Charlotte Harbor is Florida’s second largest open water estuary (including Lemon Bay to Estero Bay). At 30 miles long and 7 miles wide, the harbor encompasses 270 square miles. The harbor’s predominantly natural shoreline, affords us the same sense of tranquility experienced by our earliest settlers.

The Peace River watershed is the largest land area draining into Charlotte Harbor (2,350 square miles). This watershed begins in Polk County at the Peace Creek drainage canal, and Saddle Creek, north of Lake Hancock. From there the river flows about 105 miles south to the harbor. Flows from the river are critical to the health and overall productivity of Charlotte Harbor. Predominant land uses in the Peace River watershed include phosphate mining, agriculture and urban development.

Although the harbor is recognized as a being a large estuary, it is small in relation to its watershed. A watershed is the land area that drains rain water to surface waters (lakes, rivers, estuaries). A watershed is also referred to as a basin. Charlotte Harbor’s watershed is 4,468 square miles. This means that approximately 17 square miles of watershed drain into every one square mile of estuary, (a 17:1 ratio). If we focus just on Charlotte Harbor proper, the ratio increases to 22:1. Compare that to Lemon Bay with a land to water ration of 1:1 or Tampa Bay with a ratio of 5:1, and it becomes apparent that the watershed plays a huge role in ensuring the health of Charlotte Harbor.

The Myakka River watershed encompasses approximately 600 square miles. This watershed begins in Manatee County at the confluence of seven tributaries which form the headwaters known as Flatford Swamp. The predominant land use in the Myakka River watershed is agriculture, with urbanization in the lower watershed.

The cumulative effect of land use changes can affect stormwater runoff (rain water that carries pollutants... (Continued on page 2)
with it) and baseflow contributions (the lowest river flows) to the rivers. For instance, groundwater withdrawals lower the potentiometric surface or groundwater table. Over time this causes saltwater intrusion. When groundwater (which is of poor water quality) is released into surface waters the result is degradation to overall water quality. This groundwater to surface water scenario presented serious problems for the City of Punta Gorda’s drinking water supply (Shell Creek), several years ago. As a result, agricultural users, who are the largest water users, came to the table and adopted best management practices (BMPs) to reduce their impact on water quality. Through the use of tail water recovery systems, groundwater releases to surface water have been dramatically reduced and water quality is much improved.

Septic systems are another concern. Septic systems in the Peace and Myakka river watersheds contribute between 11-22% of the total nitrogen load to the estuary. The majority of septic system failures occur due to improper sighting. Over 70% of the soils in the Peace and Myakka are considered unsuitable for septic systems.

Drainage of wetlands can also affect surface water storage and drainage patterns. Historic phosphate mining and reclamation of mined lands can alter the timing and magnitude of runoff, surface water storage, recharge, and evapotranspiration (water lost to the atmosphere).

The most important thing each of us can do to protect the estuary is arm ourselves with technically sound knowledge. Whether you are new to Florida or have lived here all of your life, learn how to protect Florida’s environment. Get started in your own back yard by implementing the Nine Principles of Florida-Friendly Landscaping™ listed below:

1. Right Plant, Right Place
2. Water Efficiently
3. Fertilize Appropriately
4. Mulch
5. Attract Wildlife
6. Manage Yard Pests Responsibly
7. Recycle
8. Reduce Storm Water Runoff
9. Protect the Waterfront

Florida-Friendly Landscaping™ (FFL) means using low-maintenance plants and environmentally sustainable practices. Learn how you can have a beautiful landscape that could save you time, energy and money while protecting our future. Workshops on Florida-Friendly Landscaping™, Composting, Rain Barrels and other related topics are regularly offered by the Charlotte County UF/IFAS Extension Office.

Sources:

http://www.swfwmd.state.fl.us/education/interactive/peaceriver/harbor.php