**Chesapeake Bay**

**Name:** Most historians believe it was named after the Algonquin word, “Chespeicooc,” meaning “great shellfish bay” or “village at great water.”

**Location:** Connected to the Atlantic Ocean on the east coast of the United States.

**Chesapeake Bay States:** New York, Pennsylvania, Delaware, Maryland, Virginia, West Virginia also Washington D.C.

**Size:** About 200 miles long and 30 miles at its widest; Shoreline is 11,684 miles; 64,000 square miles of watershed.

**Depth:** 21 feet average with maximum depth 174 feet. 24% of the bay is less than 6 feet deep.

**Population:** About 17 million people

**Average salinity:** 13-17 ppt (parts per thousand); salinity increases near the Atlantic Ocean and the Elizabeth River.

**Scorecard:** Overall a “D+” although every creek, river and tributary may have a different grade.

**Plants & Animals:** Over 50% fresh water comes from the Susquehanna River, the Bay’s largest tributary.

**Cool fact:** Atlantic Blue Crab, Callinectes sapidus

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**Norfolk, Virginia**

**Location:** SE Virginia; bottom of Chesapeake Bay; near Atlantic Ocean

**Size:** 66 square miles (the size of about 720 football fields)

**Population:** 247,189 people (estimate, 2015 census)

**Name:** Early 1630s, Britain named Norfolk and means “northern people.”

**Schools:** 33 elementary, 8 middle and 5 high schools

**Rainfall:** 101 rain days a year; 46.55 average inches a year; Norfolk floods are increasing and the city is experiencing one of the highest sea level rises on the east coast. (Top 5 in the United States.)

**Temperature:** Average 60 degrees Fahrenheit or 15.5 degrees Celsius

**Stormdrains:** 350 miles of stormwater pipes

**Streets:** 2,186 lane miles of roads; 31,000 street lights

**Cool fact:** Norfolk is a “Tree City” with 33% tree canopy and a goal of 40%.

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**Elizabeth River**

**Name:** Early 1600s, Captain John Smith named it the Elizabeth River in honor of Princess Elizabeth Stuart, daughter to King James I of England.

**Location:** SE Virginia; lower Chesapeake Bay; near Atlantic Ocean.

**Elizabeth River Cities:** Norfolk, Portsmouth, Chesapeake and Virginia Beach.

**Size:** Less than 25 miles long and 252 square mile watershed.

**Depth:** Average 13 feet with maximum depth of 55 feet to accommodate ships.

**Population:** About 500,000 residents.

**Average salinity:** 18 ppt (parts per thousand) Polyhaline zone, the saltiest zone; fresh water source: Great Dismal Swamp’s Lake Drummond

**History:** The Elizabeth River is a busy harbor with ship repair industries and the second largest port on the East Coast of the United States. In 1767, the nation’s oldest and largest Norfolk Naval Shipyard was founded where the world’s first ironclad ship, the first dry dock in the Western Hemisphere and the first aircraft carrier was built. At the mouth of the river is the world’s largest naval base.

**Scorecard:** Overall a “C” although each branch has a different grade.

**Oysters:** Since 1920s, harvesting oysters has been banned due to contamination from sewage. Great news! Elizabeth River Project, partners and the Norfolk community has worked hard and the Lafayette Branch is now on track to be the first tributary in Virginia to meet Chesapeake Bay oyster restoration goals.

**Cool fact:** The Atlantic sturgeon fish was on our planet before the T-Rex dinosaur and over 200 were found alive in the Elizabeth River in 2014.

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**Mummichog Fish**

**Common Name:** Mummichog

**Scientific Name:** Fundulus heteroclitus

**Historical:** Mummichog is a Native American word that means “swims in great numbers.”

**Habitat:** They live in brackish waters, don’t migrate and live within a 50 yard area.

**Life span:** Live up to 3 years and grow up to 5 inches.

**Food:** They are omnivores and feed on insects, small fish, crustaceans and plant materials.

**Salinity:** They can live in a wide range of salinities and high temperatures.

**Food web:** They are an important food source for larger fish.

**Winter:** To avoid freezing they burrow in the mud to depth up to 8 inches (20.3 cm).

**Males:** Vertical greenish, brown stripes with bright blue spots and belly is white to orange.

**Females:** Larger, pale green with light bellies and they do not have stripes.

**Eggs:** Lay eggs on leaves and shells. You can see their eyes and heart beating through shell.

**Indicator:** Scientists study their health to see how healthy the river and their habitat is.

**Cool fact:** Mummichogs were the first fish in space!

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**What’s wrong with this picture?**

- Is it safe to play in flood waters? Why or why not?
- Do you know why Norfolk floods?

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**Atlantic blue crab, Callinectes sapidus**

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**Atlantic sturgeon can live up to 60 years, grow to 14 feet and weigh 800 pounds.**
The Elizabeth River Project: Founded in 1991 with a mission to restore the Elizabeth River to the highest practical level of environmental quality through government, business and community partnership. There are over 1,000 members, 4,000 River Star Homes, 180 River Star Schools, 120 River Star Businesses and about 1,869 volunteers. Education initiatives include: The Learning Barge, Paradise Creek Nature Park, Wetlands in the Classroom and costume character Princess Elizabeth.