

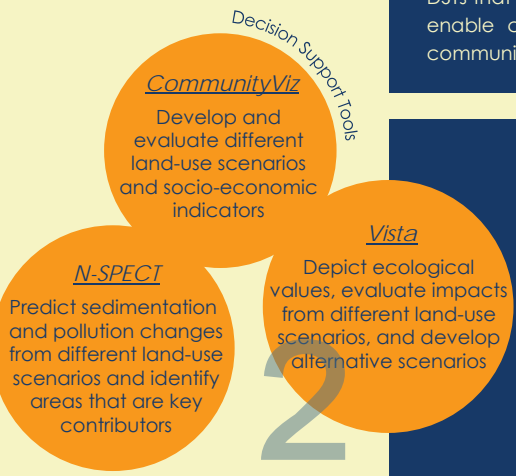


# Improving land-use planning through the application and interoperation of decision-support tools in the Mission-Aransas NERR

## Ecosystem Based Management and Decision Support Tools

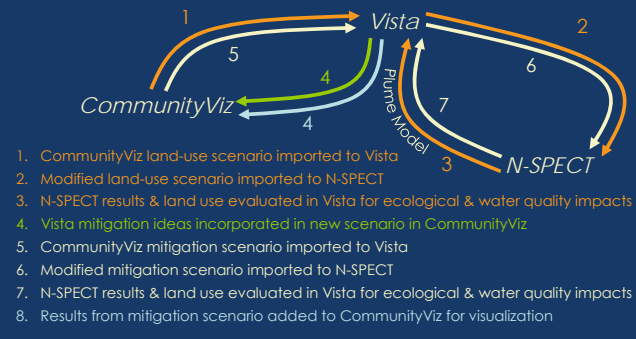
**Ecosystem Based Management (EBM)** seeks to restore and sustain the health, productivity, resilience, and biological diversity of coastal ecosystems and promote a sustainable and enhanced quality of life for people in those ecosystems.

**Decision support tools (DSTs)** assist the land use planning, conservation and resource management, and ecosystem modeling sectors in the integration of land use planning and ecosystem management in coastal zones. Integrating DSTs that draw upon variables from the entire ecosystem, from socioeconomic to habitat structure and function, can enable coastal communities to develop land-use strategies that promote coastal environmental quality and community quality of life.



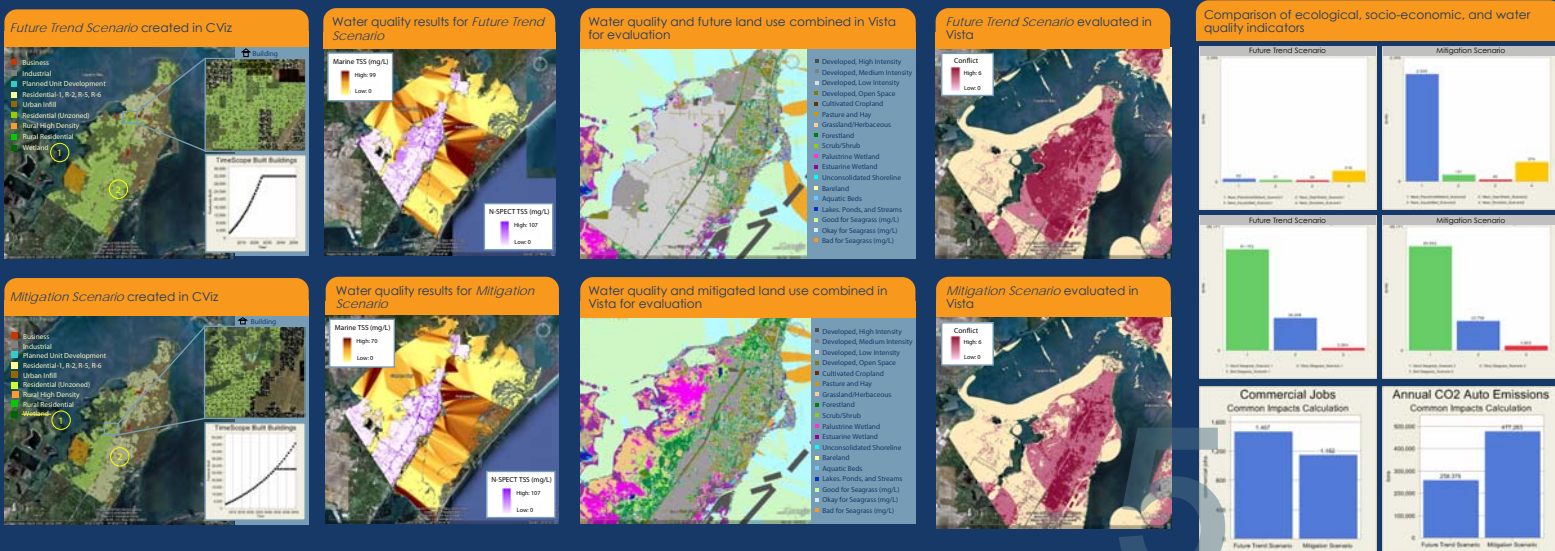
## Mission-Aransas NERR Watershed

- Relatively undisturbed watershed that supports healthy & diverse estuaries
- Some areas (i.e., Live Oak and Lamar Peninsulas) are experiencing rapid population growth
- Strong community interest in maintaining the resource-dependent quality of life
- Ideal location for a case study that links decision support tools and applies integrated land-sea planning



## Interoperability

There are DSTs available to address land use planning, biodiversity conservation, and the impact of land use change on water quality. However, these tools were developed independently without conscious planning for how they could be used interoperably in a project. Interoperability refers to the process of utilizing the outputs of one tool as an input to another tool to achieve more complete analyses. For example a land use scenario developed in one tool can be used to predict run-off changes in another tool which can be used to estimate ecological impacts in a third tool.



## Training Strategies:

- Short Overview**
  - Conferences
  - Webinars
  - Technical Presentations
  - Target Audience: Senior Managers/Decision Makers
- Half-Day Overview**
  - Conferences
  - Two-Day Workshops Series
  - Target Audience: Planners and Resource Managers; Scientists; GIS Analyst
- Three-Day Training**
  - Regional Workshops
  - Workshops
  - Use Cases & Applications
  - Targeted Audience: Scientists; GIS Analyst

## Acknowledgements:

David & Lucile Packard Foundation, Aransas County, City of Rockport, Town of Fulton, Texas Parks & Wildlife Department, Texas A&M University – Corpus Christi