



# St. Andrews and St. Joseph Bay Estuary Program Economic Valuation

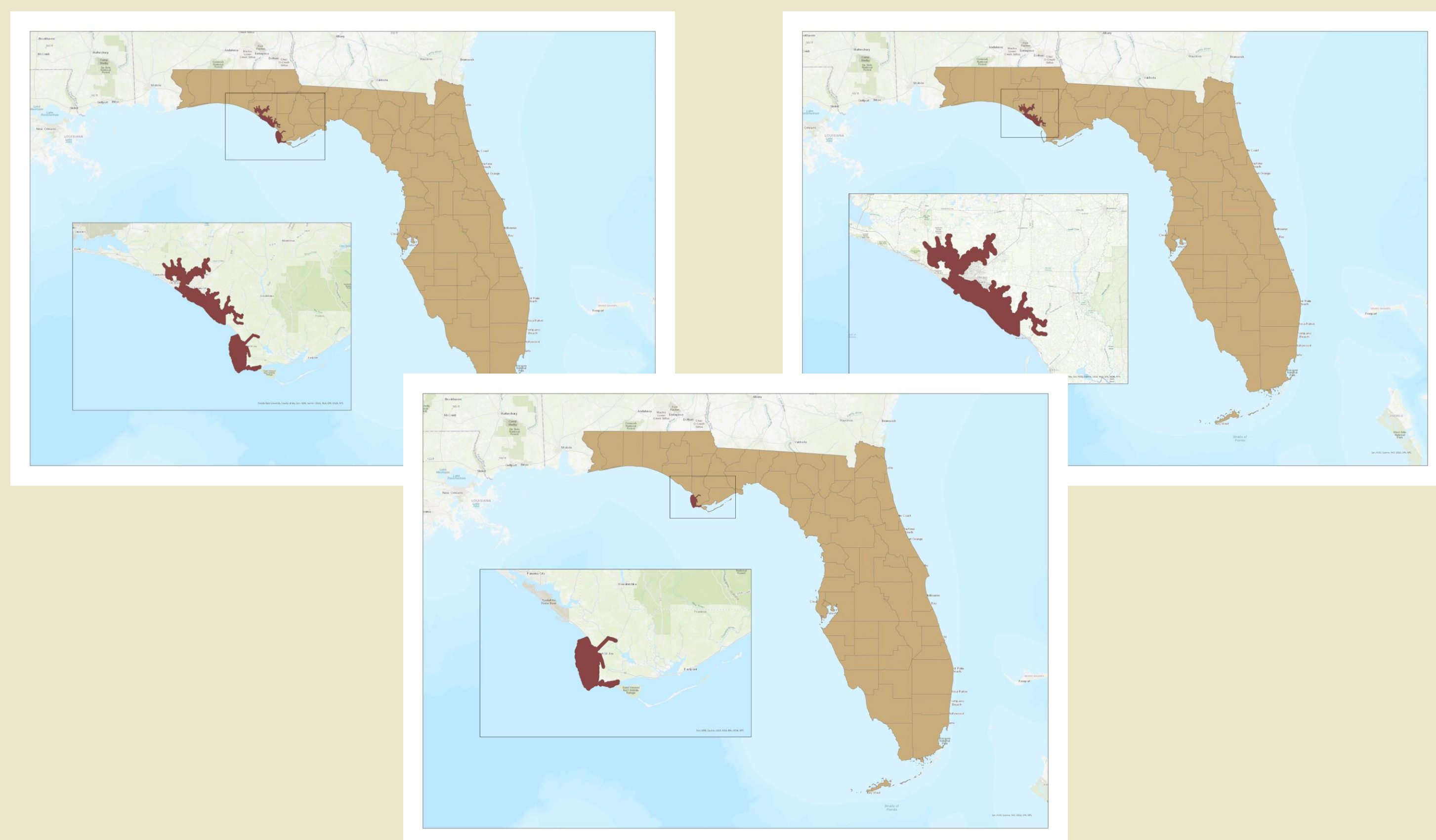


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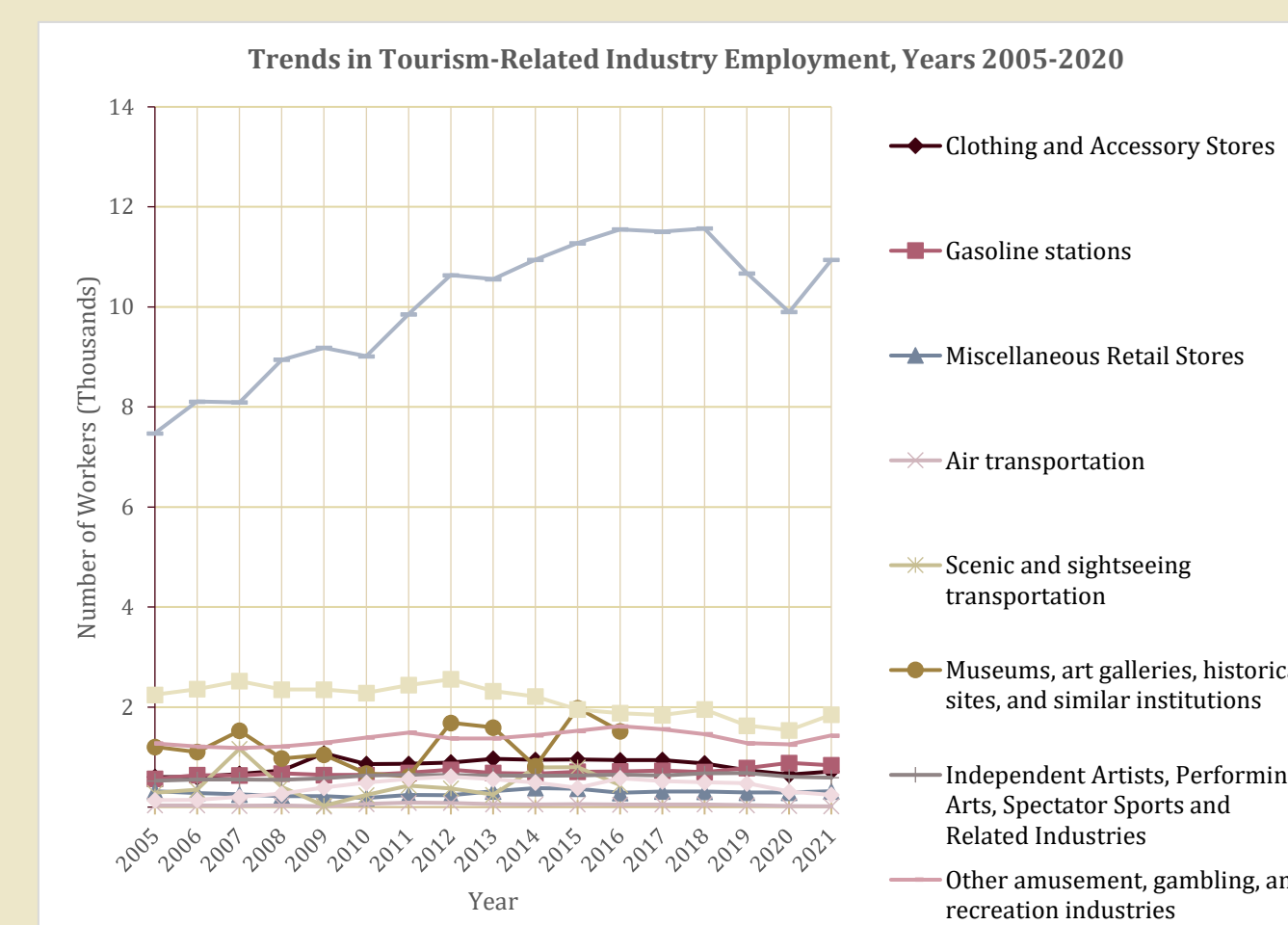
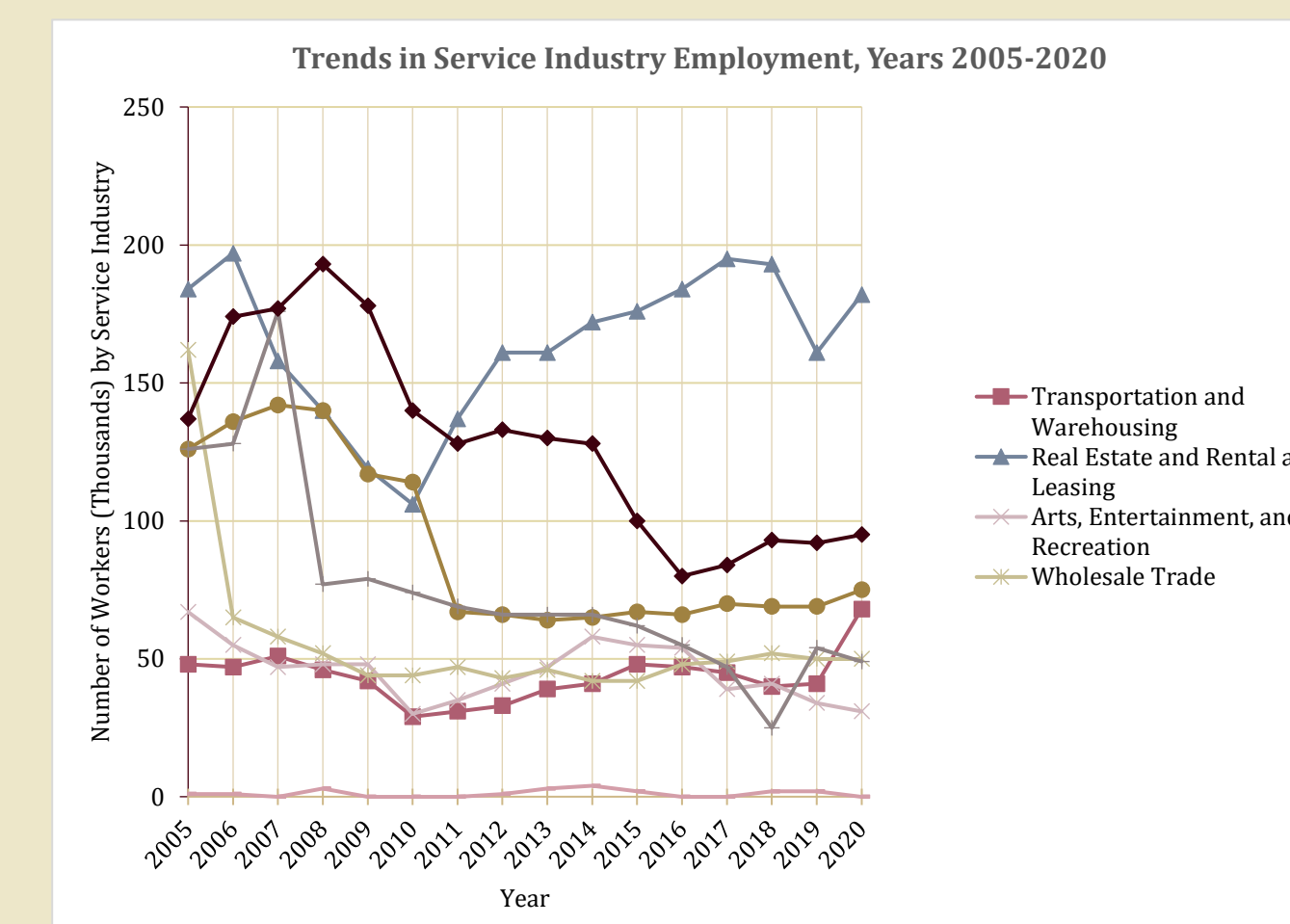
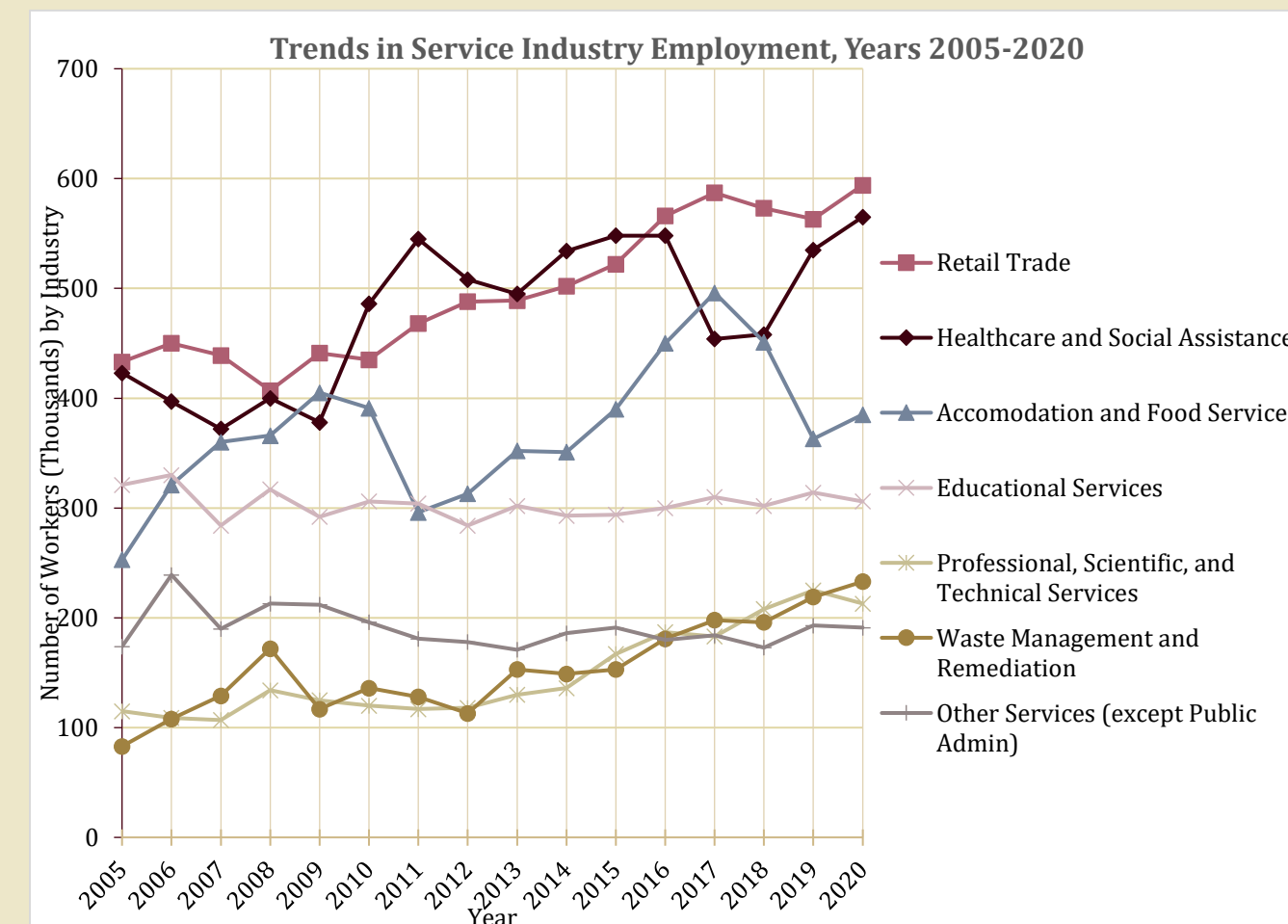
## Background

Florida State University's (FSU) Center for Economic Forecasting (CEFA) and Analysis in union with FSU's Florida Resources and Environmental Analysis Center (FREAC) are working on an economic valuation and impact study for the St. Andrew and St. Joseph Bay estuaries and the surrounding counties. The project is working in conjunction with the St. Andrew and St. Joseph Bays Estuary Program (SASJBEP) to evaluate the impact and contributions of the watershed associated with these estuaries. The St. Andrew Bay Watershed is located in North Florida, in the central Florida panhandle, and covers 1,156 square miles. This watershed covers both the St. Andrew Bay and St. Joseph Bay. The watershed supports the biological diversity of the region and provides economic benefits to the surrounding regions through tourism based on the social and recreational benefits of the estuaries



## Methods

- NETs data, property appraiser parcel data from the Florida Department of Revenue (FDOR), 100-year flood data, and sea-level rise data from the National Oceanic and Atmospheric Administration (NOAA) is being gathered
- Boundaries of the estuary are being mapped in the GIS software ArcGIS Pro.
- A half-mile buffer is being added around the boundaries
- Python code and GIS are used to create a final reports
  - of the sales of businesses withing a half-mile of the estuary
  - the just-value of the land parcels said businesses are on.



Large, Medium, and Small Businesses within 1/2 Mile of the SASJBEP Area			
Sector (by SIC)	Number of Businesses	Number of Employees	Total Sales
Agriculture, Forestry, and Fishing	220	500	\$20,176,187
Mining	1	6	\$1,050,013
Construction	1,184	2,769	\$288,390,534
Manufacturing	144	475	\$47,611,964
Transportation, Communications, Electric, Gas, and Sanitary Services	286	890	\$65,771,966
Wholesale Trade	207	630	\$10,492,869
Retail Trade	680	2,305	\$212,396,638
Finance, Insurance, and Real Estate	789	2,253	\$215,139,533
Services	4,867	12,103	\$686,575,754
Public Administration	49	192	\$479,397
<b>Totals</b>	<b>8,435</b>	<b>22,123</b>	<b>\$1,638,085,054</b>

Large, Medium, and Small Businesses within 1/2 Mile of the SASJBEP Area (Cont.)			
Sector (by SIC)	Number of Businesses	Number of Employees	Total Sales
Agriculture, Forestry, and Fishing	0	0	\$0
Mining	0	0	\$0
Construction	5	365	\$69,400,362
Manufacturing	14	2,551	\$446,174,104
Transportation, Communications, Electric, Gas, and Sanitary Services	18	384	\$118,189,383
Wholesale Trade	3	81	\$33,350,436
Retail Trade	238	3,287	\$259,823,252
Finance, Insurance, and Real Estate	20	322	\$91,910,238
Services	204	3,277	\$212,979,970
Public Administration	51	1,845	\$9,475,000
<b>Totals</b>	<b>142</b>	<b>20,036</b>	<b>\$1,955,292,462</b>

## Results

- The results thus far are preliminary.
- Excluding carbon sequestration
- St. Andrews sequesters \$11.8 million worth of carbon per year
- St. Joseph sequesters \$2.4 million worth of carbon per year
- Future results include:
  - the economic impact and value of the estuary
  - the direct business sales and property values that are impacted by the estuary

County	Property by Type	Market Value of Properties by Property on the SASJBEP Area	Empty Market Value	
Bay	All Prop	4,810	\$173,172	\$1,113,016
	Man Prop	4,208	\$158,826	\$1,018,884
	Unim Prop	1,144	\$11,220	\$1,022,910
	Unim Vac	1,044	\$10,220	\$1,022,910
	Unim Vac	1,044	\$10,220	\$1,022,910
	Unim Vac	1,044	\$10,220	\$1,022,910
	Unim Vac	1,044	\$10,220	\$1,022,910
	Unim Vac	1,044	\$10,220	\$1,022,910
	Unim Vac	1,044	\$10,220	\$1,022,910
	Unim Vac	1,044	\$10,220	\$1,022,910
Perdido	All Prop	1,200	\$100,000	\$2,100,000
	Man Prop	1,000	\$80,000	\$1,800,000
	Unim Prop	200	\$20,000	\$300,000
	Unim Vac	1,000	\$100,000	\$1,900,000
	Unim Vac	1,000	\$100,000	\$1,900,000
	Unim Vac	1,000	\$100,000	\$1,900,000
	Unim Vac	1,000	\$100,000	\$1,900,000
	Unim Vac	1,000	\$100,000	\$1,900,000
	Unim Vac	1,000	\$100,000	\$1,900,000
	Unim Vac	1,000	\$100,000	\$1,900,000
<b>Total</b>	<b>6,010</b>	<b>\$273,172</b>	<b>\$3,213,016</b>	

## Discussion

At the time of presentation, the economic valuation is still being performed. The results will contribute to the economic literature of valuation of natural resources. The preliminary results presented here have shown the invaluable contribution of ecosystem services to the economic health of the surrounding areas.

## References

Harrington, J., Holland, M., Strode, G., Kabbani, J. (2022). An Economic Impact and Valuation Analysis of the Pensacola and Perdido Bays Estuary Program (PPBEP)

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