**Weekly Estuarine Conditions Update**

**As of November 2, 2009**

**St. Lucie Estuary**

**Current Conditions:**

Over the past week, flow averaged 0 cfs at S-80 and 2 cfs at S308.  Provisional data indicates that discharge of 0.2 cfs occurred at S-97 on C-23 and 0 cfs at S-49 on C-24.  The current weekly average salinities (in bold) at the four monitoring sites in the St. Lucie Estuary are given below in practical salinity units (psu), along with the previous week’s (in parenthesis).

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Weekly Average Salinity (psu)** | |  |
| **Sampling Site** | **Surface** | **Bottom** | **Envelope** |
| HR1 (N. Fork) | **18.9**(19.8) | **20.9** (21.1) |  |
| Roosevelt Bridge | **21.7** (21.4) | **22.4** (22.3) | 8.0 – 25.0 |
| A1A Bridge | **27.9** (28.4) | **29.8** (30.3) | 20.0 – 31.0 |

Average salinity remained the same over the last week.  Weekly average salinities at Roosevelt Bridge and A1A Bridge are within the preferred range.  Salinity conditions in the estuary are good considering the time of year, the location in the estuary, and salinity preference of the oyster, *Crassostrea virginica*.

**Caloosahatchee Estuary**

**Current Conditions:**

During the past week, flow averaged 0 cfs at S-79, 78 cfs at S-78, and 439 cfs at S-77. The concentration of chlorides at the Olga Plant was 60 ppm yesterday.  The current weekly average salinities (in bold) at the six monitoring sites in the Caloosahatchee Estuary are given below in practical salinity units (psu), along with the previous week’s (in parenthesis).

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| --- | --- | --- |
| **Weekly Average Salinity (psu)** | | |
| **Sampling Site** | **Surface** | **Bottom** |
| Franklin Locks (S-79) | **4.4** (1.6) | **5.5**(1.7) |
| Rt. 31 Bridge | **5.3** (1.8) | **10.2** (4.0) |
| I-75 Bridge | **5.6**   (2.1) | **11.1**   (6.2) |
| Ft. Myers Yacht Basin\* | **11.5** (8.9) | **14.4** (14.3) |
| Marker 52 | **11.9** (9.3) | **15.9**(16.1) |
| Cape Coral Bridge | **18.3**(15.7) | **19.5**(19.6) |
| Shell Point | **28.8** (26.6) | **29.4**(27.2) |
| Sanibel | **31.9** (29.7) | **32.8** (31.0) |

\*red values are estimated using a regression relationship between salinity at Marker 52 and salinity at Ft. Myers

Salinity increased throughout the estuary last week.  Salinity conditions in the upper estuary are considered good. The estimated 30-day average salinity at Ft. Myers is 7.1 psu. Salinities at the Cape Coral Bridge are within the preferred range for the oyster, *Crassostrea virginica.* Salinity at Shell Point and the Sanibel Causeway indicate that conditions are good for seagrass in the lower estuary and San Carlos Bay.  Therefore, conditions in the lower estuary and San Carlos Bay are good.

FWRI (Fish and Wildlife Research Institute) reports that *Karenia brevis*, the Florida red tide organism, was not detected in water samples collected this week alongshore of Pinellas, Manatee, Charlotte, Collier and Monroe counties or offshore of the Florida Keys (Monroe County). Three samples collected alongshore of Sarasota County (out of 28 total samples) ranged from background to very low concentrations of *K. brevis*.

Samples collected alongshore and offshore of Lee County ranged from not present to medium concentrations of *K. brevis.* An extensive fish kill in conjunction with discolored water was reported approximately 10 miles offshore, southwest of Sanibel Island. ([research.myfwc.com/features/view\_article.asp?id=9670](http://research.myfwc.com/features/view_article.asp?id=9670)).

Monitoring data collected by the River, Estuary and Coastal Observing Network (RECON) of Sanibel-Captiva Conservation Foundation (SCCF) indicated that chlorophyll ranged from 1.7 – 3.4 ug/l at Ft. Myers and 1.0 – 4.1 ug/l at Shell Point;  Dissolved Oxygen ranged from 4.4 – 6.8 mg/l at Ft. Myers and 4.2 – 6.4 mg/l at Shell Point. Ft. Myers values are from yesterday only, the recorder has been down. ([www.recon.sccf.org](http://www.recon.sccf.org/)).

**Biscayne Bay**

**Current Conditions:**

Continuous salinity measurements are now being measured at two sites in Biscayne Bay (see map in attached graphics file).  Data will be reported on a monthly basis. This initial report is not particularly detailed but will be refined in the future, as more data is accumulated.  Salinity at both sites was close to 20 ppt at the end of September, and showed a general increase for most of the last month (ranging from about 25 – 32 ppt). Salinity at the southern station, BBCW10, is more variable than for BBCW8.  Recently, salinity has begun to increase, most likely in response to declining rainfall.

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| --- | --- | --- | --- |
|  | **Average Salinity (psu)** | | |
| **Sampling Site** | **August** | **September** | **October** |
| BBCW8 | **27.1** | **28.6** | **28.6** |
| BBCW10 | **33.5** | **27.0** | **28.8** |

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click on “Current Week”

click on “Technical Summary”

scroll to the bottom and click on “Coastal Ecosystems”