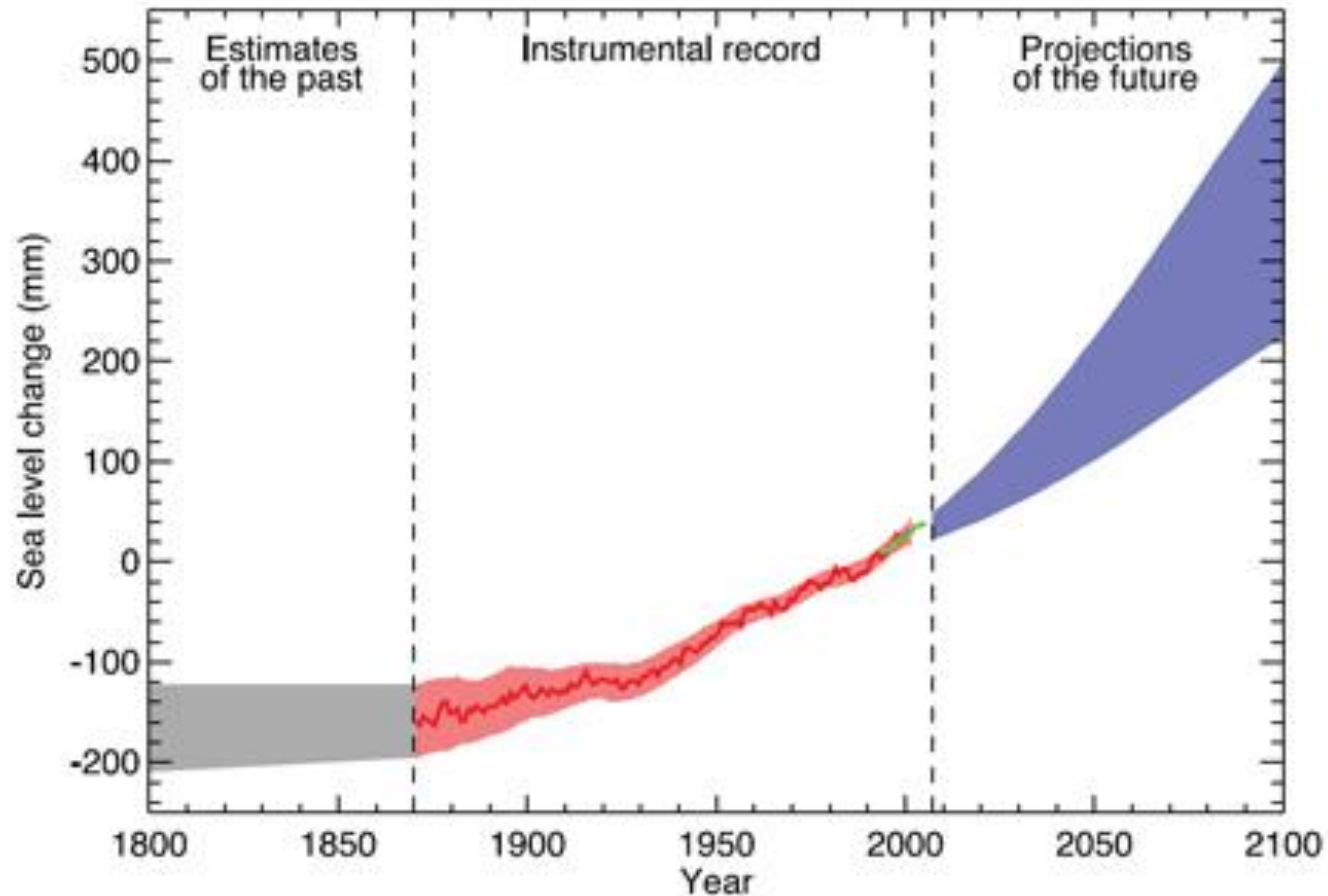


# Planning for Sea Level Rise in Florida

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February 28, 2012

# Sea Level Rise Projections



Some planning initiatives consider up to 2.5 m by 2100

Source: IPCC, 2007

# Potential Impacts of Sea Level Rise

- More frequent inundation at high tides
- Higher storm surge
- Higher water table and saltwater intrusion
- Increased flooding (lack of drainage)
- Greater coastal erosion
- Vegetation changes (affect storm buffering)
  - The Nature Conservancy video:  
<http://blog.nature.org/2011/07/nature-brains-the-race-against-sea-level-rise/>

# Sea Level Rise Planning

- Prominent cases across Florida - examples
  - South Florida (Miami-Dade, Broward, Palm Beach, Monroe)
  - Tampa Bay region
  - Collier County
  - Charlotte Harbor and Estuary, City of Punta Gorda
  - Satellite Beach, Cape Canaveral (Volusia County)
  - Lower and upper Big Bend



# Sea Level Rise Planning

- Projects for which I am Principal Investigator
  - Levy County
    - Florida Sea Grant
    - Two years
  - Matanzas Basin
    - National Estuarine Research Reserve Science Collaborative
    - Guana Tolomato Matanzas NERR
    - Three years



# Project Goals

- Initiate community conversations about sea level rise
- Provide basic locally relevant information about potential impacts of sea level rise and options for adaptation

# University-Community Partnership

**Sea Level  
Rise  
Project**



**Local  
Group or  
Initiative**



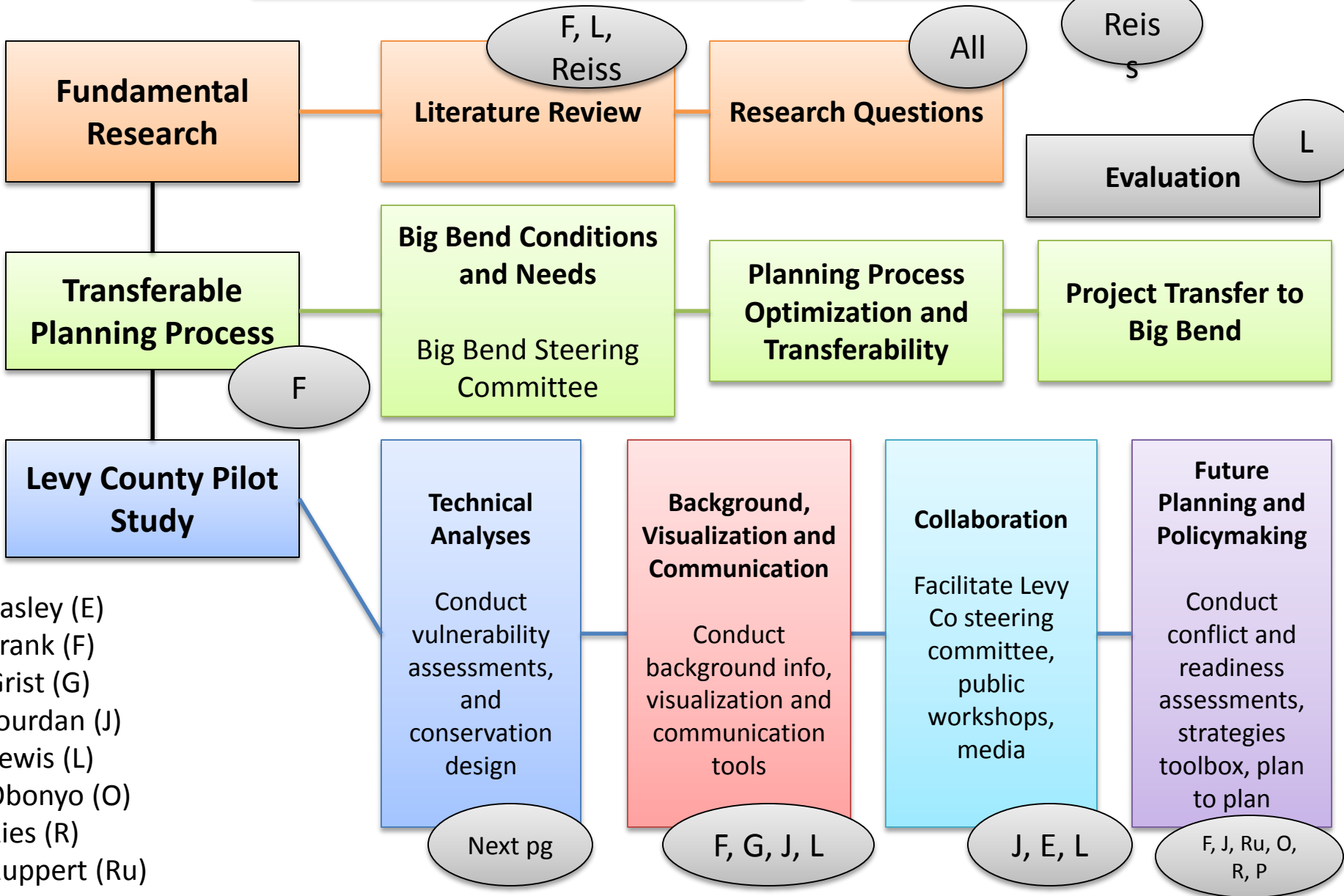
# Levy County Project

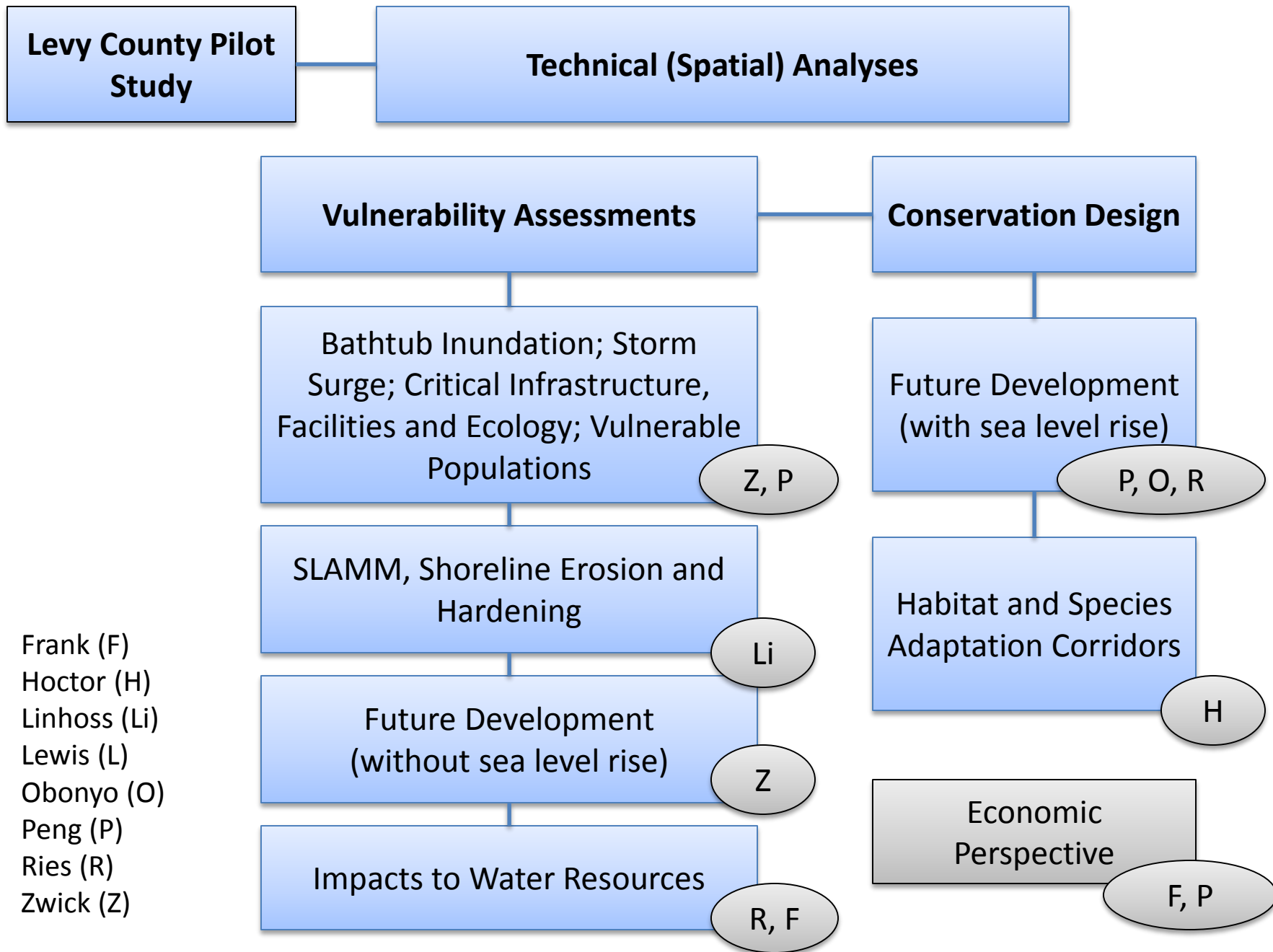




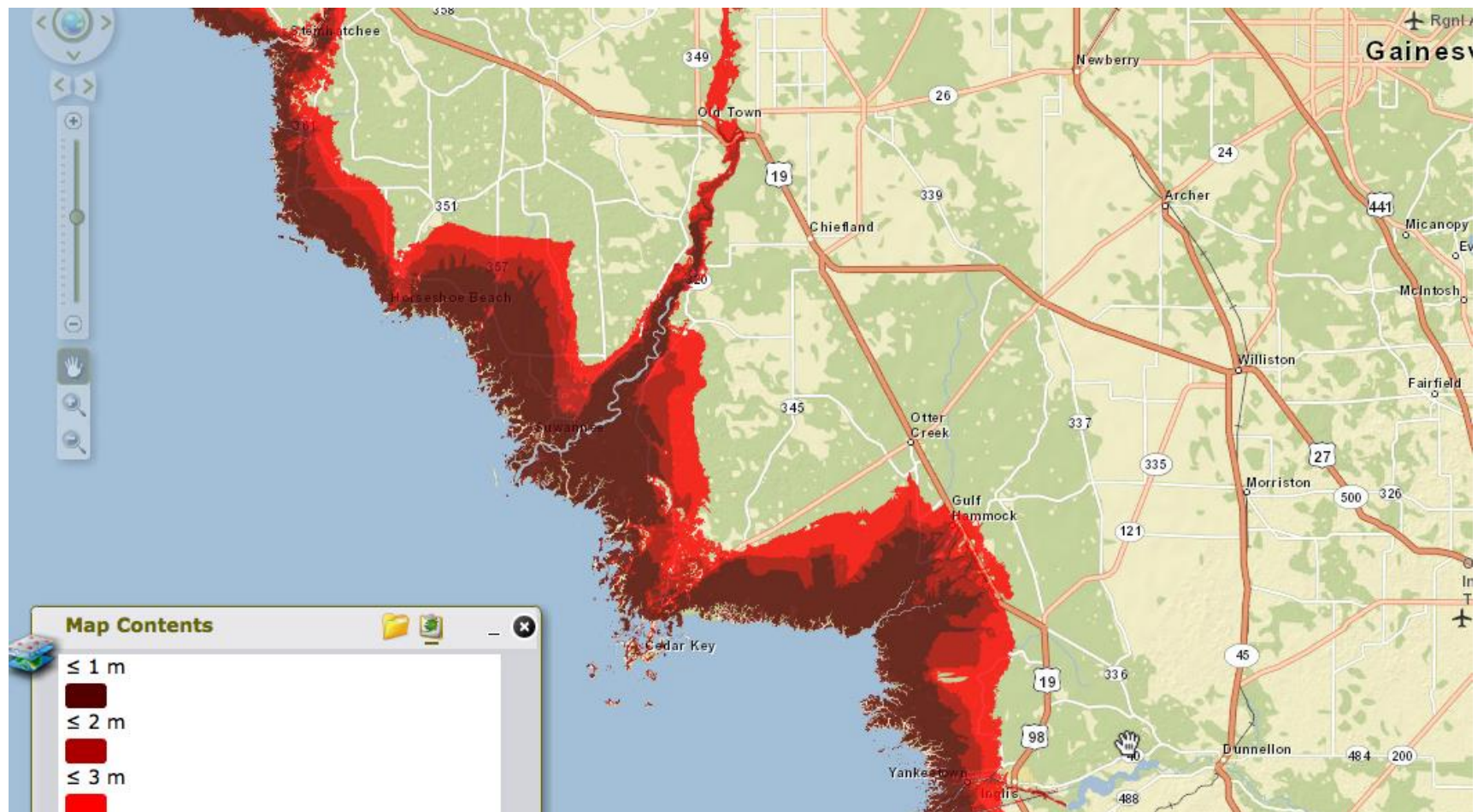
**Rural Planning for Sea Level Rise**  
*Goal: Initiate planning*

**Project Management**





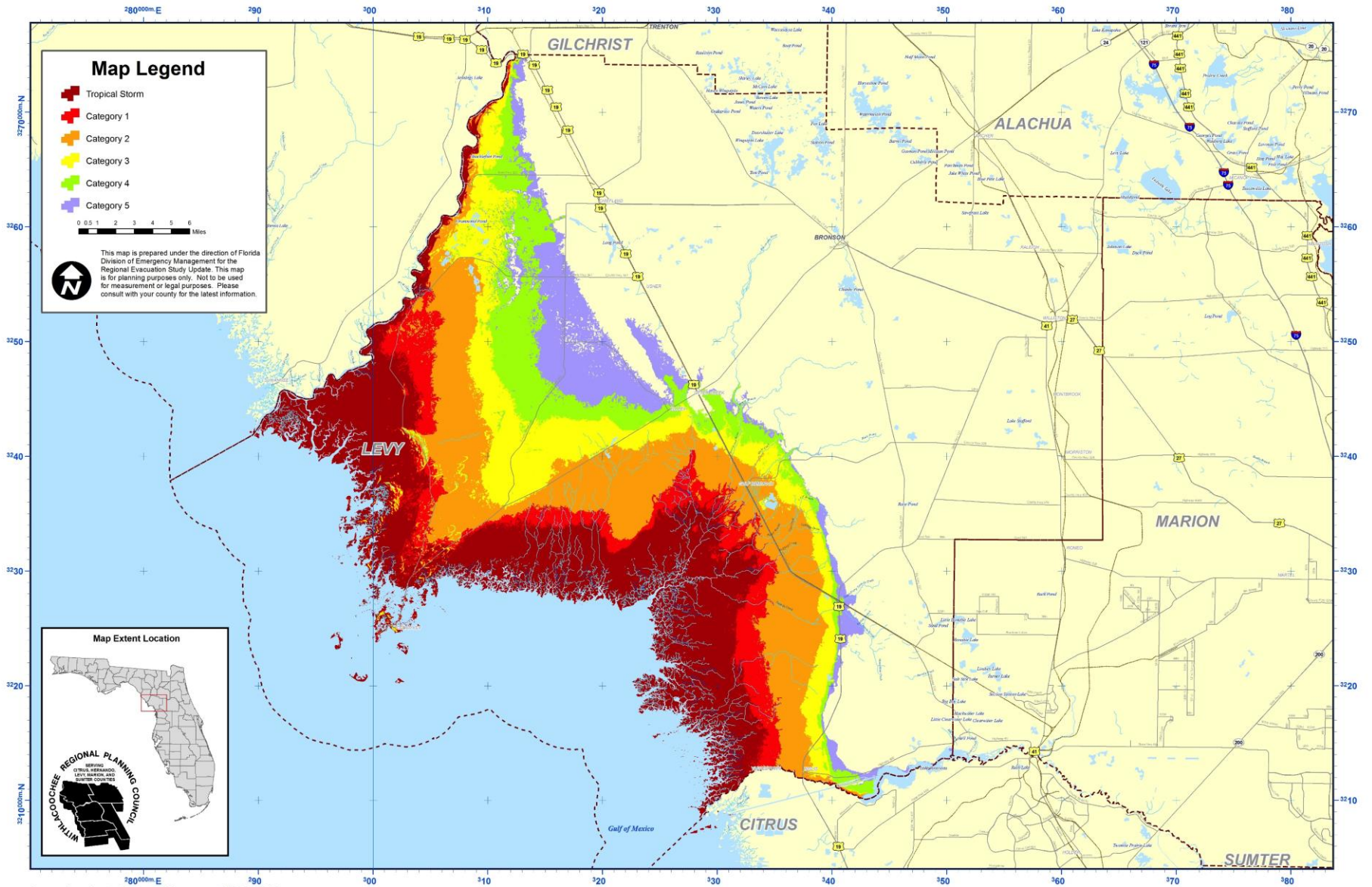
# Bathtub Inundation



<http://climategem.geo.arizona.edu/slr/us48prvi/index.html>

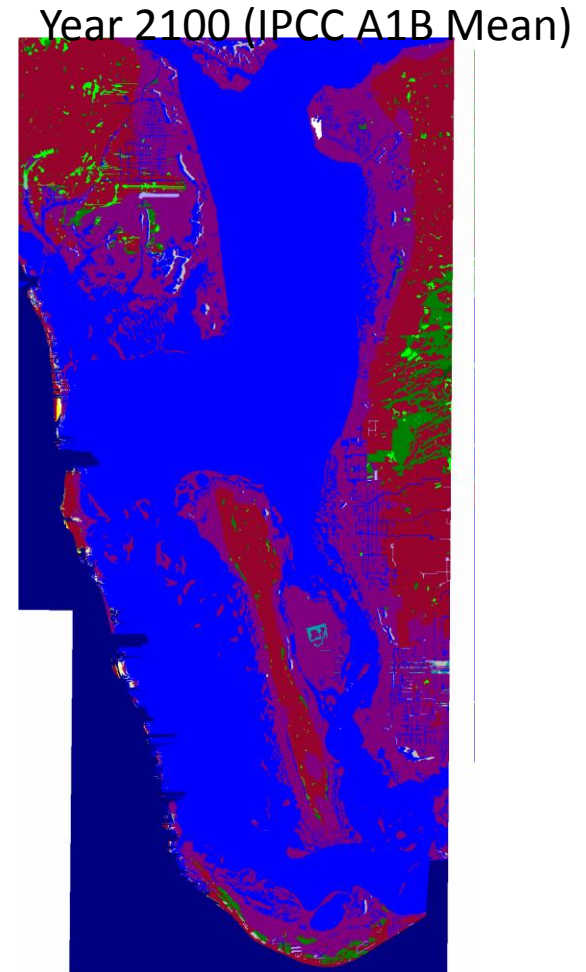
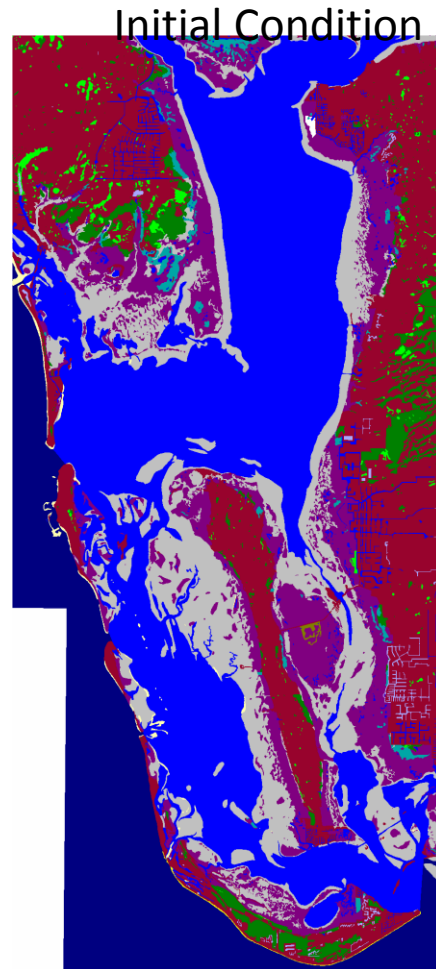


# Levy County Surge Zones



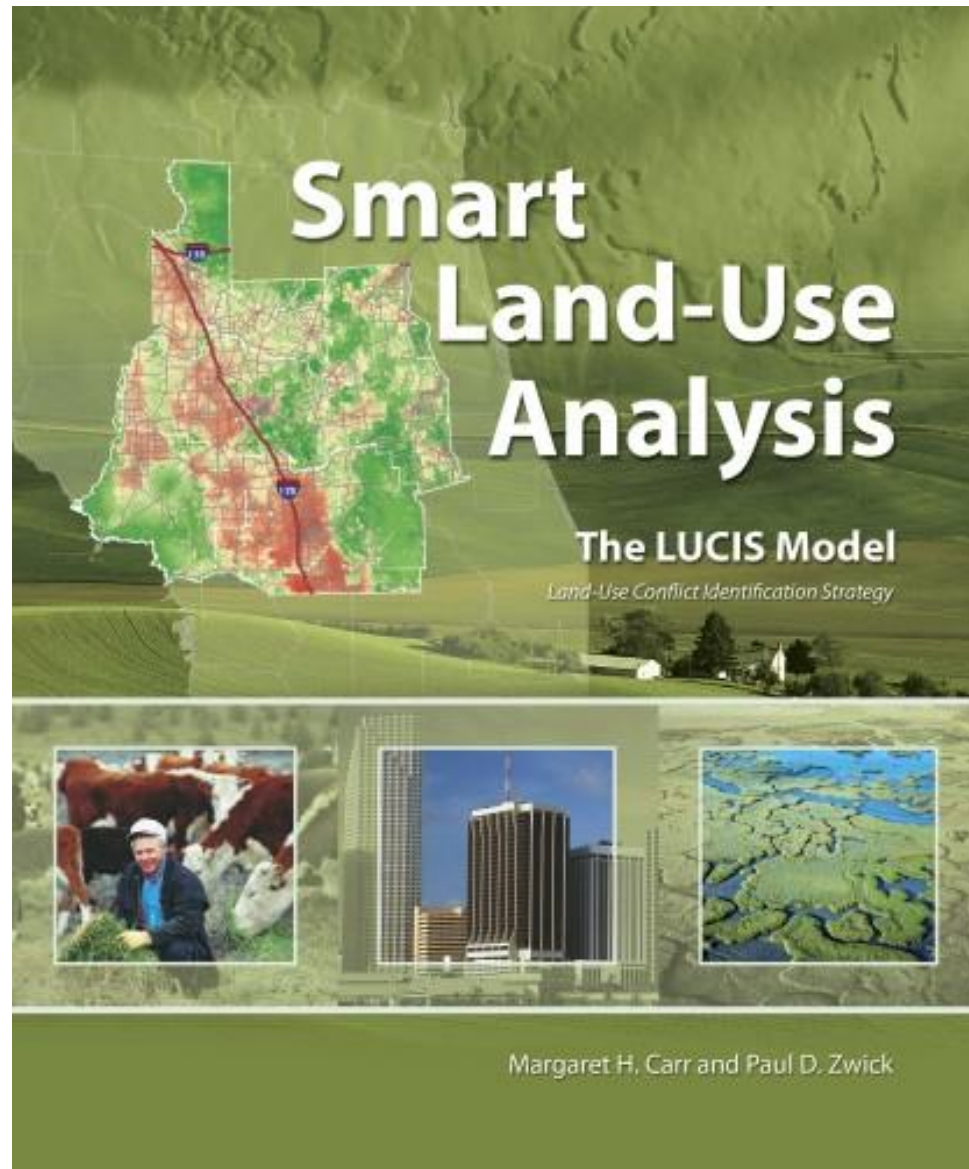
# Vegetation Change - Sea Level Affecting Marshes Model (SLAMM)

Charlotte, FL



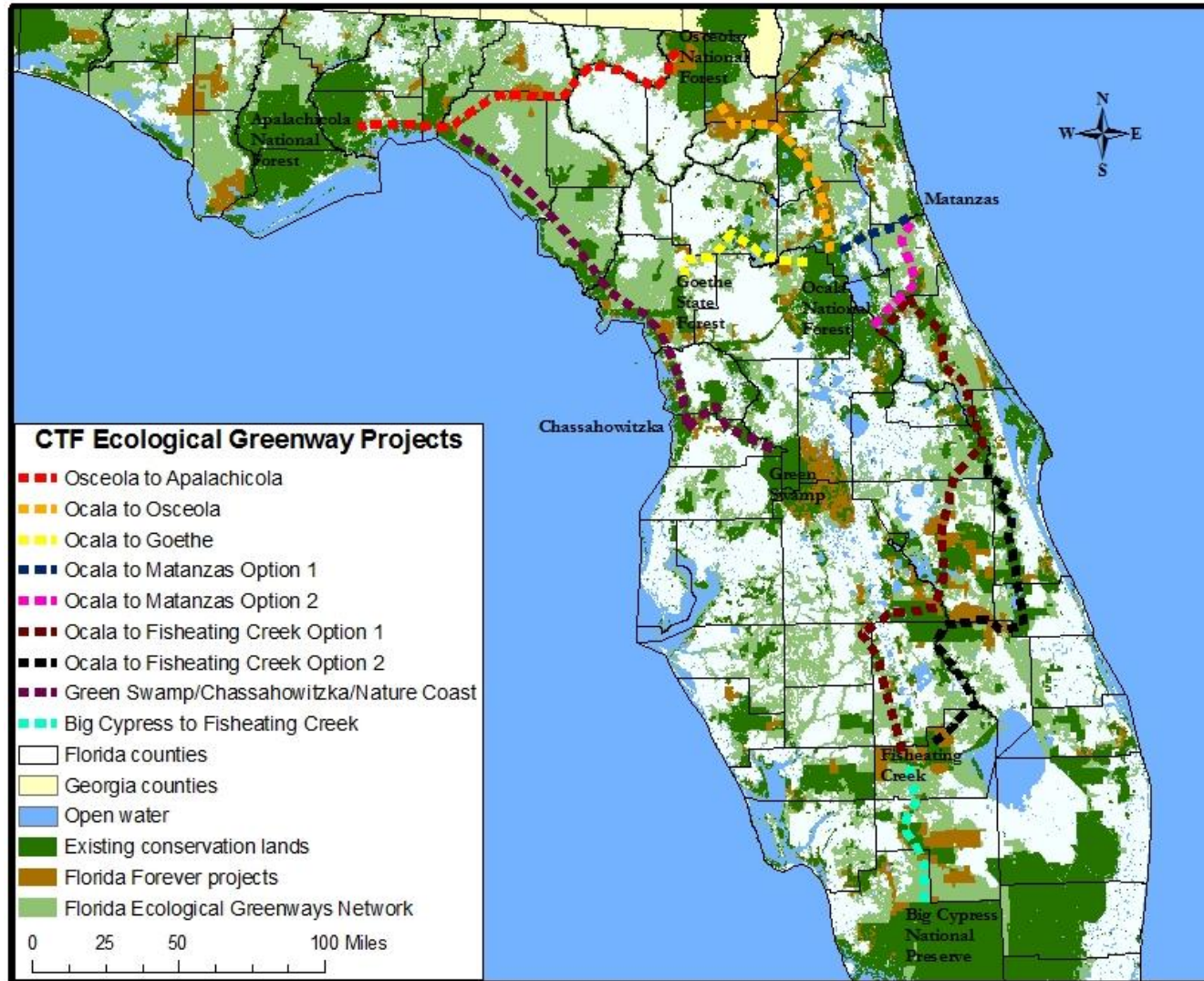
<http://warrenpinnacle.com/prof/SLAMM/>

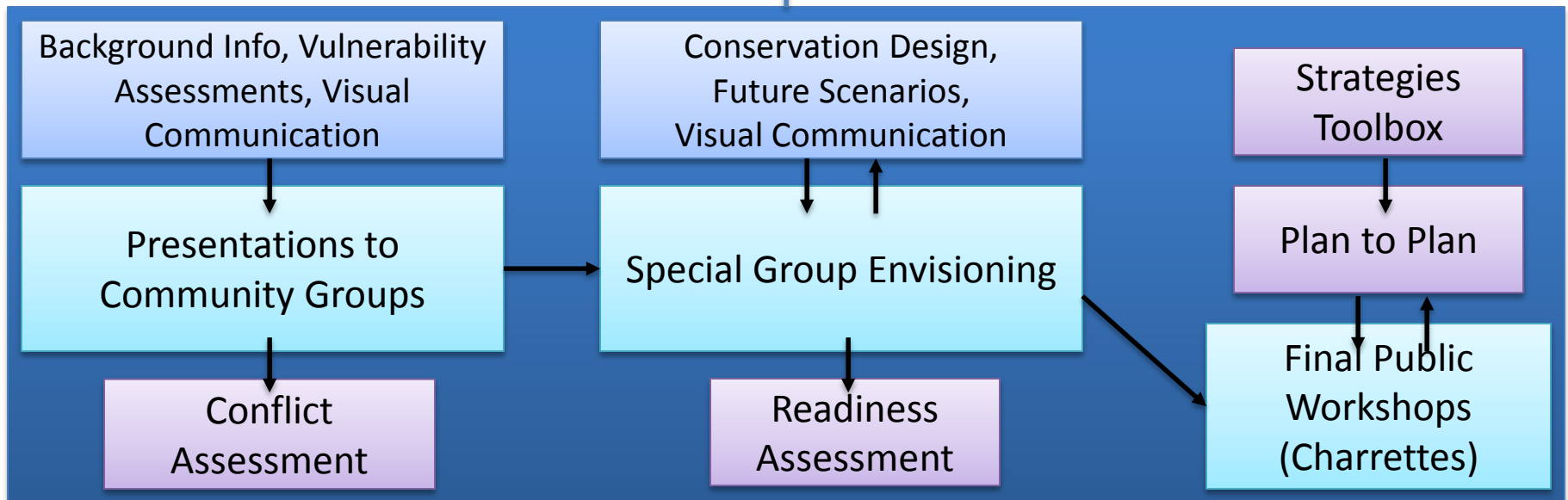
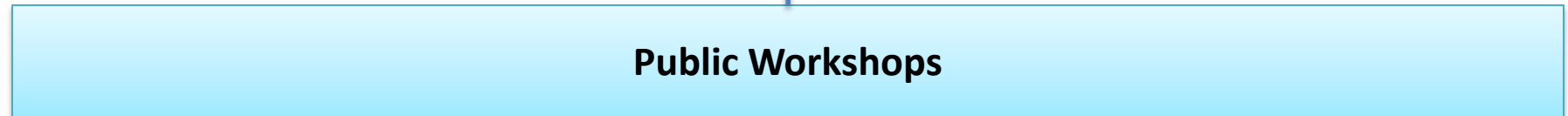
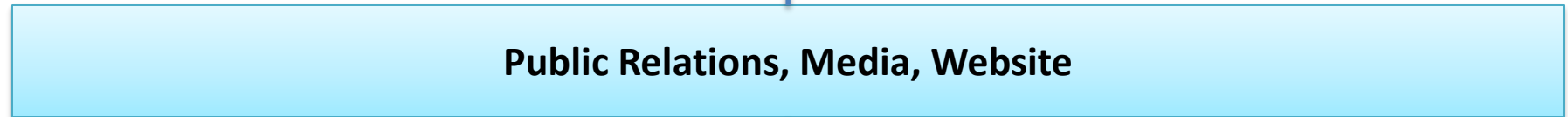
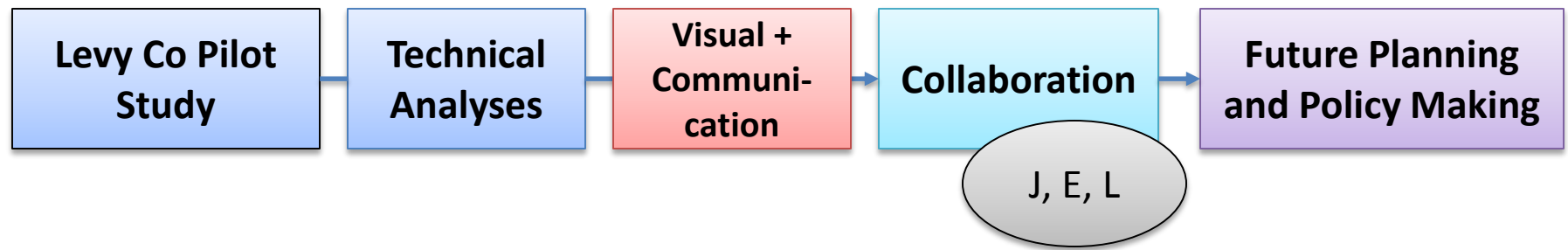
# Future Development





# Habitat and Species Migration Corridor Design





SCHEDULE	1-Sp	1-Su	1-Fa	2-Sp	2-Su	2-Fa
Levy Co Steering Committee; Website and Communications						
Background Info; Vulnerability Assessments; Visual Communication						
Presentations to Community Groups; Conflict Assessment						
Conservation Design; Future Scenarios; Visual Communication						
Special Group Envisioning						
Readiness Assessment; Strategies Toolbox; Plan to Plan						
Final Public Workshops (Charrettes)						