Corsica River Watershed Characterization

Excerpt Showing an Example of Surface Features

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Floodplains

Flooding was identified as a local issue early in the WRAS project. Flooding of public roads crossing streams is a particular concern. Map 13 Floodplain and Sea Level Rise shows that the 100-year floodplain extends far up tributaries beyond Centreville. In recent years, stormwater management requirements have provided a means to limit impacts of new development and impervious area that would otherwise contribute to stream degradation and flooding. However, these requirements may not significantly improve water quality or quantity problems that are driven by systemic watershed factors. For existing development and impervious area, retrofitting controls to enhance water quality and limit peaks in stormwater runoff may offer an additional way to protect waterways.

Low Elevation Areas Subject to Sea Level Rise

The average rate of sea level rise along Maryland's coastline has been 3-4 mm/yr or approximately on foot per century. Such rates are nearly twice those of the global average (1.8 mm/yr), a result most likely influenced from land subsidence. The rate of sea level rise is expected to accelerate in response to global warming, resulting in a rise of 2-3 feet by the year 2100.

The low-lying coastal plains such as those along the eastern shore are vulnerable to impacts associate with rising sea level. Sea level rise threatens to exacerbate erosion and flooding, making areas more vulnerable to land loss, permanent inundation, and storm surge. Recognizing the need for advanced planning, the Department of Natural Resources developed a response strategy in 2000 and has been aggressively acquiring high-resolution elevation data (LIDAR) in the most vulnerable areas. Partial coverage of Queen Anne's County including the Corsica River has been acquired as select areas were defined as being less than 1.5 meters (5 feet) above sea level. Accurate elevation data will significantly improve the State and County's ability to define the most vulnerable areas and determine the most appropriate management measures to mitigate the impacts.[8]