

Vertical Data Integration (Scale Ranges)



Level	Pixel	Scale
Global	30m-1km	>500k
Federal	1m-1km	7.2-500k
Regional	1-30m	7.2-500k
State	1-30m	7.2-250k
County	.3m (1')	2.4-63k
Municipal	.15m (6")	1.2-24k

Data Scale Requirements

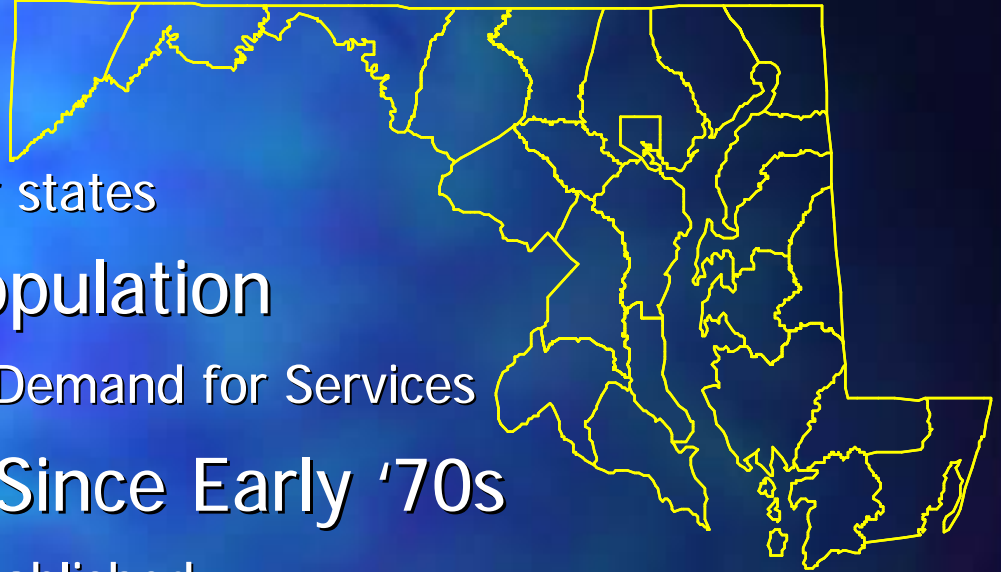
(By Selected Layers and User Group)

Activity	Global	Federal	Region	State	County	Municipal
Ortho Imagery	100k	12-24K	12-24K	12K	2.4K	1.2K
DEM	20'	10'	10'	5-10'	2-5'	.5-2'
Transportation	100k	24k	24k	12k	2.4k	1.2k
Hydrography	100k	24k	24k	12k	2.4k	1.2k
Geodetic ControlPrecise in all cases.....					
Polit. Boundaries	100k	24k	24k	12k	2.4k	1.2k
Cadastre	?	24k	24k	12-24k	2.4k	1.2k
Floodplain	100k	24k	24k	12k	2.4k	1.2k
Wetlands	100k	24k	24k	12k	2.4k	1.2k
Census	?	?	?	?	?	?

Is Maryland Different ?

- n Eighth smallest State

Not much area to map
compared to many other states



- n Fifth Largest State Population

Variety of fund sources/Demand for Services

- n GIS Data Production Since Early '70s

Routine is pretty well established

- n Coordination Good Within State Government.

Outreach to other groups can improve

- n Level of Activity is Disparate

Between Agencies and Levels of Government

- n Funding Unstable Through the '90s

Do All Layers Require a High Degree of Precision ?



n Political Boundaries

It Depends on the Use -

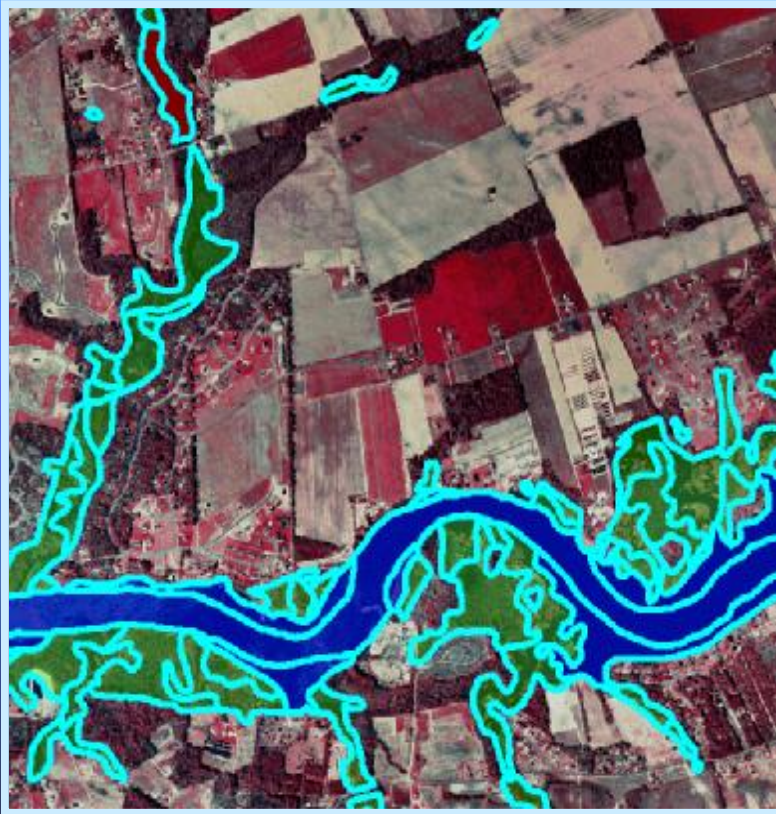
Perhaps when establishing jurisdiction in a murder case, but not for planning purposes.



n Who are your users?

n What is your Mission?

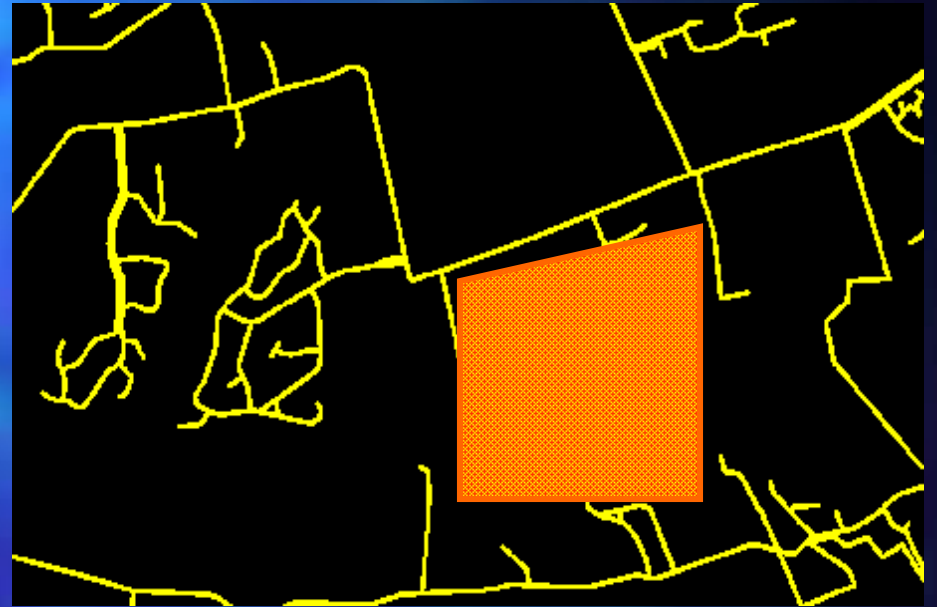
Do All Layers Require a High Degree of Precision ?



Wetlands - The level of precision and the areal extent increases with larger scales, but mapped delineations are seldom accepted by regulatory agencies.

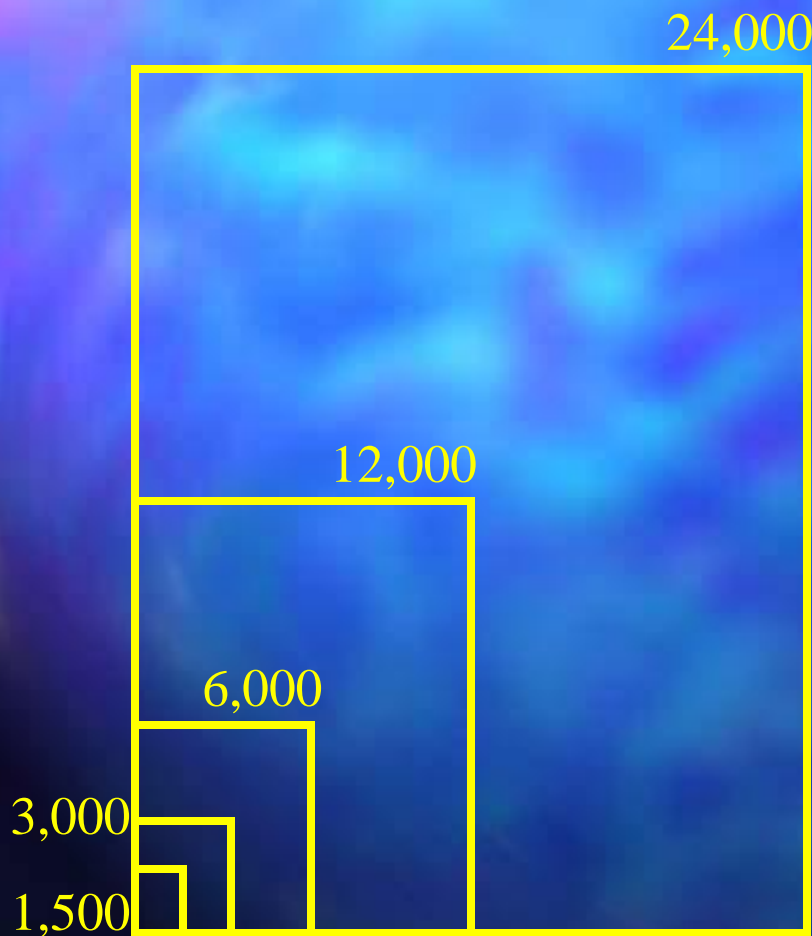
Do All Layers Require a High Degree of Precision ?

U.S. Census Bureau wants road and address data from local governments to improve the quality of their data, but can not adjust their tracts and blocks to be spatially accurate at large scales. Therefore, will local and state governments lose interest in a partnership.



Census and Road Centerline Data

How Many Map Sheets in Maryland?



Scale	# D-Scale Sheets
24K -	252
12K -	879
6K -	3,094
3K -	10,890
1.5K -	38,333

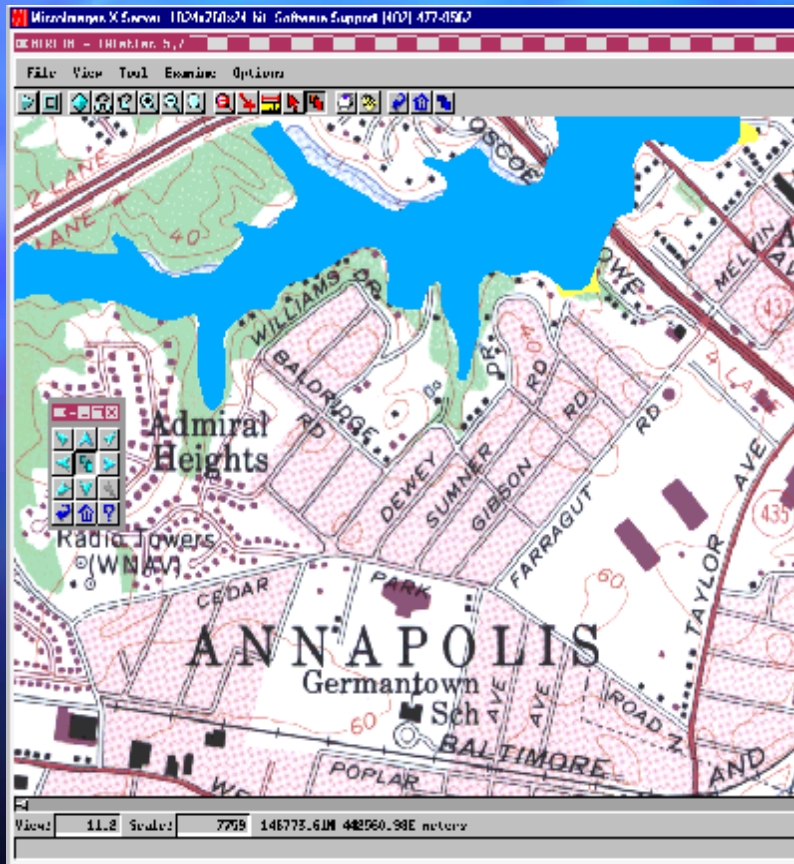
Each scale step = 4X the previous scale multiplied by 88% to compensate for loss around the edges.

What Happens to the Cost in Maryland?

Scale	#D-Scale Sheets	Cost of Production
24K	252	n What production costs will be evaluated for each of the layers being studied.
12K	879	
6K	3,094	n What factors do we include when comparing production at two or more scales versus sharing production of one product.
3K	10,890	
1.5K	38,333	

An Example

Floodplain Maps -



- n Would we re-study the floodplain at each scale and re-map it, or would we use one engineered study and fit the elevations to more accurate DEM's at each scale.
- n FEMA is the authority, and their maps are the basis of regulatory programs and flood insurance. Is there any valid reason to re-map at larger scales.

Is a New and Formal Infrastructure Required?

Central GIS Authority
Manages Contracts
Holds Funds
Supplies Data

Will Federal Agencies
Participate
What Funding Mechanisms
How Much Money - How Often

Will State and Regional Governments Participate
What Funding Mechanisms
How Much Money - How Often

Will County and Municipal Agencies Participate
What Funding Mechanisms
How Much Money - How Often

How do we factor in the increased costs for a formal infrastructure?

Should we work piecemeal and build on existing mandates and relationships?

Should we let an agency coordinate all production for a layer they are normally associated with. Do we assign coordination up, down, or in both directions.



What will form the basis for our decisions?



This Virginia resident is currently a deduction, not a taxpayer.

- n Best deal on data production and management costs for current and future taxpayers, or
- n Significant improvement in government efficiency or public service that warrants an increased cost.