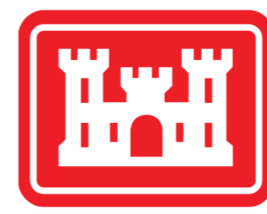


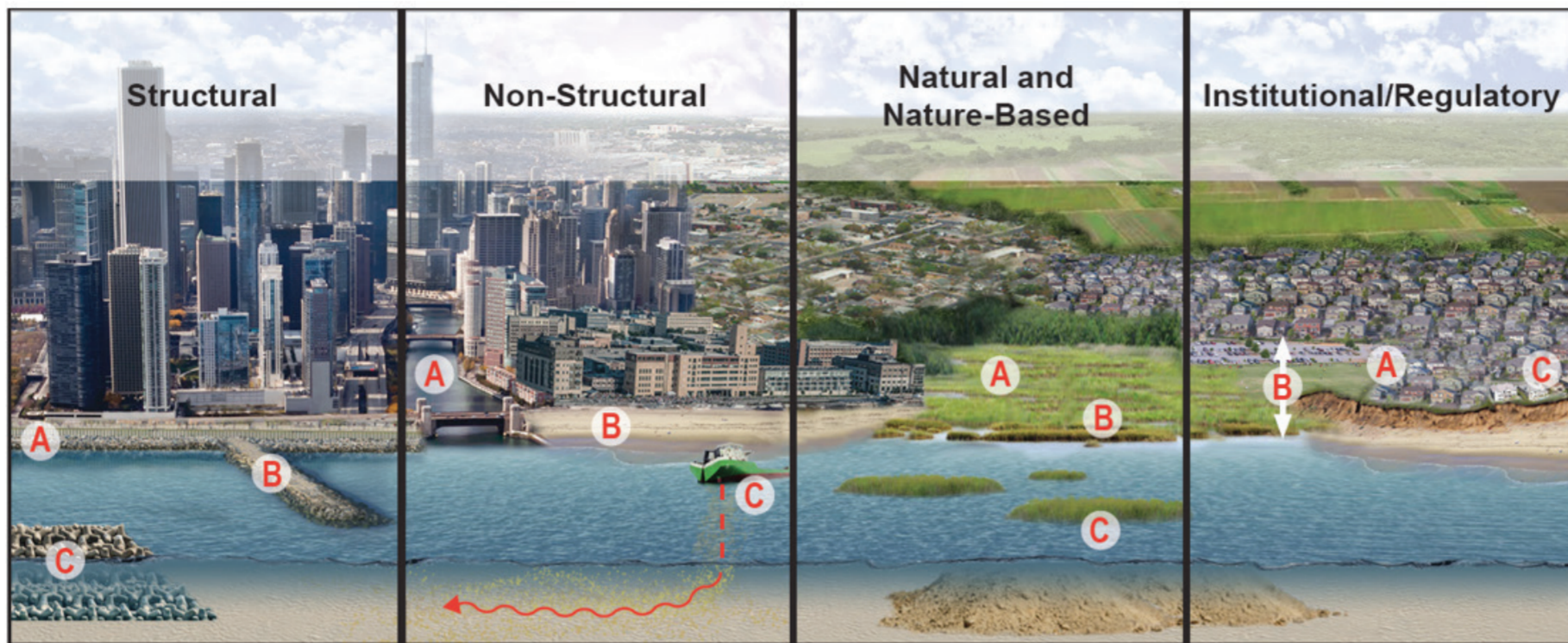
Northern VA Coastal Storm Risk Management Study



Metropolitan Washington Council of Governments

Potential Flood Risk Measures and Alternatives

The team will consider structural, non-structural and natural and nature-based coastal storm risk management measures.

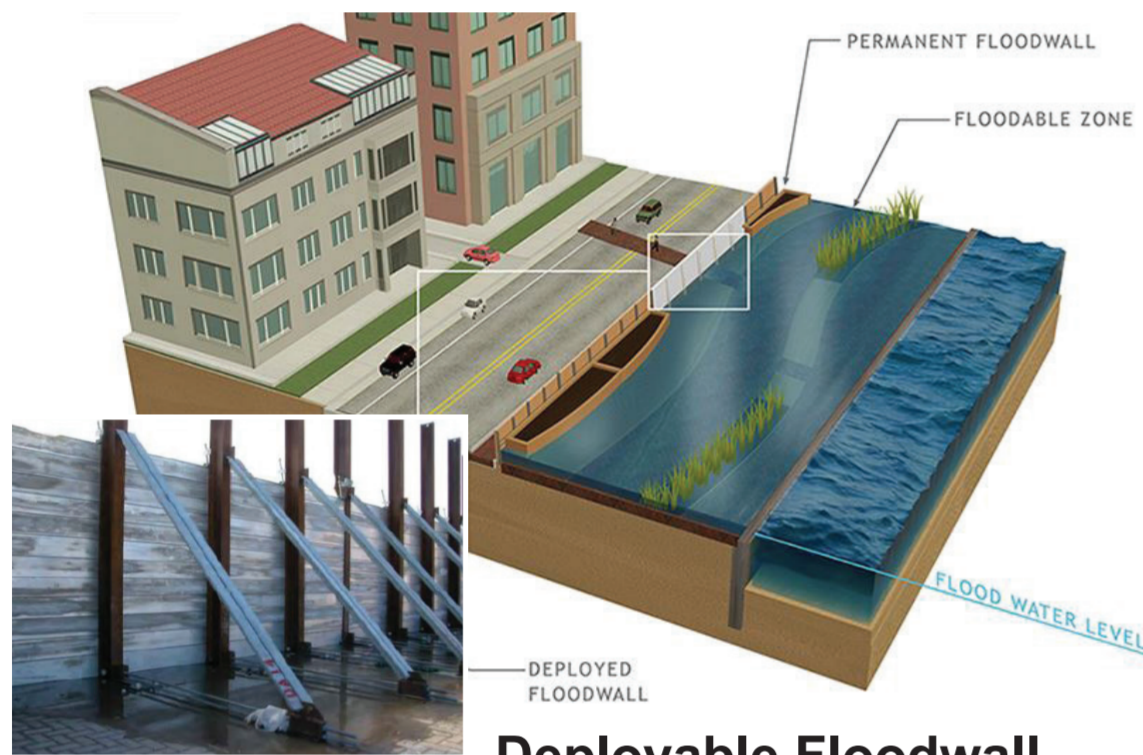


- | | | | |
|---------------------------|-----------------------------|----------------------------|-------------------------------|
| A. Coastal Armoring | A. Dredging | A. Conservation | A. Land Use Planning |
| B. Groins | B. Beach Nourishment | B. Wetland Creation | B. Setbacks/Zoning |
| C. Breakwaters/Revetments | C. Littoral Sediment Supply | C. Barrier Island Creation | C. Resilient Design Standards |

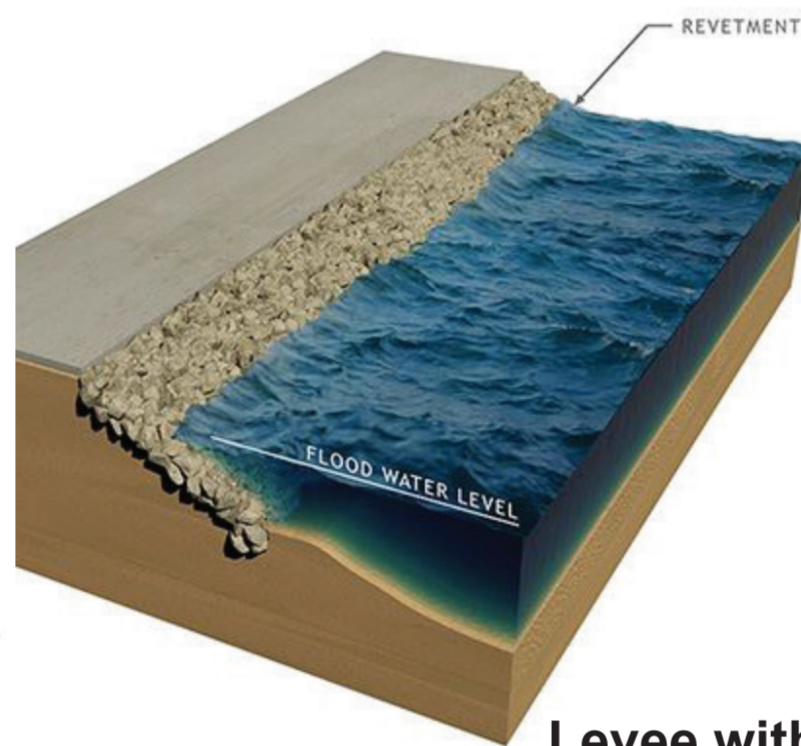
Measures selected based on:

- Area problems & characteristics (shoreline type & infrastructure)
- Partner planning objectives like risk reduction
- Engineering feasibility
- Environmental & cultural impacts
- Social acceptability

Structural Examples



Deployable Floodwall



Levee with Revetment

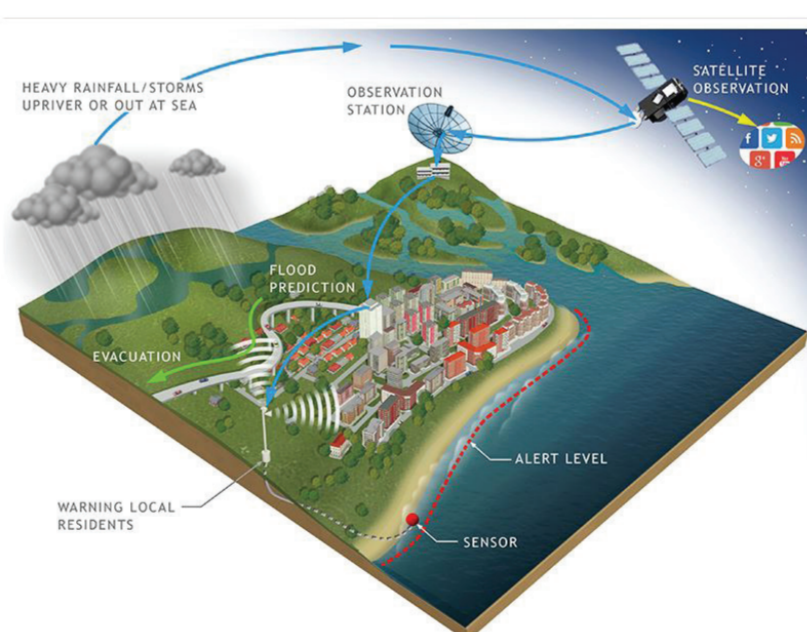


Storm Surge Barrier

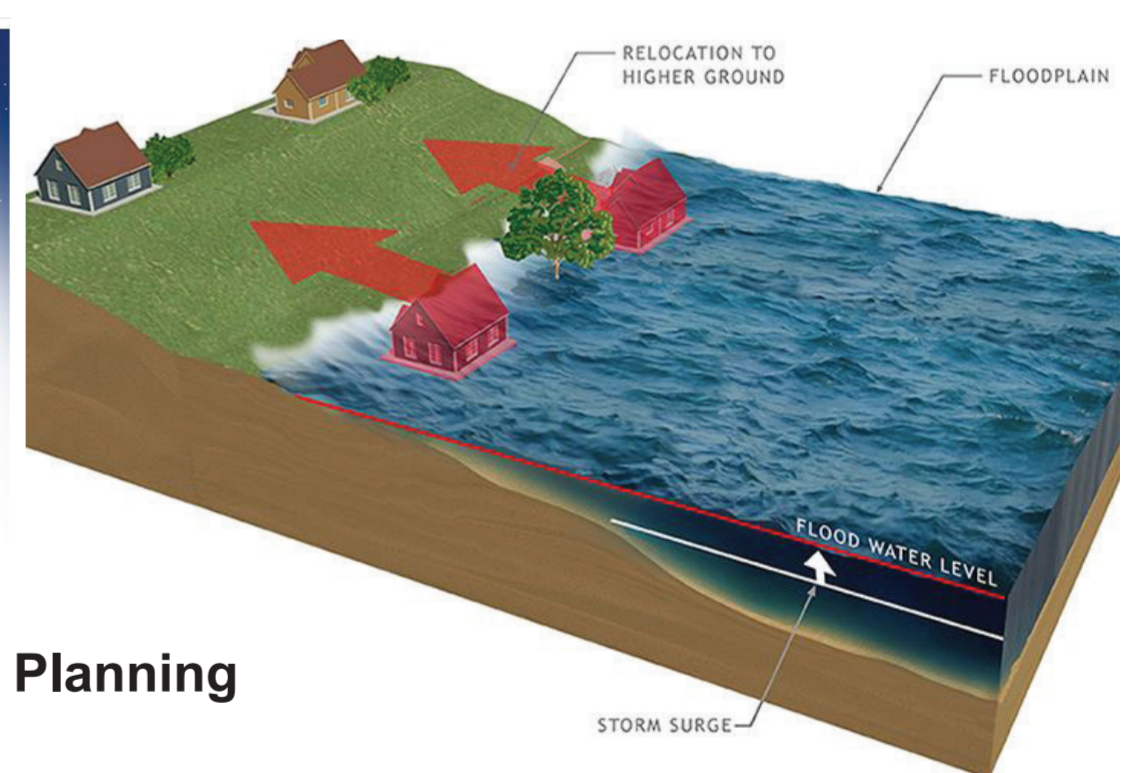
Non-Structural Examples



Building Retrofit/Flood Proofing

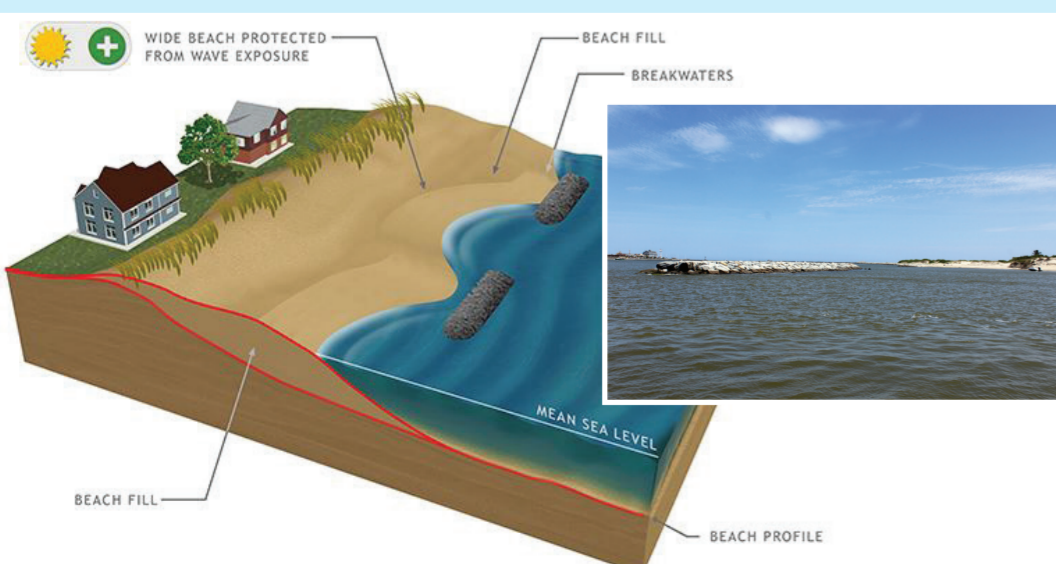


Enhanced Warning and Evacuation Planning

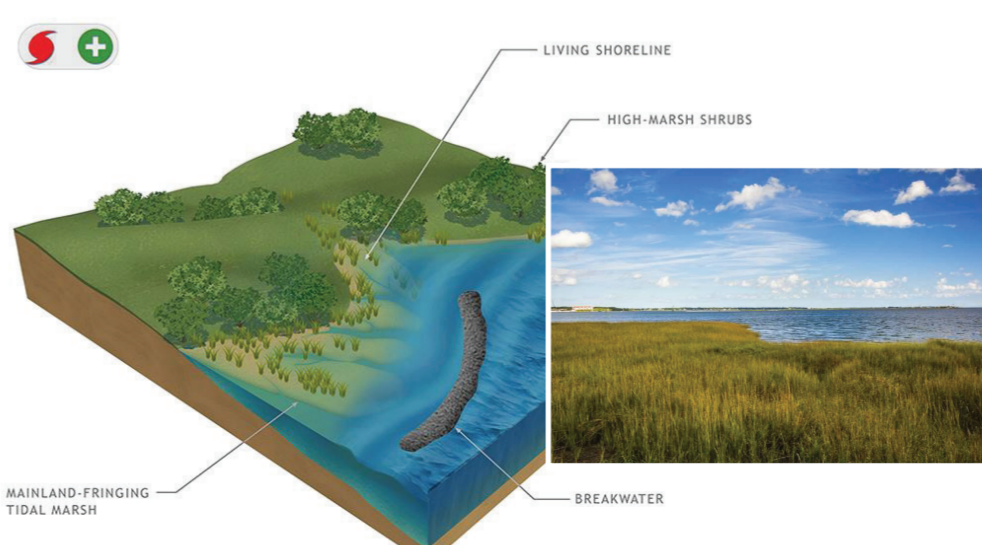


Building Acquisition & Relocation

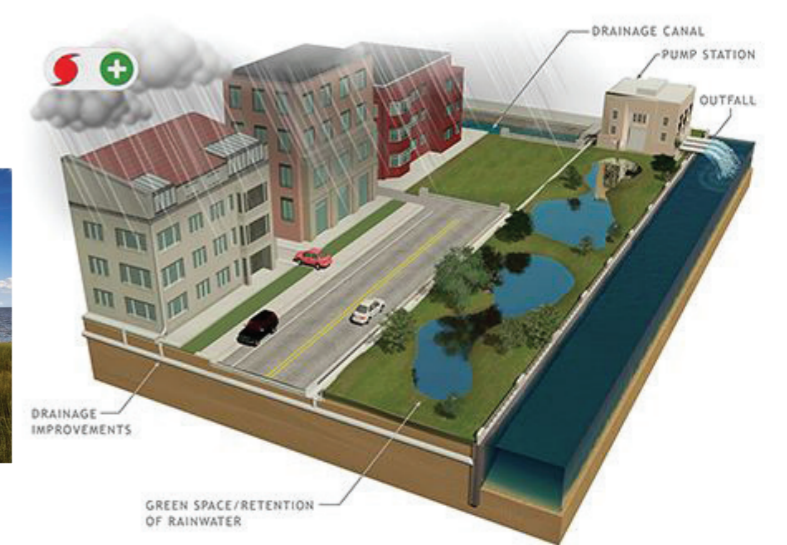
Natural and Nature-Based Examples



Beach Restoration with Breakwaters



Living Shorelines



Drainage Improvements