

## Comprehensive Plan



The Comprehensive Plan contains the official land use planning policies for a locality. While legal implementation occurs through the zoning ordinance, the Comprehensive Plan acts as a framework for future development.

The Comprehensive Plan can be used to assess vulnerabilities to sea level rise. The most valuable ecological resources for adaptation (floodplains, wetlands, and beaches) can be designated as requiring special protections. As the locality's principal guiding document, the Plan can be used to site critical infrastructure outside of high hazard areas. As the first step in preserving valuable ecological areas, the Comprehensive Plan can be used to prioritize areas for land acquisition. The Comprehensive Coastal Resource Management Plan, which is a required inclusion in Comprehensive Plans in the Tidewater Region, can be used to identify preferred locations for living shorelines.



Beyond prioritizing ecologically valuable areas, the Comprehensive Plan can outline goals to enhance or protect natural resources. The City of Charlottesville, for example, has a stated goal within the Comprehensive Plan to protect the current tree canopy of 32%, as well as a goal expanding that canopy to 40%, which has benefits for stormwater mitigation.



## Code of Virginia, § 15.2-2223

The local planning commission shall prepare and recommend a comprehensive plan for the physical development of the territory within its jurisdiction and every governing body shall adopt a comprehensive plan for the territory under its jurisdiction

## Code of Virginia, § 15.2-2223.2

A Comprehensive Coastal Resource Management Plan must be included in comprehensive plans [Required for Tidewater localities]

Code of Virginia, § 15.2-2223.3

Comprehensive plans must incorporate strategies to combat projected sea-level rise and recurrent flooding. [Required for localities within the Hampton Roads Planning District Commission]



## 1: Up to 100 points (Activity 510, Natural Floodplain Functions Plan (NFP), Manual pg. 510-235)

Credit for plans addressing habitat conservation and restoration, green infrastructure, open space, and natural floodplain functions in the Comprehensive Plan.

2: : Up to 10 points (Activity 420, Open Space Incentives (OSI), pg. 420-20)

Credit for recommending open space use or low-density development of flood-prone areas in the Comprehensive Plan.



The Code of Virginia mandates that the Comprehensive Plan be reviewed at least once every five years. Although the process varies by locality, amendments to the Comprehensive Plan

typically require a public review process, as well as public hearings before the Planning Commission and Board of Supervisors. The Board of Supervisors votes to adopt any amendments to the plan. For those localities required to prepare a Coastal Resource Management Plan, localities can request technical assistance from the Virginia Institute of Marine Science. The local hazard mitigation plan may also be incorporated into the comprehensive plan.

The 2009 Virginia Beach Comprehensive Plan update included a sea level rise projection of 2.3-5.2 ft. by 2100. Virginia Beach's Plan is currently undergoing another revision, and resiliency has been a key focus area. In planning for a wide range of SLR scenarios, Virginia Beach has adopted near, middle, and far-term estimates, which is a measure most localities in the region have not yet undertaken.



- Review process provides an opening to plan for SLR
- Provides opportunities for public participation
- Studies undertaken during plan development can assess and identify sea level rise impacts



There is no standard estimate to how much localized sea level rise will occur. The projections vary considerably, and planning for substantially different scenarios is time consuming and expensive.



The following tools can help inform local staff during the development of the Comprehensive Plan.

CanVis (Digital Coast)	An easy alternative to Photoshop, which allows for the visualization of potential community impacts, including sea level rise, new development, shoreline armor, etc.
Habitat Priority Planner (Digital Coast)	Inventories specific habitats and conditions, and allows for "what if" scenarios showing the potential impact of new development or habitat restoration.
InVEST (Natural Capital Project)	Includes 18 models for mapping and valuing ecosystem services.
SLAMM View	Visualizes SLR projects using the "Sea Level Affecting Marshes" model, and also considers local conditions of the Chesapeake Bay region.

The barrier discussed above, namely the lack of standard SLR projections, is one that we heard repeatedly from all localities we interviewed. There are too many scenarios to plan for in an efficient manner. The Army Corp of Engineers has created a sea-level change curve calculator that is useful in that its projections are based on specific geographies, and include low, intermediate, and high projections. The Calculator is available here.

Localities can use their comprehensive plans to target measures specific to their own needs. For example, while some localities are seeking ways to accommodate rising waters, higher-lying cities we've interviewed mentioned the need to prepare for migration within their boundaries.

CCRM. (2013). Comprehensive Coastal Resource Management Guidance. Virginia Institute of Marine Science, Center for Coastal Resources Management.

Ekstrom, J., Moser, S., & Torn, M. (2010). Barriers to Climate Change Adaptation: A Diagnostic Framework. California Energy Commission.

FEMA. (2015). Plan Integration: Linking Local Planning Efforts.

Grannis, J. (2011). Adaptation Tool Kit: Sea-Level Rise and Coastal Land USe. Georgetown Climate Center.

HRPDC. (2013). Coastal Resiliency: Adaptating to Climate Change in Hampton Roads. Hampton Roads Planning District Commission.

Mitchell, M., Stiles, W., & Hartley, T. (2014). Sea Level Rise: A Relentless Reality that Virginia Must Continue to Plan Carefully For. The Virginia News Letter, 90 (6).

Stiles, W. (2010). A "Toolkit" For Sea Level Rise Adaptation in Virginia . Wetlands Watch .

VA APA. (2014). Managing Growth and Development in Virginia: A Review of the Tools Available to Localities. Virginia Chapter of the American Planning Association .

