

# Density Calculation Ordinance Fact Sheet

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## High Density Development Creates Problems for Sussex County

Concentrating housing-density near sensitive wetland areas contributes to the degradation of these important natural resources, and can result in poor water quality, habitat loss, and increased flooding. Reducing development density, the number of dwelling units per parcel or per area of land, by excluding wetlands, streams and rivers when calculating the “gross area” of a development site, would reduce these negative impacts on the environment and County residents.

### Water Quality

- Studies have shown that noticeable degradation to water quality begins when watersheds exceed 10% imperviousness. In 2010 the Inland Bays watershed as a whole reached 10.4% impervious cover. Rehoboth and Little Assawoman Bay Watersheds are even higher: 13.7% and 12.7% respectively. The most densely developed communities may exceed 50% imperviousness.
- Impervious surfaces contribute to nonpoint source pollution, the largest source of nutrient pollution to the Inland Bays.
- Excess nutrients from nonpoint sources like runoff from impervious surfaces can cause algae blooms. Algae blooms reduce water clarity, inhibit the growth of bay grasses and cause oxygen levels to fluctuate to extreme lows and highs. Low dissolved oxygen levels can stress or kill fish and crabs.

### Habitat Loss

- Wetlands are essential for the maintenance of the fish and wildlife populations of the Inland Bays. They serve as the base of the food chain for our fish and shellfish populations.
- Wetlands hold very high concentrations of rare species. 41% of the wetland plant species occurring in Delaware are considered rare.
- By reducing density near these sensitive areas, the potential for human disturbance of their important wildlife habitats is decreased, as is the potential of degradation of water quality from runoff associated with dense development.

### Flooding

- High density developments with a high percentage of impervious surfaces (roads, parking lots, driveways, and rooftops) are vulnerable to flooding from storm surges or areal flooding from intense or prolonged precipitation events.
- While wetlands help reduce flooding and erosion from storms, high density development near these sensitive areas put people right in the path of that water and can lead to catastrophic damage.

- Around the Inland Bays, studies have found that marshes can migrate inland at surprisingly rapid rates (upwards of five feet per year). By providing less density and more open space in the areas that these wetlands must migrate into to survive, their chances of persisting are higher. Surviving wetlands can provide much needed flood reduction benefits to buildings in a development.
- Flooding, particularly on the coast, but also in more inland areas with high water tables is projected to increase as sea level rises and intense precipitation events become more common.
- On the Delaware coast, sea level is currently rising at a rate of 1.1 feet per century and increased flooding, shoreline erosion, and drowning of tidal wetlands are the result.
- According to the Sea Level Rise Vulnerability Assessment for the State of Delaware, In Sussex County approximately 357 miles of roads and bridges and 13% of residences lie in the path of sea level rise may be inundated by water.
- A study done by the University of Delaware indicated that the assessed “improved value” of parcels exposed to sea level rise in Sussex County is \$857.7 million.
- Limiting the density of development near low lying wetlands and waterways reduces the risk that these structures would be exposed to flooding due to sea level rise.

## The Solution

Preventing the concentration of development density near ecologically sensitive wetlands and waterways, such as those of the Inland Bays would reduce the exposure of future County residents and their property to flooding, and reduce the potential of degradation of habitat and water quality from runoff associated with dense development.

This proposed ordinance to amend the code of Sussex County with respect to the calculation of permitted density, seeks to exclude streams, rivers and wetland areas from the gross area used for calculating permitted density.

This action is consistent with the Coordinated Land & Water Use Decisions Focus Area of the Inland Bays Comprehensive Conservation and Management Plan. The Comprehensive Conservation and Management Plan’s goal is to protect and restore the Inland Bays watershed that is so important to Sussex County’s \$7 billion coastal economy. The Plan, to which the County is signatory, lays out the actions necessary to improve water quality in the Bays and to protect their important natural habitats.