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THE RAFT
RESILIENCE ADAPTATION FEASIBILITY TOOL

Incorporating Resilience: Comprehensive Plan Comparison Chart

Accomack County, VA

2019

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Ways to Incorporate Resilience into the Comprehensive Plan	Ways Other Localities/Jursidictions Have Taken this Action (All Pincites are to the in-document page #) Crisfield, MD Comprehensive Plan: https://tinyurl.com/y3ga9wq5 Gloucester County, VA Comprehensive Plan https://tinyurl.com/y6rt7lwb Portsmouth, VA Comprehensive Plan https://tinyurl.com/y5kfswcl Virginia Beach, VA Comprehensive Plan https://tinyurl.com/y5v3tnkm	How the Current Accomack County Comprehensive Plan Does or Does not Address This (All Pincites are to the in-document page #)	Suggestions
Use up to date studies/ information to establish SLR and recurrent flooding projections and time periods for land use decisions	Crisfield, MD - Uses FEMA 100 year floodplain map to establish susceptibility of coastal flooding (15). Uses Nat. Weather Service SLOSH modeling to project potential storm surge flooding (17). Cites a specific sea level rise rate and states that it is accelerating based on tide gauges and unspecified scientific research. (17). Gloucester County, VA - Cites NOAA projections of SLR increase, also uses Army Corps of Engineers data and mapping for future projections (165). Also cites to HRPDC study conducted to evaluate vulnerable areas (165 to 166). Portsmouth, VA - Uses 100 and 500 year FEMA floodplain as well as sea level rise mapping with links to VIMS and the climate explorer tool (200 to 203). The plan proposes more modeling and mapping be done and utilized by the city. (65, 140). Virginia Beach, VA - Cites NOAA nuisance flooding study and notes the increasing flooding. Stresses the importance of SLR and RF to Virginia. Using NOAA, VIMS, and Army Corps of Engineers data, the city has projected sea level rise thresholds for long and short term planning to be factored into city planning decisions (2-53).	Cites VIMS data about SLR and its accelerating rate (2-67). States that there is an expected increase in storms (2-71), the groundwater section states that the county must take into account SLR. Appendix C specifically addresses resiliency and cites data from NOAA and future projections to be considered for future plans (C-17).	Consider incorporation of studies/information re: increased preciptitation. VT has local data dating back to the 1940s, could also use USGS/NWS data. Ensure that SLR discussion covers the vast amount of data, reports, studies, plans, etc. that are available. Consider using the Coastal Resiliency Tool for planning of future flooding and habitat impacts.
Study and identify the impacts of SLR and recurrent flooding.	Crisfield, MD - Identifies roads prone to flooding, including roads to major public infrastructure buildings (13). Calls for the city to conduct an engineering study to determine improvements to roads for evacuation in severe flooding situations (41). Gloucester County, VA - Identifies and maps flood prone areas based on FEMA flood mapping (151), shoreline erosion, storm surge problems, and lists the % of county land effected by these problems (161 to 163). Portsmouth, VA - NOAA Coastal Center data used to create a series of flood exposure maps. Identifies flood and storm surge zones and frequently flooded streets by using NOAA and Army Corps of Engineers data. (200-203). Virginia Beach, VA - Lists various impacts such as groundwater salinity (2-44), diminishing beaches and drowning wetlands (2-50), and recurrent flooding (2-53) based on NOAA and VIMS data.	Entire section devoted to shoreline erosion with a city prepared map indicating identified areas on erosion based on VIMS data (2-62). The plan states SLR can threaten roads, habitats, and development (2-67). There is a section dealing with floodplain management and storm surge with maps starting at (2-67).	Cover impacts to growing seasons. Check with VT for local data, or look to NOAA or USDA for relevant data. Cover impacts to plants and animals. Answer the question of how SLR factors into current and future erosion patterns and how current shoreline protection measures lack designs that consider future SLR. Cover impacts to septic systems (threat to surface waters and public health) and groundwater (include reference to current ESVA Groundwater Plan and most recent information). Consider using the Coastal Resiliency Tool for planning of future flooding and habitat impacts.
Vulnerability and exposure analyses	Crisfield, MD - Identifies elevation categories for city land and notes that most major institutions are on a relatively high elevation, the roads leading to them are vulnerable (13). Since the whole city is, at most, 3 feet above sea level, the whole city is vulnerable. Gloucester County, VA - Specifically mentions areas most susceptible to storm surge damage and sea level rise, as well as cumulative vulnerable land area (164 to 165). Specific goal to direct growth away from vulnerable areas (182). Shows maps of FEMA flood zones (152). Portsmouth, VA - Calls for the city to conduct a vulnerability analysis to prepare further mitigation plans. (200, 140 to 145). Virginia Beach, VA - Identifies the south watershed area to be vulnerable to flooding (2-56).	The plan recommends reviewing of existing models of SLR to determine vulnerable properties (C-20).	Implement recommendation.
Designate areas for special protection	Crisfield, MD - Includes Chesapeake Bay Critical Areas (17). Notes that tidal wetlands on the cities ends are important resources that should be preserved (26-27). Designates a resource protection land use category in its land use plan (33) to further preservation of important areas. Main roads specifically mentioned for protection and flood improvement (18, 41). Gloucester County, VA - Includes Chesapeake Bay Preservation Act (CBPA) areas, wetlands, and maps of them (156). Tidal Wetland development requires a special permit (159). Conservation areas are designated in the land future use section (202 to 203, 211). Portsmouth, VA - Includes the CBPA areas (197). Identifies parks and green spaces (195). Virginia Beach, VA - The plan calls for the preservation and enhancement of beaches and dunes along shorelines (2-56).	Some county areas designated as conservation areas, including marshlands and barrier islands (v), (3-16). CBPA areas are included (2-30).	
Site future infrastructure outside of vulnerable areas	Crisfield, MD - Has a land use category of waterfront planning area, that emphasizes water dependent and water related uses (36-37) Gloucester County, VA - County floodplain management ordinance directs flood prone land to be set aside for uses not endangered by inundation (153). The plan designates "bayside" residential and rural districts as a land use category and encourages conservation of residential and discourages development of rural. (202-204, 211). Portsmouth, VA - Future land use plans are outlined and mapped (182). The criteria used for determining the zone type of an area is listed (183-184). Public infrastructure criteria does not seem to factor in vulnerability. However, the plan has an objective to prioritize city projects based on the results of vulnerability mapping. (144) Virginia Beach, VA - Recommends new development take place in higher elevated areas (2-56).	Sets as a goal to amend land use map and zone ordinance to direct development away from shorelines, citing VIMS erosion data (5-6).	Opportunities to incorporate SLR projections into future land use plans. Re: "waterfront development", need to include explanation of how SLR currently is and will, in the future, impact development along the waterfront and low-lying areas.
Identify specific goals, objectives, and policies that will respond to identified impacts	Crisfield, MD - Policy to restore wetlands and open areas compromised by poor planning (27). Policy to protect the remaining coastal environmental features (32). Also to reduce impervious surface area (37). When re developing waterfront areas, a policy to establish buffer areas (37). A goal to evaluate roads that flood often (41). Policy that requires environmental site design techniques that optimize conservation of natural features and minimize impervious surfaces (102). Gloucester County, VA - In a table starting at (176), the plan lists all objectives, their individual implementation strategies, and time frames, including protecting wetlands (181) and protecting the county from sea level rise (182). The plan also mentions the State's preferred shoreline stabilization alternative is a living shoreline (163). Portsmouth, VA - Lists Many goals and strategies for resilience starting at (57), each given its own section and within each section its list of tactics used to achieve the end result. The goals are broken down into a matrix starting at (353) that displays each goal in a chart with its relevant strategies and tactics. Virginia Beach, VA - Environmental stewardship framework proposed in Sec. 2.2 to protect natural resources. Specific implementation goals include green infrastructure (2-49), development in higher areas to combat SLR and RF (2-56), avoiding development in flood hazard areas, and public education. The plan also calls for specific SLR and RF plans to be made.	Encourages the use of living shorelines to reduce shoreline hardening (2-66). Sets out goals, policies, and recommended actions in a section of the plan (5-2). Recommends re-directing development due to SLR and erosion. Calls for planning for climate change (5-3, 5-4). Goal to develop programs to encourage conservation of the shoreline (5-7).	Identify specific actions for initiating long-term activities related to SLR and hazard mitigation.
Identify potential funding/ revenue sources	Crisfield, MD - State and county grants and loans mentioned. The plan states a possible impact fee assessment on developers (46). Portsmouth, VA - Identifies possible revenue sources the city could adapt such as enterprise zones, commercial development block grants, tax abatement, special asset districts, and investment (190). Virginal Beach, VA - Briefly mentions FEMA funding applications to raise buildings.	Each issue in chapter 4 identifies potential funding sources individually.	
Create an implementation schedule	Gloucester County, VA - Implementation strategies and rough timelines are listed along side each objective in a table starting on (176). Not all goals are resilience related and the timeframe is broken down into long term, short term, and ongoing. Portsmouth, VA - Implementation is broken into categories such as ongoing, short term, mid term, etc. (18 to 19). Each goal or objective is assigned its own designation. Virginia Beach, VA - Each action has its own implementation projection	Goals and objectives sometimes are presented with implementation strategies in the form of recommended actions. The plan itself recommends implementation priorities of the various topics, but does not specifically break down a time frame (v).	Provide more detailed timelines and milestones, as appropriate, for stated priorities.