What's being done to improve the St. Johns River

Total Maximum Daily Loads (TMDLs) - State agencies were directed by EPA to establish the total amount of pollutants (i.e., Total Maximum Daily Loads) that can enter impaired water bodies so that water quality standards can be met. Those total amounts must then be fairly and cost-effectively distributed among industry, agriculture, and cities. The FDEP has determined the reductions required for nutrients entering the LSJR main stem and fecal coliforms entering the tributaries. Agreements with stakeholders to achieve those reductions are being implemented. A mercury TMDL will also be established by 2012.

Fertilizer and landscape irrigation - Best Management Practices are encouraged throughout the LSJRB to reduce nutrient loads into waterways and to conserve water supply. State and Local Rules/Ordinances apply.

Fecal coliform bacteria - Fecal coliform bacteria assessment and remediation of tributaries is ongoing. The Septic Tank Removal Program is connecting Jacksonville neighborhoods to sewer lines in problem areas, and sewerage infrastructure is being improved throughout the lower basin.

Regional stormwater treatment facilities - Several projects in the LSJRB are underway to reduce nutrient loads and address localized flooding concerns.

Tri-County Agricultural Area (St. Johns, Putnam, and Flagler counties) - Agricultural Best Management Practices have been implemented to reduce nutrients, suspended solids, and pesticides in runoff. Two regional agricultural stormwater treatment facilities are in operation.

Wastewater - Upgrades in municipal wastewater treatment plants and reclamation facilities are under way in all counties in the LSJRB to reduce nutrients in water bodies.

The State of the River Report is the result of a consolidated effort directed by a team of academic researchers from Jacksonville University (JU), University of North Florida (UNF) and Valdosta State University (VSU). The report has undergone an extensive review process including local stakeholders and an expert panel with the expertise and experience in various disciplines to address the multi-faceted nature of the data.

For more information, please visit: *http://www.SJRreport.com.*

The State of the River Report was funded through the City of Jacksonville's Environmental Protection Board (EPB) and the River Branch Foundation. It is one component of a range of far-reaching efforts initiated by Jacksonville Mayors John Delaney and John Peyton and the River Accord partners to inform the public about the current status and trends in the Lower St. Johns River Basin, Florida (LSJRB). River Accord partners include the City of Jacksonville, St. Johns River Water Management District (SJRWMD), JEA, Jacksonville Water and Sewer Expansion Authority (WSEA), the Florida Department of Environmental Protection (FDEP), and local governments and utilities.

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Photos by Heather P. McCarthy unless otherwise noted.

2011 STATE OF THE RIVER REPORT FOR THE LOWER ST. JOHNS RIVER BASIN, FLORIDA:

Water Quality, Fisheries, Aquatic Life & Contaminants

Rating Scheme for River Health Indicators

The State of the River Report describes the health of the Lower St. Johns River Basin based on a number of broad indicators including water quality, fisheries, aquatic life and contaminants. How each indicator contributes to, or signals, overall river health is discussed in terms of its current status in 2011 and trends over time.

CURRENT STATUS

SATISFACTORY

UNSATISFACTORY

The Current Status for each indicator is based on the most recent data records. This rating often considers whether the indicator meets State and Federal minimum standards and guidelines.

TREND

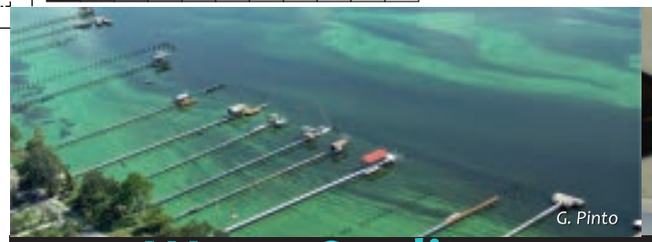
CONDITIONS IMPROVING

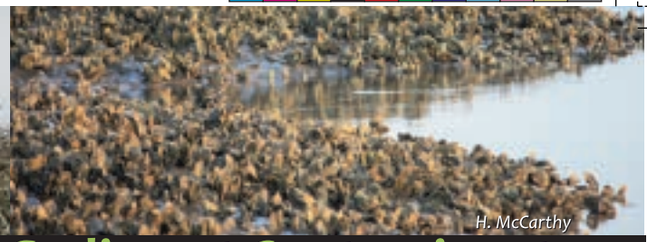
CONDITIONS STABLE

CONDITIONS WORSENING

TREND UNCERTAIN

The Trend rating reflects only historical change derived from statistical analyses of the best available scientific data over the time period analyzed. The Trend rating does not consider initiated or planned management efforts that have not yet had a direct impact on the indicator.





Water Quality

DISSOLVED OXYGEN (DO) -- Shallow areas and some tributaries have particularly low DO in the summer.

NUTRIENTS (nitrogen and phosphorus) -- Elevated levels of nutrients have increased the frequency and intensity of algal blooms and contributed to low DO conditions.

TURBIDITY -- Turbidity is improving in the LSJR main stem, but tributaries are particularly prone to turbidity events after heavy rainfall or dredging.

ALGAL BLOOMS -- Excessive nutrients have increased the frequency and intensity of algal blooms significantly in recent decades.

BACTERIA (fecal coliform) -- Although the LSJR main stem is in compliance with fecal coliform standards, many tributaries have unacceptably high counts.

METALS IN THE WATER COLUMN -- Maximum values of most metals analyzed, particularly copper, fluctuated above water quality criteria in LSJR main stem. Metal concentrations are elevated in many tributaries including, Doctors Lake, Moncrief Creek, Arlington River, Trout River and Cedar Creek.

Fisheries

RED DRUM

SPOTTED SEATROUT

LARGEMOUTH BASS

FRESHWATER CATFISH

SHEEPSHEAD

STRIPED MULLET

SOUTHERN FLOUNDER

BLUE CRAB

SHRIMP

STONE CRAB

A red box indicates the status or trend has changed from last year's River Report. For detailed explanations and statistical analyses of status and trend ratings, please see the full technical report at http://www.sjrreport.com.

Aquatic Life

SUBMERGED AQUATIC VEGETATION

WETLANDS

MACROINVERTEBRATES

NON-NATIVE AQUATIC SPECIES

FLORIDA MANATEE (endangered)

BALD EAGLE (delisted 2007)

WOOD STORK (endangered)

SHORTNOSE STURGEON (endangered)

Sediment Contaminants

POLYAROMATIC HYDROCARBONS (PAHs) -- PAHs continue to be a major contaminant stressor throughout the basin with sources from petroleum and combustion.

NORTHERN LSJRB - Recovery from 1980s creosote contamination continues in the north.

SOUTHERN LSJRB - Urbanization in south may be increasing some types.

METALS -- Metals, especially mercury, lead and zinc, are elevated throughout the LSJRB. Conditions are worst in the Cedar-Ortega area and Rice Creek, and organisms are likely impacted. Most metal contaminants have leveled off since the 1990s. Mercury found in fish has caused the Florida Department of Health to issue consumption advisories for some species of fish and has prompted the Florida Department of Environmental Protection to list 34 water bodies as impaired.

POLYCHLORINATED BIPHENYLS (PCBs) -- PCBs are a persistent, low-level stressor in most areas of the LSJRB and have not demonstrated a significant decline in the last 20 years. PCBs are a high-level stressor in the Cedar-Ortega area, although a new stormwater treatment facility should improve conditions in the area. Rice Creek is also highly contaminated with PCBs.

PESTICIDES -- Pesticides have not discernibly declined in toxic effects over the last 20 years and are expected to persist into foreseeable future. DDT and its degradation products are the most significant contaminants. Pesticides are present in low levels in most LSJR sediments, but they are a major stressor in the Cedar-Ortega area.