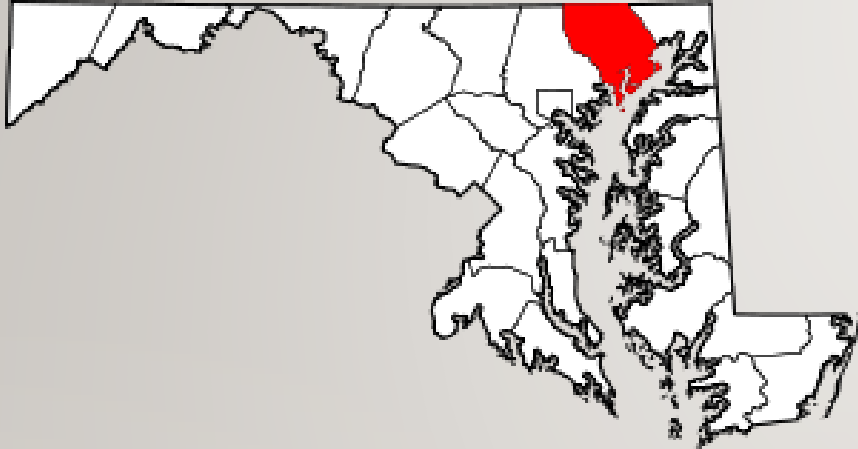


HEALTH OF CHESAPEAKE BAY

TRAVIS KARWATKA





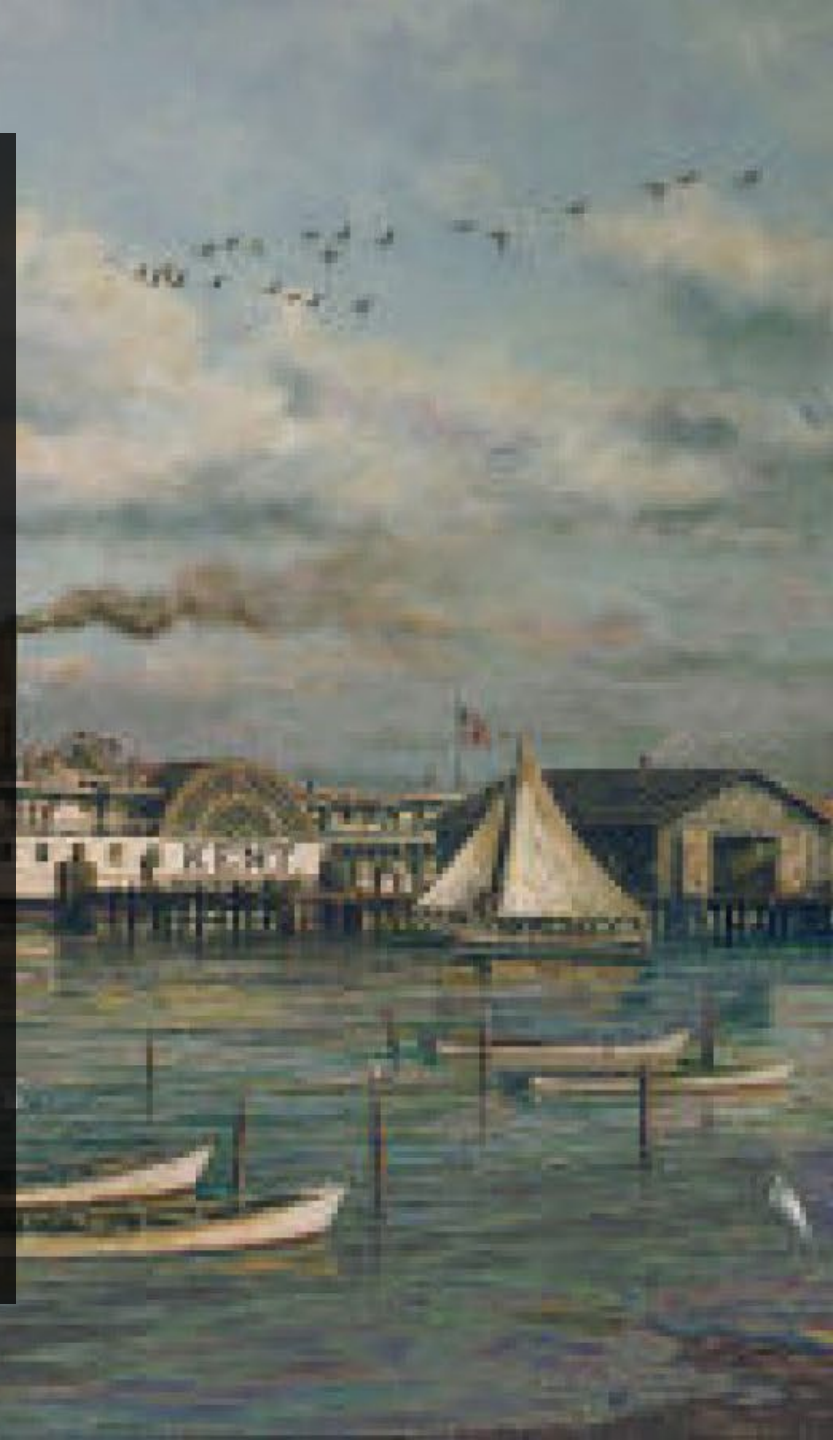
WHY I CHOSE THIS

- Grew up on the water
- Seen effects that threats to the bay have on wildlife, people, and the environment
- Looking to spread awareness on the issues faced by the estuary



HISTORY

- Third Largest Estuary in the world, 11,684 miles of shoreline
- Bay is crucial to economies of Maryland and Virginia, contributes nearly 34,000 jobs
- Water quality has been decreasing since the 1950s
- By 1970s the bay was at a crucial point where wildlife was beginning to disappear
- Key factors that led to this are agricultural run off, chemical contaminants, sediment runoff, and stormwater runoff



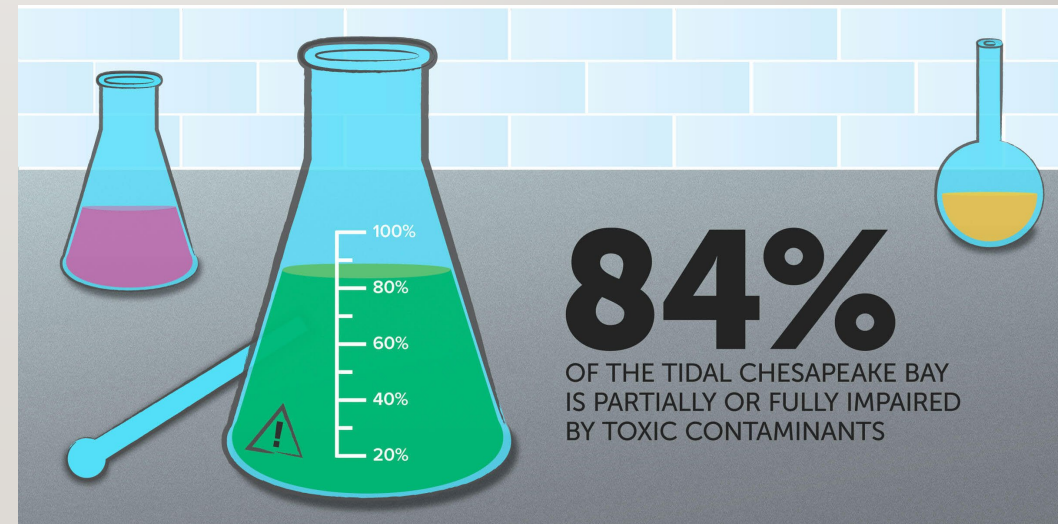
CAUSES AND EFFECTS

- Over fertilizing of the bay (humans fertilizing lawns, gardens and farms), nutrients overwhelm the bay causing rapid algae growth
- Sediment runoff, 5.2 million tons of sediment enter the bay per year
- Sediment runoff began in 18th and 19th century, 70-80 percent of watershed forest cover removed
- Sediment can smother oyster beds which clean and filter the water of the bay



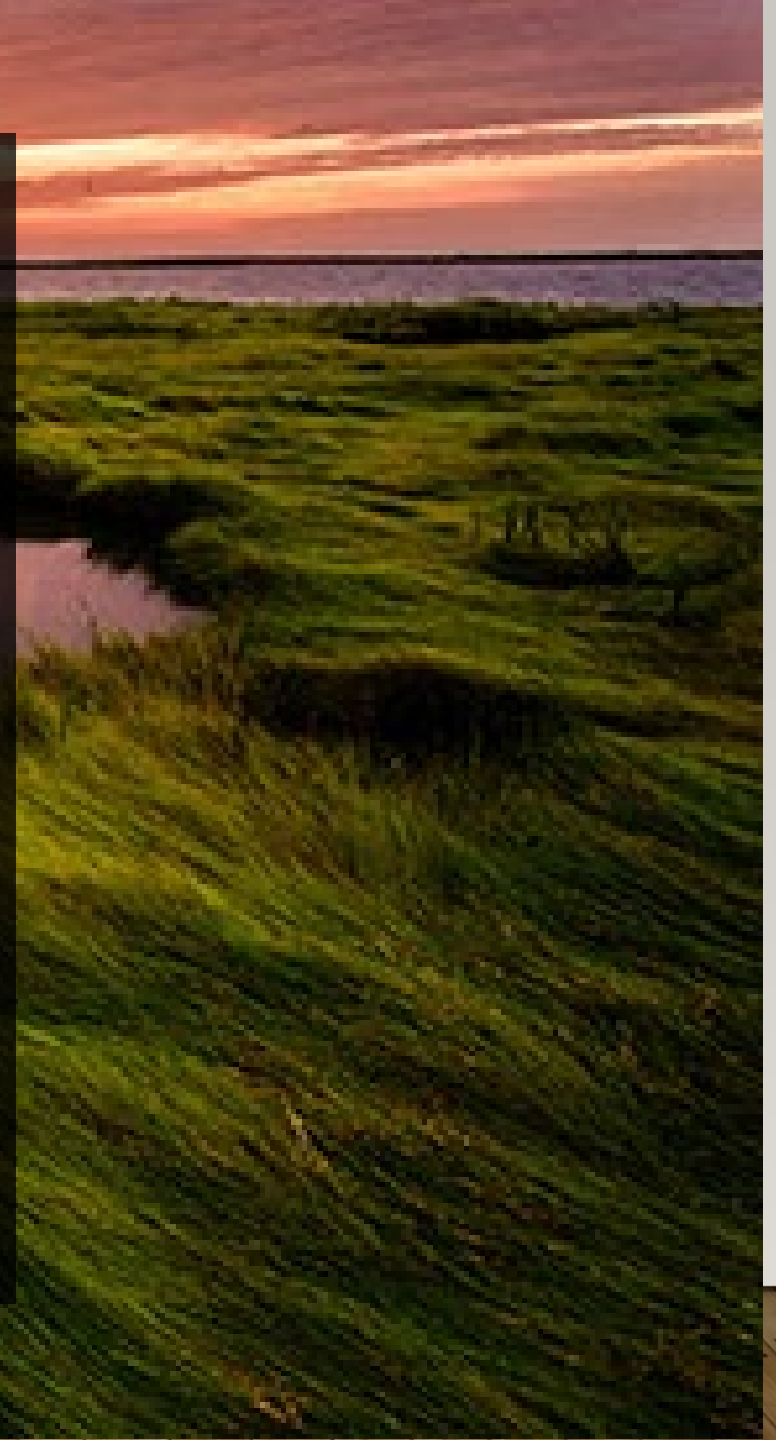
CAUSES AND EFFECTS CONTINUED...

- Agricultural practices such as over irrigating farmland, over-tilling soil, application of fertilizer and pesticides contribute to 42 percent of the nitrogen, 55 percent of the phosphorous and 60 percent of the sediment entering the bay
- Over 75% of the bays tidal waters are believed to be impaired by chemical contaminants, from insecticides used in farm fields to cleaners used for cars and homes



WHAT IS BEING DONE?

- Chesapeake bay foundation created in 1966, led by Arthur Sherwood
- Early 1970s Maryland and Virginia enacted tidal wetland protection acts, within years tidal wetland loss fell by more than 90%
- Environmental education
- 1980s Chesapeake bay agreements, Governors from MD,VA, PA met to create the first interstate Chesapeake bay agreement
- By late 1990s needs of the bay were changing, 1996 indicator benchmarks were set for bay restoration, included wetlands, underwater grasses, forested stream buffers, migratory fish, oysters, toxics, dissolved oxygen, water clarity, and loss of resource lands.
- 2000s bay cleanup began to slow down
- 2010 U.S. Environmental Protection Agency established the Chesapeake Bay Cleanup Plan, set federally regulated limits of nitrogen, phosphorus, and sediments across Bay jurisdictions to meet water quality goals that are to be achieved by the year 2025.



WHAT CAN WE AS CITIZENS DO?

- Reduce pollution runoff, install rain garden or rain barrels and replace asphalt/concrete with gravel or pavers
- Purchase products from local farms, will reduce pollution associated with transportation and packaging
- Use non-toxic pesticides or chemical-free cleaning and personal-care products
- Follow legal disposal methods for chemicals
- Spread awareness



QUESTIONS

- ...