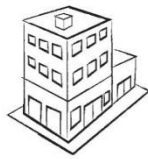


SCENARIO PLANNING ENVISION TOMORROW +

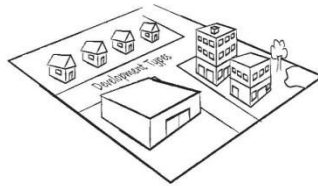
Sarah J. Hanners, University of Utah

Envision Tomorrow PLUS

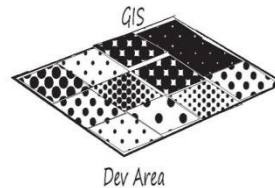
Basically, ET+ allows you to build a model of your study area, from a site to a neighborhood, to a city or region.



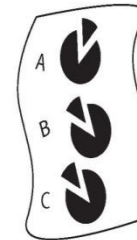
**Building
Prototypes**



**Development
Types**



**Scenario
Painting**



**Output:
Indicators**

ET+ Process is like painting the
future...



ET+ process is like painting the future...



pigments

ET+ process is like painting the future...



Mix paint colors

ET+ process is like painting the future...



Choose your palette

ET+ process is like painting the future...



Create a picture

ET+ process is like painting the future...



Compare pictures



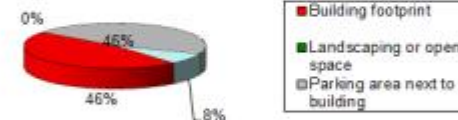


Start with Buildings



Your City, USA

Lot area	10,000 sf
Lot area	0.23 acres
Height	3 stories
Floor-area ratio	1.18 FAR
Average unit size	1,000 sf
Residential density	30 /acre
Employment density	5 /acre



Average unit sale price	N/A
Average cost/sf	N/A /sf
Average unit rent	\$ 1,500.00 /month
Average rent (sf/month)	\$ 1.50 /sf
Retail rent (sf/year)	\$ 16 /sf (triple net)
Office rent (sf/year)	N/A /sf (triple net)
Estimated land value	\$ 15 /sf
Estimated land value	\$ 150,000
Total project costs	\$1,634,278

Residential parking spaces per unit	1.00
Retail parking spaces per 1000sf	2.00
Office parking spaces per 1000sf	N/A
Total parking spaces	11
Landscaping and open space area	0%

Surface	\$3,000 /space
Structured (above ground)	\$10,000 /space
Underground	\$35,000 /space
Tuck-Under	\$20,000 /space

Residential	\$100 /sf
Retail	\$100 /sf
Office	\$95 /sf

⁴ Includes building hard costs and \$25/sq ft tenant improvement allowance (commercial).

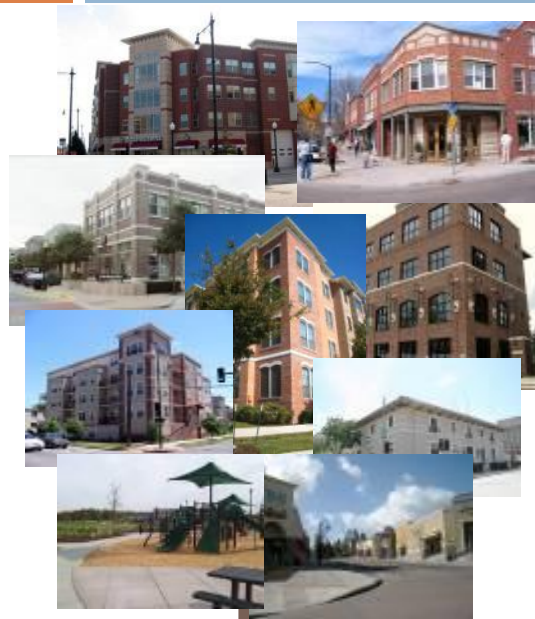


Mix buildings with public domain features...





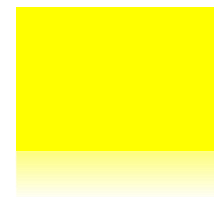
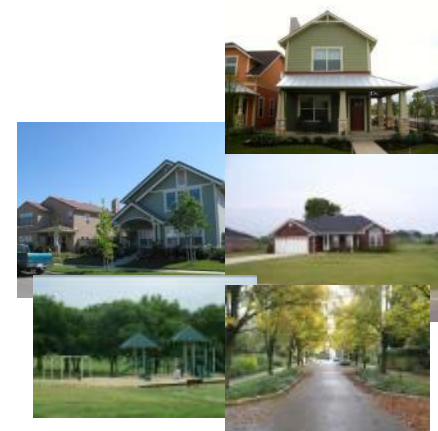
... to create Development Types



**Town
Center**



**Medium-Density
Residential**



**Single-Family
Residential**



Load Development Types into GIS interface tool, and paint.

File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help

1:6,000

Network Analyst | Network Dataset: | Envision 2.0 Paint Tool

Editor | Page Text | Drawing | Arial | 10 | B I U |

Table of Contents

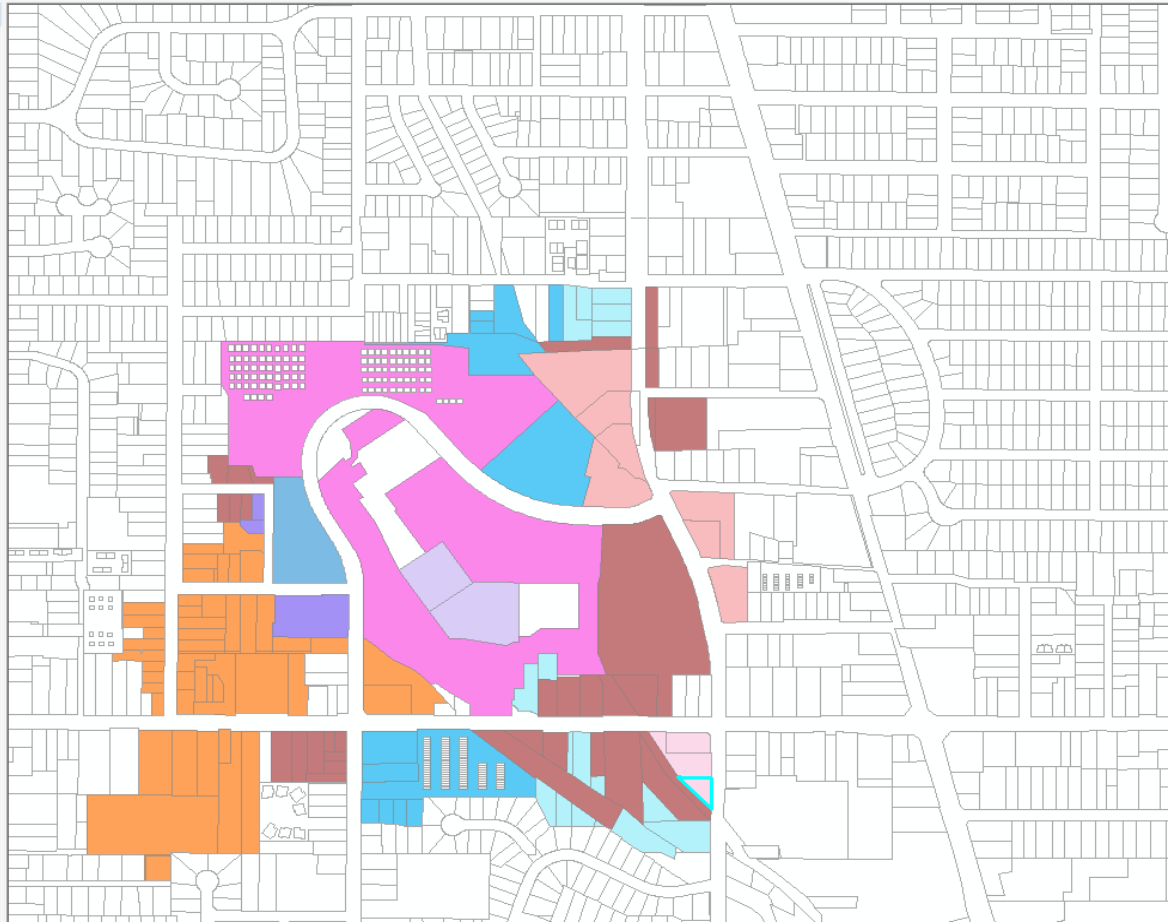
- Layers
 - GAET_TestFolder\BrickyardTestScenario.gdb
 - Brick1
 - <all other values>
 - DEV_TYPE
 - Urban Business District
 - Urban Residential District
 - Business Center
 - Residential Center
 - Town Center
 - Compact Mixed-Use Neighborhood
 - Mixed-Use Neighborhood
 - Regional Shopping
 - Strip Commercial
 - Shopping District
 - Main Street Commercial
 - Office Park
 - Hospitality Center
 - ParcelPainting <ACTIVE>
 - <all other values>
 - DEV_TYPE
 - ERASE
 - Urban Business District
 - Urban Residential District
 - Business Center
 - Residential Center
 - Town Center
 - Compact Mixed-Use Neighborhood
 - Mixed-Use Neighborhood
 - Regional Shopping
 - Strip Commercial
 - Shopping District
 - Main Street Commercial
 - Office Park
 - Hospitality Center
 - SCENARIO_SUMMARY
 - SCENARIO1
 - ENVISION_DEVTYPE_FIELD_TRACKING

ENVISION PAINT TOOLS

File Edit Scenarios Subareas

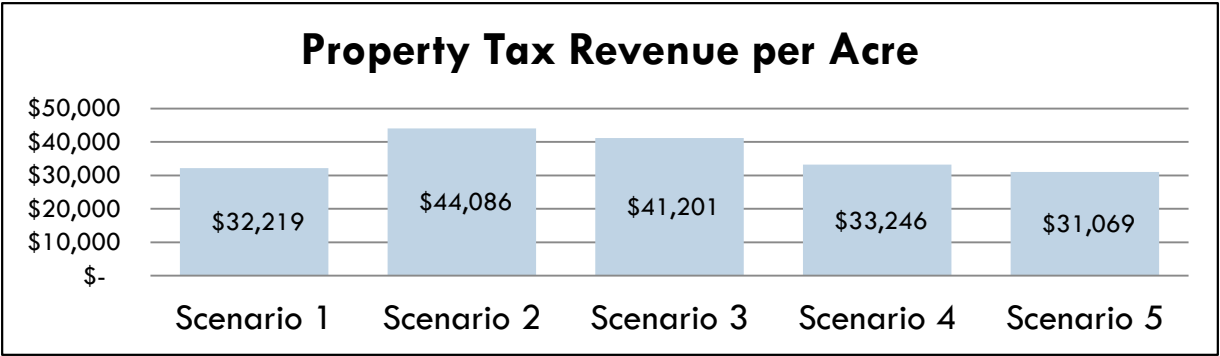
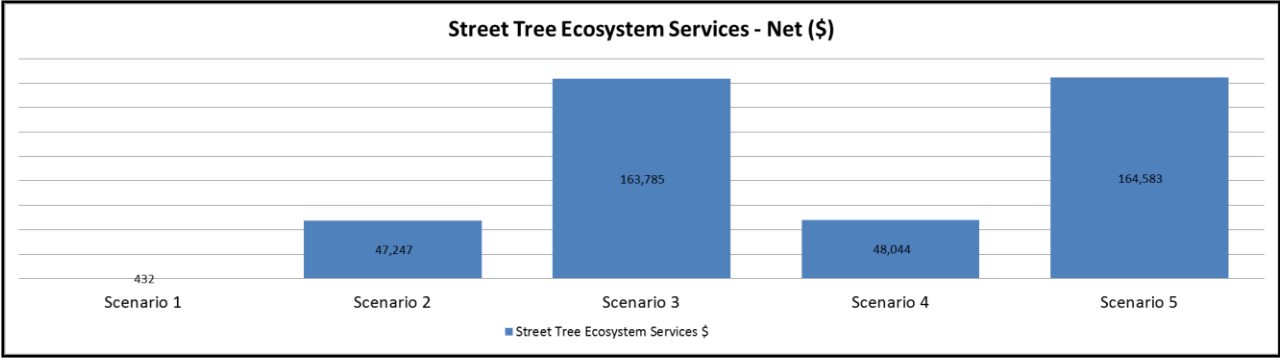
Apply Start Edit

Symbol	Development Type
	ERASE
	Urban Business District
	Urban Residential District
	Business Center
	Residential Center
	Town Center
	Compact Mixed-Use Neighborhood
	Mixed-Use Neighborhood
	Regional Shopping
	Strip Commercial
	Shopping District
	Main Street Commercial
	Office Park
	Hospitality Center





Create a picture of a possible future, and consider the outcomes.



Outputs:

- Developed acres
- Land use mix
- Population
- Household size, school-aged children
- Housing mix
- Owner/renter mix
- Employment mix
- Density
- Jobs-Housing balance
- Cost of living
- Average rent, unit size
- Average home price, size
- New building value
- Tax revenues per acre
- Energy use per household
- CO2 emissions
- Water use
- Waste generation
- Impervious cover
- Parking spaces
- Parking lot coverage
- New road lane miles, cost
- Green infrastructure benefits

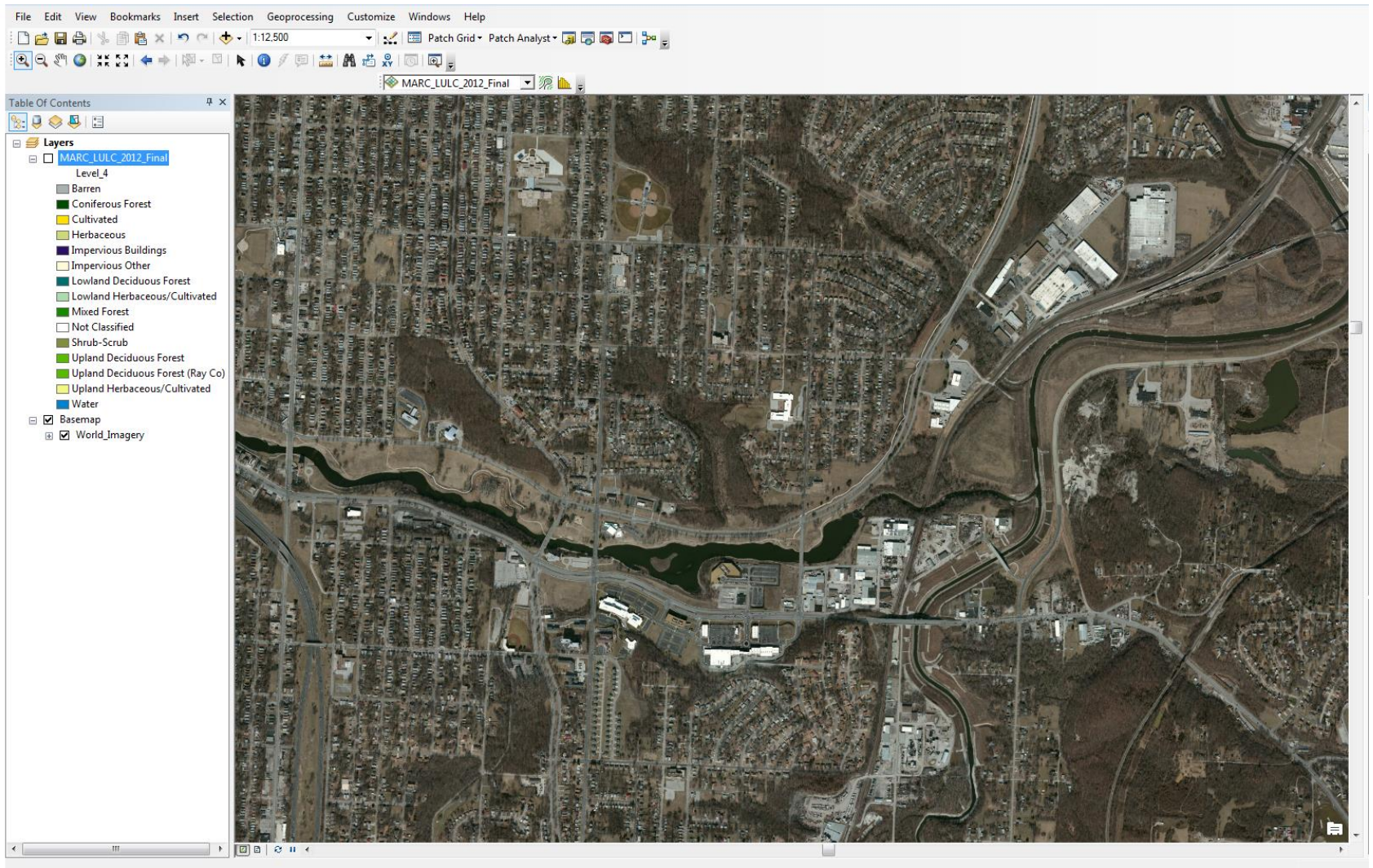
and more....

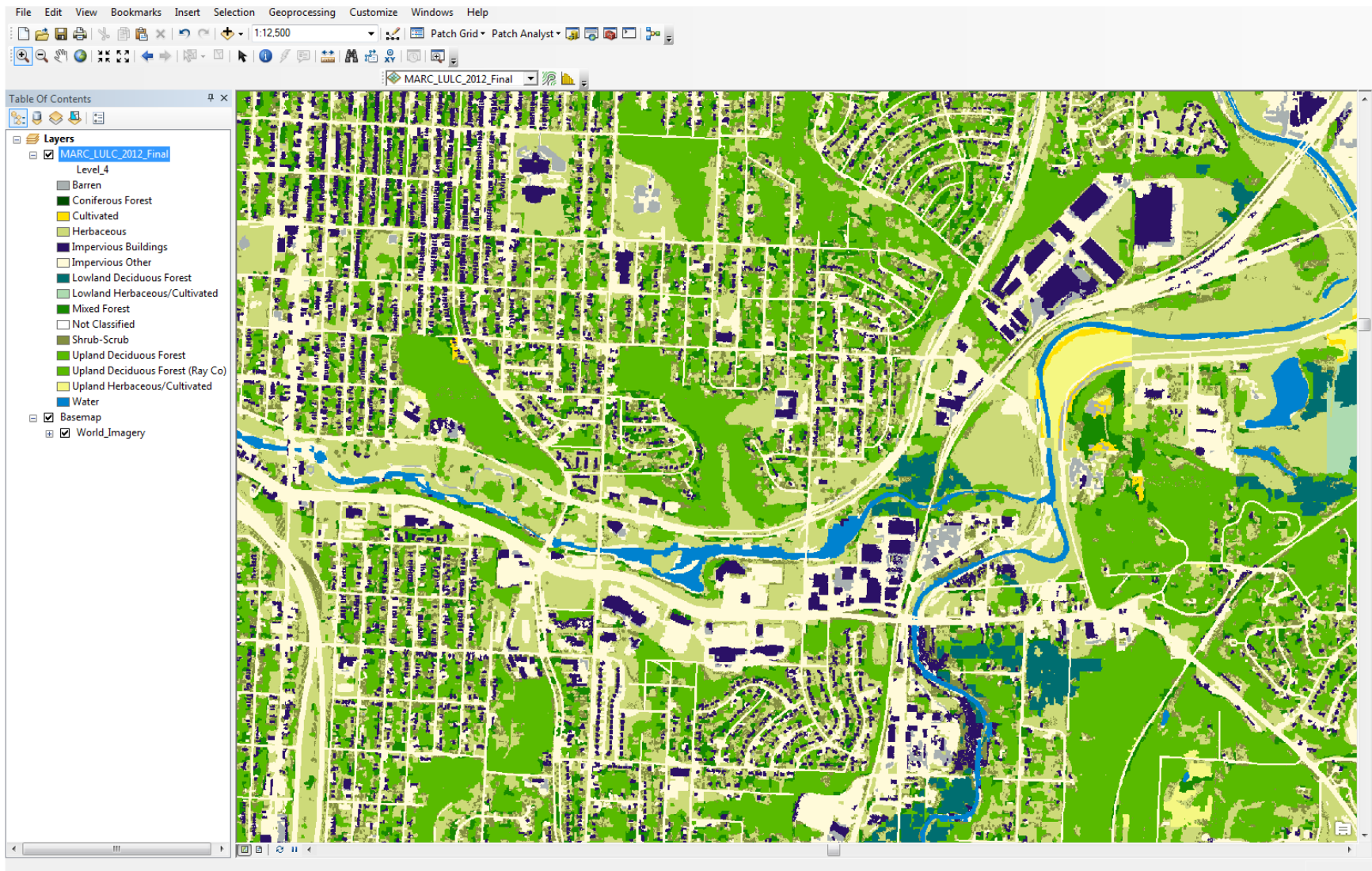
What I've just described assumes that you're painting on a blank canvas.

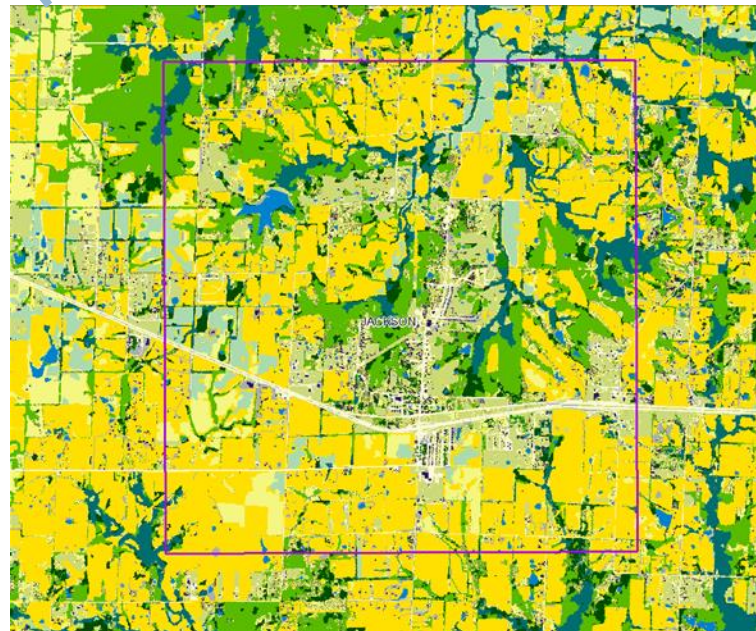
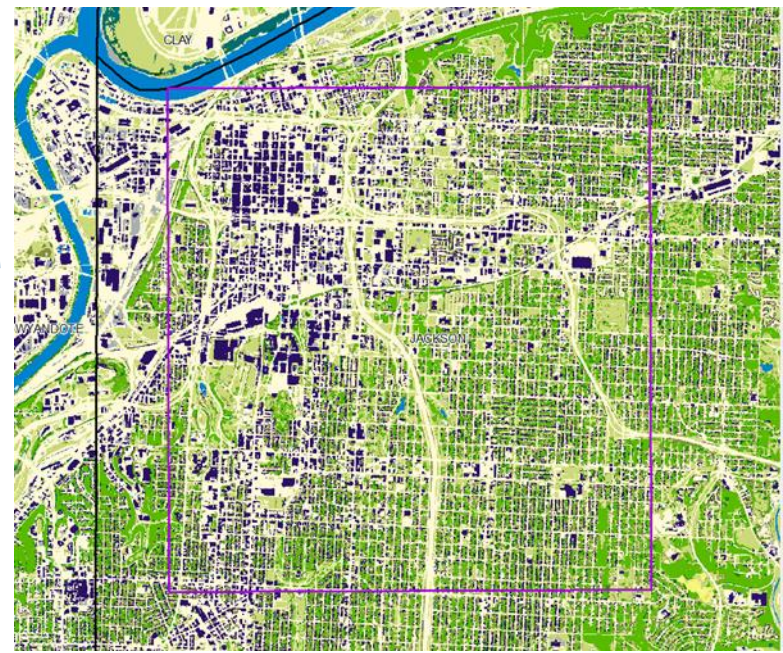
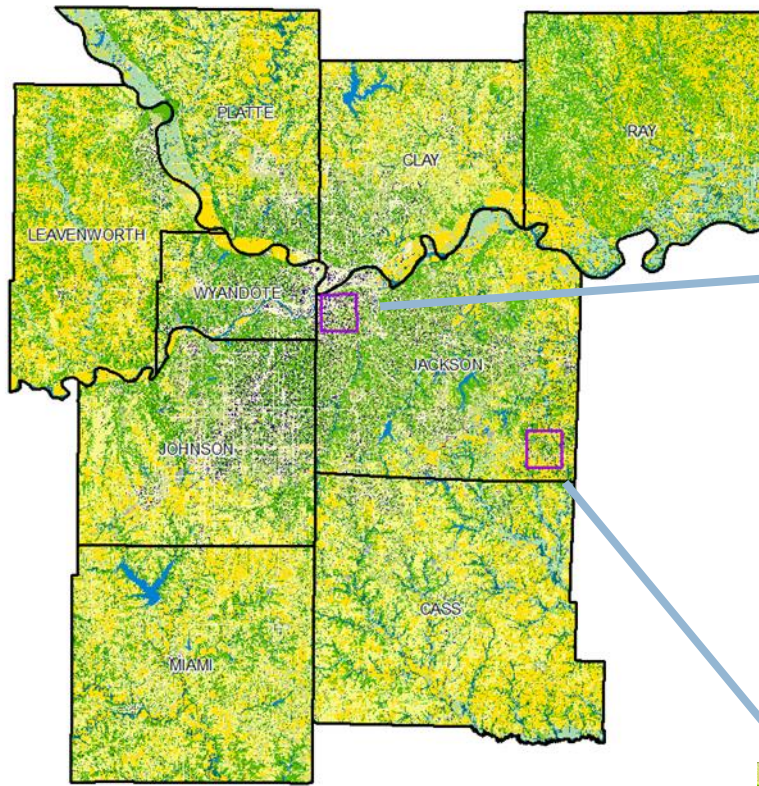
What if there's already a painting there? How does ET+ interact with **pre-existing conditions**?

Much of the work that's been done recently has been to increase capability to incorporate existing data.

Can we track impacts of development on natural land cover?







Kansas City

Natural Resources Inventory
2.5m resolution land cover

Acres preserved, by land cover type

