

Sarasota County, GIS and Watershed Management

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Integrated Water Resources



Data:

- Many organizations collected spatial data within the county
- ~150 layers on central server, with countless layers on individual machines
- Primarily used to create graphics and provided to contractors for analysis



GIS Analysis

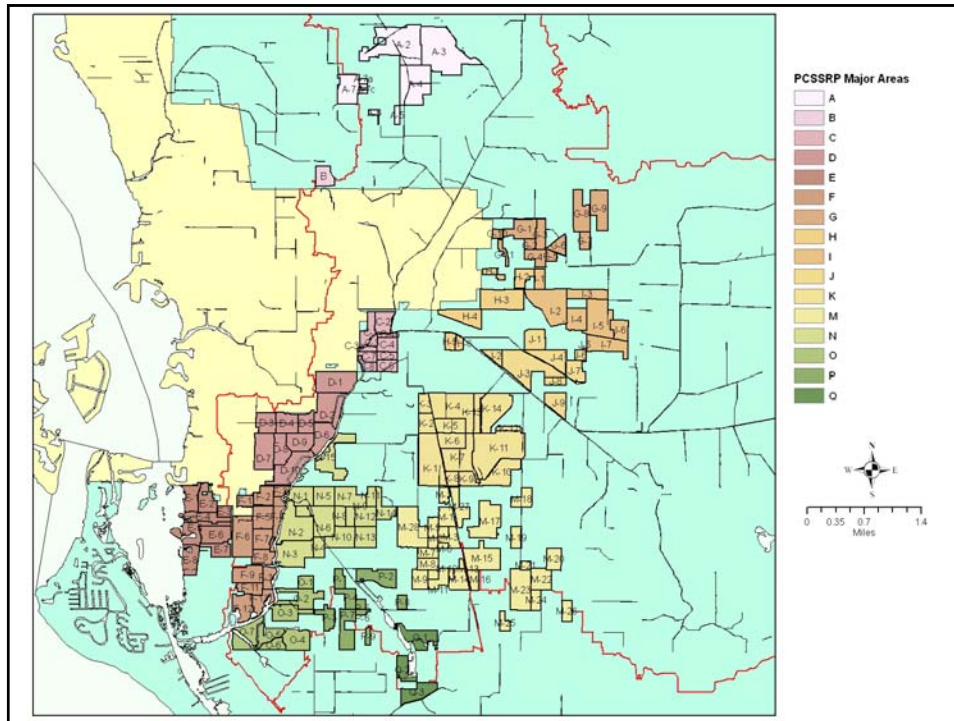
- Using the data internally
- Phillippi Creek Septic System Replacement Program
- Age of Development
- Other analyses



Phillippi Creek Septic System Replacement Program (PCSSRP)

- Provides utility connections to ~14,000 septic system users
- Located primarily in the Phillippi Creek Basin, listed as impaired for fecal coliform bacteria (TMDL expected in 2008)
- Drains to Roberts Bay (TMDL for Chlorophyll)

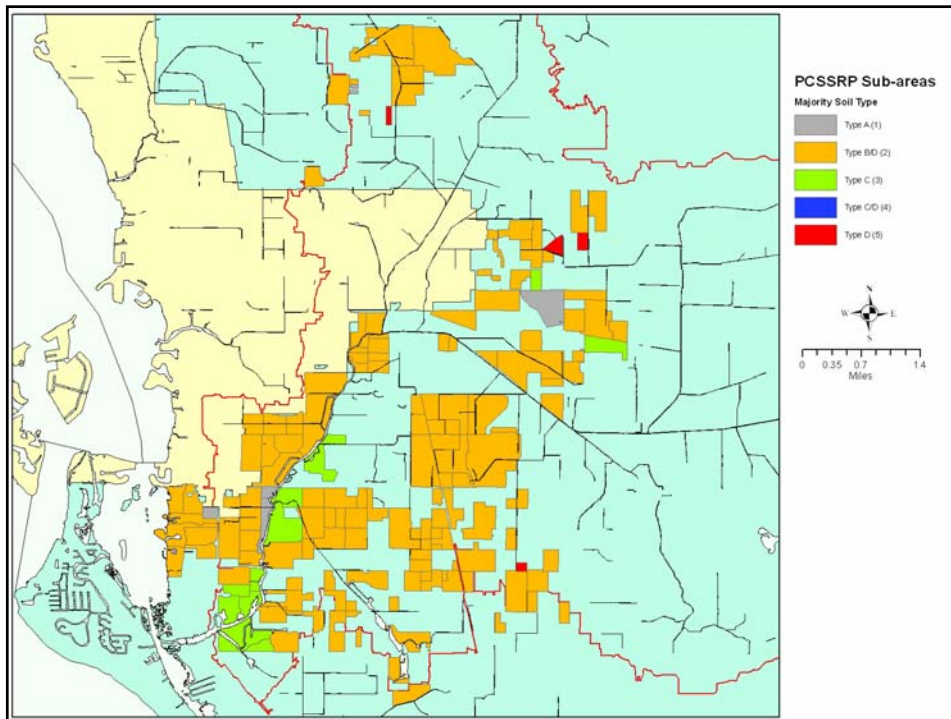


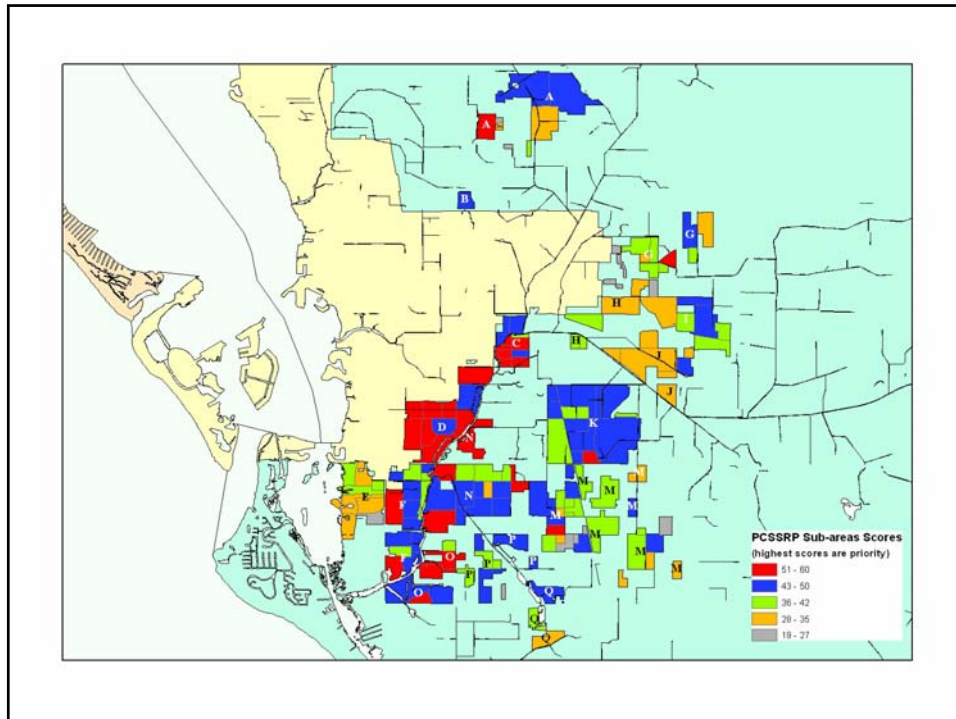


PCSSRP

- Cost estimate in 2006, \$134,000,000
- Areas A, E and F are either complete or substantially complete
- Increasing cost has led management to reprioritize the program, with an emphasis on environmental benefits
- GIS analysis of factors impacting septic systems

Weight	High (3)			Medium (2)		Low (1)	
Score	Year of Construction	Density	Soils	Distance from Conveyance	Floodplain	BMP	Repairs/ Hookup
0				> 900		Yes	
1	> 1983	>0.5	A		< 1'		< 25%
2	1973-1982		B/D				25-50%
3	1963-1972	0.25-0.5	C	165 - 900	1 – 3'	No	50-75%
4	1953-1962		C/D				> 75%
5	<1952	<0.25	D	< 165	> 3'		





PCSSRP - Conclusion

- The reprioritization did account for environmental impacts
- Applying this technique to the rest of the county to begin planning for future expansion
- Portions of this project may be added to the Pollutant Loading Model being developed to better account for septic system loadings

Age of Development

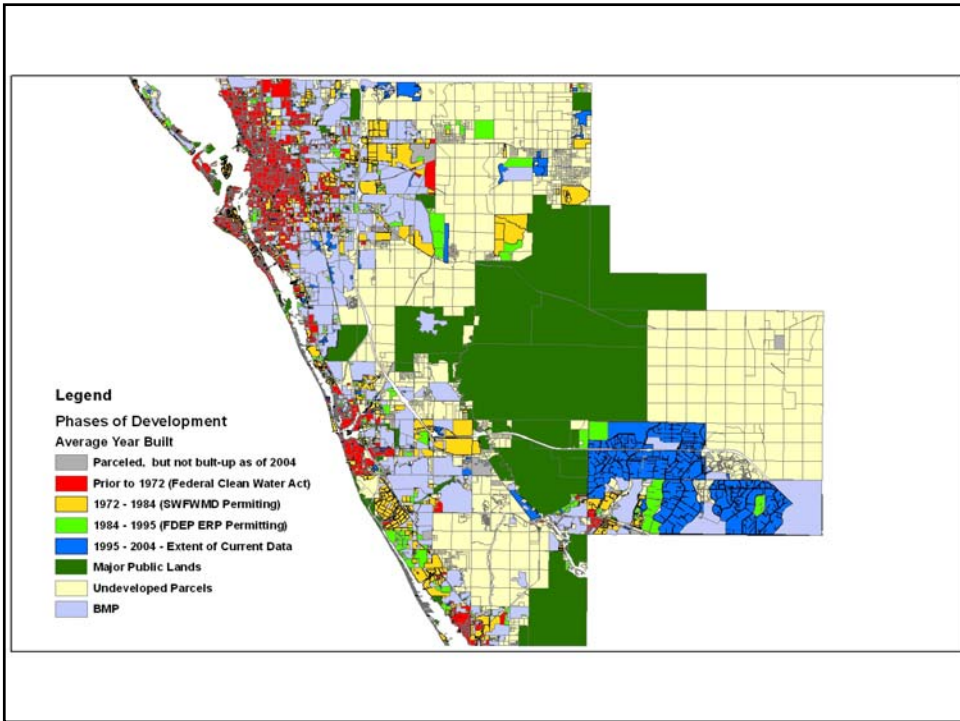
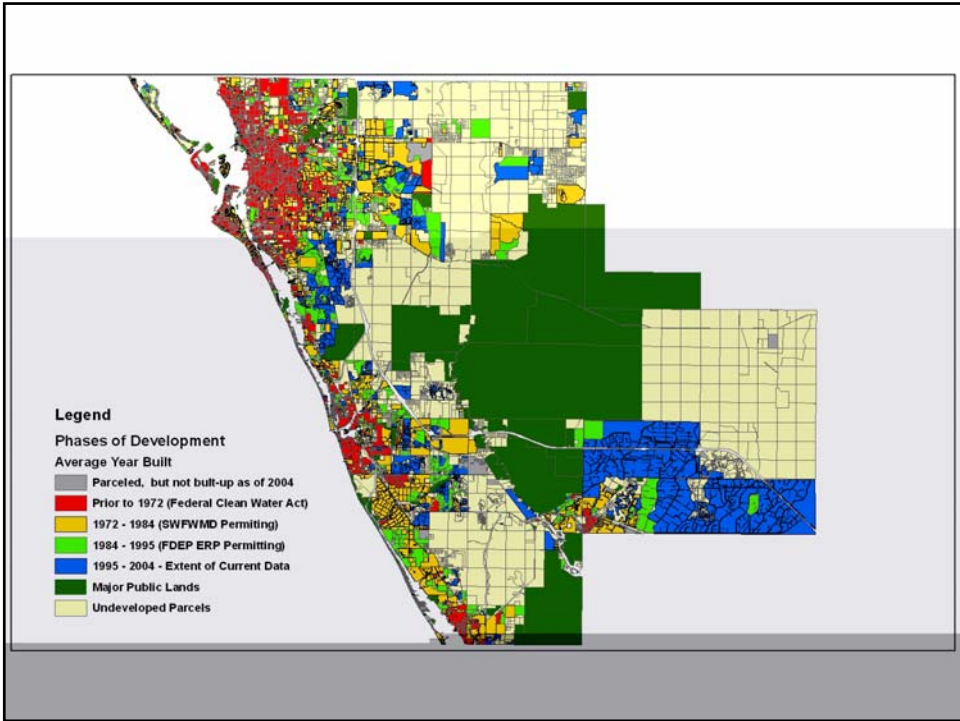
- Spawned by the development of the Pollutant Loading Model
- Looking to breakdown the Medium Density Residential landuse as mapped by SWFWMD
- Premise: Older properties lack stormwater treatment, but utilize swales and less curb and gutter



Age of Development

- Development or subdivision information didn't exist
- Plat boundaries used as a surrogate for subdivisions
- Tax Assessor's database was used to average the age of the buildings within the plat boundary





Other Correlations

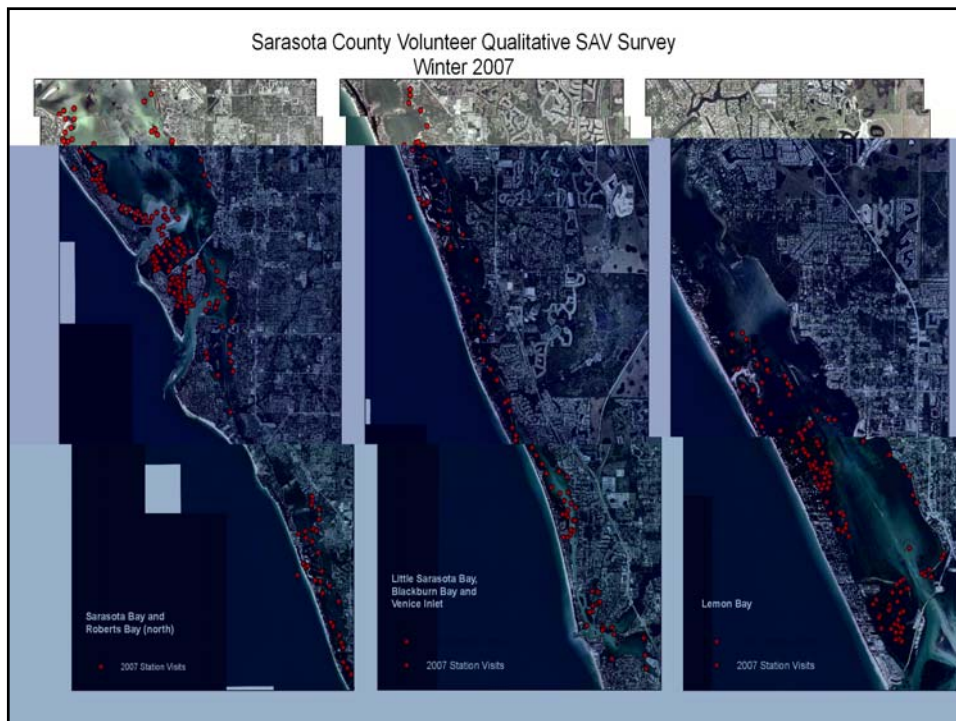
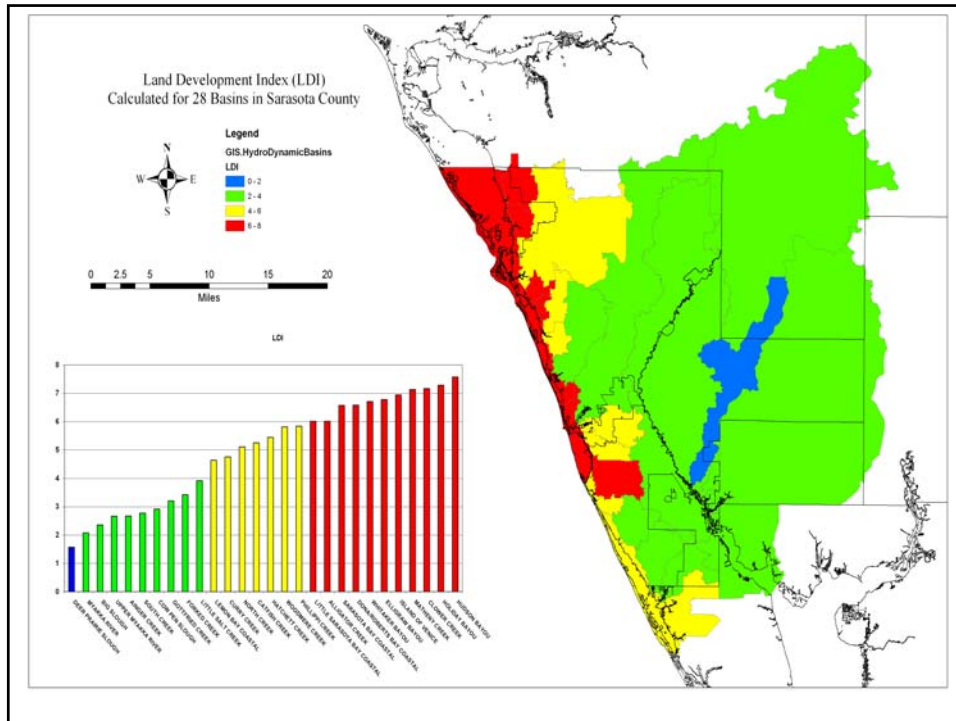
- Another correlation was identified during a windshield survey of the data
- 18 sites visited, newer/higher valued areas trended towards better lawns, indicating greater fertilizer use and increased irrigation
- This led to the current sampling based on lawn care practices to develop a range of runoff values to interpolate loadings between differing MDR landuses

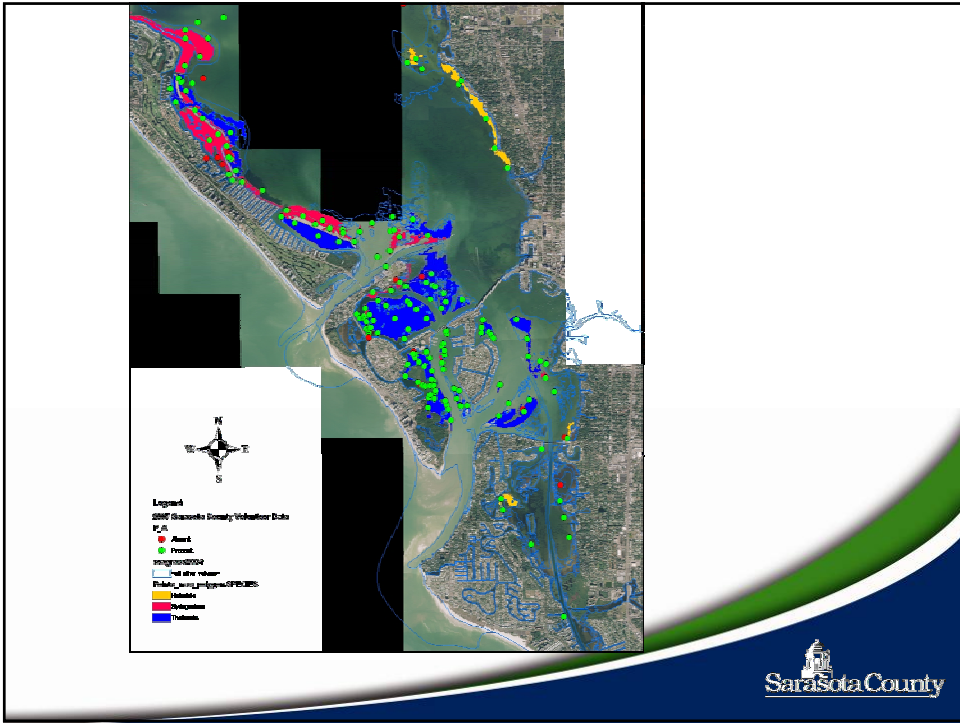


Ongoing Projects

- Utilizing the Landscape Development Intensity Index (Brown, 2003) with the Tidal Creek Index with Mote Marine Laboratory
- Analyzing volunteer seagrass species data with SWFWMD aerial seagrass maps







Thank You

Questions?

Sarasota County

The slide contains the text 'Thank You' and 'Questions?' in a blue, sans-serif font, centered on the page. The background is white with a blue and green curved graphic at the bottom. The Sarasota County logo and name are located in the bottom-right corner.