

Notes on Chesapeake Bay - largest estuary in the U.S.

Location –watershed includes parts of 6 states (MD, VA, WV, PA, NY, DE) and Washington, DC (see map below)

Wildlife - known for abundant wildlife – blue crabs, oysters, fish, birds

Population - Many people live in the Chesapeake Bay area about 18 million, including Washington, D.C. and Baltimore
- growth of population since 1960 has resulted in degradation of the bay



Human impacts –

- Storm water runoff from impervious surfaces in urban areas and pollution from agricultural areas has resulted in decline in water quality
- Excess nutrients (phosphates and nitrates) have led to algae blooms and subsequent hypoxia (dead zones of no oxygen)
- Erosion and loss of vegetation causes increase in sediments washing into bay; increases turbidity, less light for plants, including natural eelgrass
- Overharvesting of oysters contributed to huge reduction in population; oysters help keep the bay water quality good by filtering it
- Invasive species have been introduced, including the mute swan (eats native marsh grasses and is aggressive to native birds), purple loosestrife (invasive aquatic plant), and zebra mussels (very efficient filter feeders; outcompete native species of mussels)

Conservation Efforts–

- 1983 Chesapeake Bay Program – example of integrated coastal management in which different groups (such as individual citizens, city, state and federal government) work together to protect a coastal area; some success but not enough
- 2010 EPA has put the Chesapeake Bay on a “Pollution Diet” (Total Maximum Daily Load or TMDL); will try to reduce nitrogen by 25%, phosphorus by 24%, and sediment by 20%