

## STUDY APPROACH AND METHODOLOGY

This study is part of an on-going process that the Town has embarked on to proactively reduce coastal flood risk and prepare for the future effects of sea level rise. **Attachment 1** presents a detailed description of the approach and methodology used. In brief, this study, applied “State-of-the-Science”, realistic predictions of sea level rise and risk-based coastal flood hazard characterization, and took a detailed look at the Town’s potential vulnerability and risk to coastal flooding - now and in the future. This understanding of coastal flood risk, as well as feedback from the community and Town and State professionals, formed the framework for identification of appropriate resilience and adaptation strategies and implementation steps.

### STUDY APPROACH

The Study used:

- Industry-accepted “State-of-the-Science” sea level rise projections that are also consistent with current State of Connecticut guidance.
- A “risk-based” approach, including defining coastal flood hazards in terms of probability of occurrence, consistent with methods currently being used by state and federal agencies.
- High resolution, hydrodynamic computer flood modeling to supplement flood hazard analyses performed by FEMA and the US Army Corps of Engineers (USACE).
- ESRI ArcGIS geographic information system (GIS) software, also used by the Town.
- Resilience and adaptation strategies, actions and measures that are consistent with Old Saybrook’s current vision and plans for development.

### STUDY METHODOLOGY

The preparation of the Study included:

**Step 1:** Characterization of the Coastal Flood Hazards

**Step 2:** Assessment of the Vulnerability of Town Infrastructure, Neighborhoods, Buildings, and Natural Resources

**Step 3:** Identification of Coastal Resilience and Adaptation Strategies, Actions and Measures

**Step 4:** Public and Town Professionals Outreach

**Step 5:** Identification of steps to implement resilience and adaptation strategies.

## TOWN FACTS, PLANS, POLICIES AND REGULATIONS

The implementation of strategies and measures to achieve resilience to coastal flooding and adapt to sea level rise should take place within the framework of existing Town plans, policies and regulations. These strategies and measures will only be successful if they are in alignment with the overall Town planning goals and budget.

**Attachment 3** provides, for reference, a summary of the applicable plans, policies and regulations including:

- The State and Town Natural Hazard Mitigation Plan
- Plan of Conservation and Development
- Conservation Plan
- Municipal Coastal Program
- Sea Level Rise Climate Adaptation Report of Findings (SLRCC, 2015)
- Coastal Zone Management Act
- Federal and State flood regulations
- Local floodplain ordinances
- Local zoning regulations
- Federal Coastal Barriers Act
- National Flood Insurance Program
- State and federal permits related to coastal resilience and adaptation measures.

A brief overview of relevant Town details is also provided in **Attachment 3**.