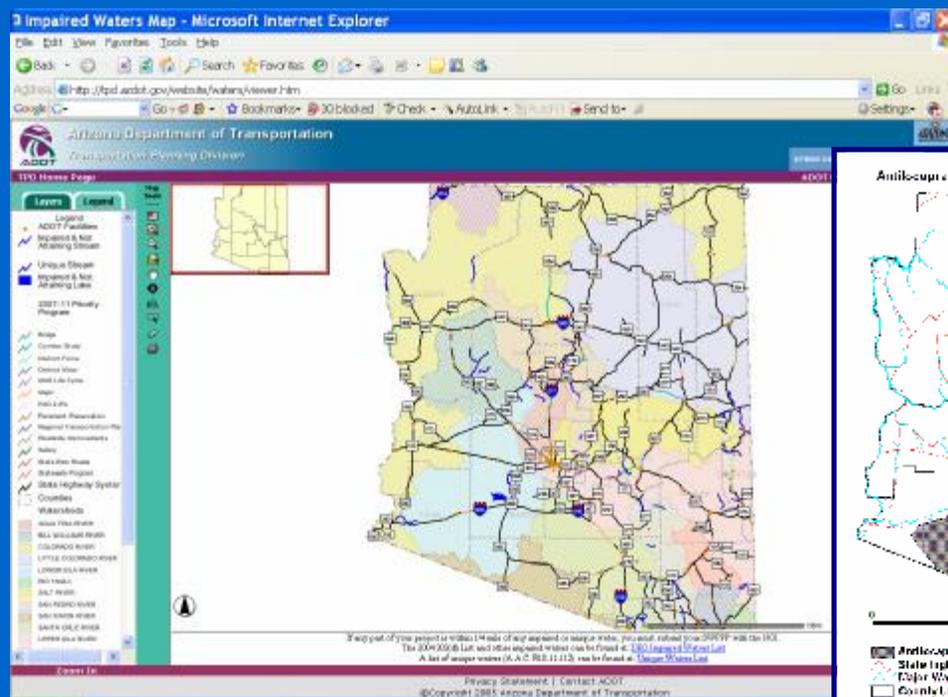
Regional Transportation Profile Guidelines

- Inventory existing conditions
- Forecast future conditions

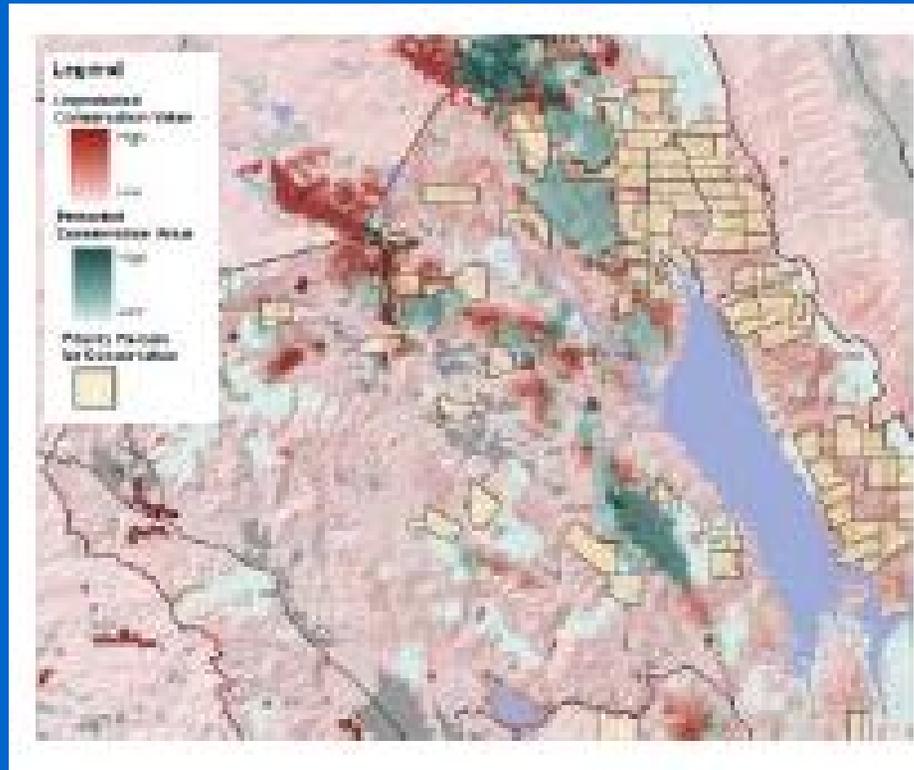
Examples of AZ Available Input Data to use with Tools such as NatureServe Vista GIS DSS



More Examples of AZ Available Input Data to use with Tools such as NatureServe Vista GIS DSS



Example Use of Output Results from One Tool such as NatureServe Vista to bring into other Tools and vice versa to support various offices and decisions



Output from VISTA, “what if” scenarios

On map: tan areas have high conservation value & potential as priority conservation corridors, Vista MAP output can be used with other tools, & inform/input to other tools and decisions

Next: More Arizona Highlights of Tools and Approaches

**Sabra Schwartz, AZ Heritage Data Management
System, AZ Game and Fish**

Topic: Environmental Review Online Tool

... Illustrating an online AZ tool

AND ----

*a subset of Project Level Data useful to inform
Long-Range Planning and Decision-Making*