



Seagrass-Watch E-Bulletin

30 April 2016

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NEWS

Seagrass Comeback Bolsters Climate Change Battle (VA, USA)

29 April 2016, WVTF

There's good news on the environmental front today. Aerial surveys show a 21% increase in seagrasses – plants that store carbon and other greenhouse gases while making the Chesapeake Bay a cleaner place. Sandy Hausman reports that Virginia is becoming a model for other countries hoping to fight climate change.

For a decade, volunteers working with the Virginia Institute of Marine Sciences and the University of Virginia have been gathering seeds from seagrass – sowing them across a wide expanse off the Eastern Shore. Professor Karen McGlathery says that area was once rich in underwater meadows, but they were wiped out by disease and storms in the 1930's.

Seagrass meadows store twice as much carbon as forests, and they come back much more quickly. They're also home to growing populations of blue crabs and scallops. McGlathery and UVA student Mathew Oreska have been working on a model that could lead to carbon credits for companies that grow underwater meadows, and several countries have contacted Virginia to learn more about the restoration project.

[more..... http://www.seagrasswatch.org/news.html](http://www.seagrasswatch.org/news.html)

Lagoon water quality rebounds since algae annihilation (FL, USA)

30 April 2016, Florida Today

The Indian River Lagoon still glows green, but water quality tests show light at the end of the "brown tide," at least for now. Biologists report improving conditions since brown tide algae annihilated thousands of fish in March, mostly in the Banana River near Merritt Island and Cocoa Beach.

Long-term averages of water quality can deceive, scientists say. It is the short-term spikes in cloudiness, the blunt drops in dissolved oxygen and other sudden shifts that can kill. To provide some basic benchmarks for the lagoon's evolving condition, FLORIDA TODAY has rekindled a monthly water quality map the paper published a decade ago. FLORIDA TODAY will examine water quality parameters using five continuous monitors maintained by the St. Johns River Water Management District. FLORIDA TODAY will also examine the past 30 days of data each month, using a similar grading system developed by Marine Resources Council and with input from environmental scientists.

The past month of data shows a lagoon on the mend, going into the season in which seagrasses, as well as algae, prosper. Preliminary data from the five lagoon monitors shows mostly healthy levels of dissolved oxygen, salinity, pH and overall cloudiness over the past month. But in the days surrounding the mid March fish kill, dissolved oxygen dipped near zero, suffocating thousands of fish. The best news this week was improved visibility, biologists said. For months, scientists snorkeling in the lagoon couldn't even see the seagrass beds to measure their extent. While light could only penetrate barely a foot deep during the brown tide algae's peak, more recently water clarity has allowed light penetration of more than 5 feet, ideal for seagrass. How the lagoon fares in coming months will depend upon light availability, temperature, and how much rain hits the region.

[more..... http://www.seagrasswatch.org/news.html](http://www.seagrasswatch.org/news.html)

Related articles:

Indian River Lagoon declines trigger alarm (Orlando Sentinel)

<http://www.orlandosentinel.com/news/environment/os-indian-river-defining-crisis-20160407-story.html>

St. Pete's \$20 million gamble: Growing sea grass for money (FL, USA)

29 April 2016, Tampabay.com

It's good to be green, especially if it makes the city millions in cash. That's the appeal — and the challenge — of an ambitious environmental project to restore dozens of acres of seagrass just off North Shore Park. The program is not just intended to protect the area from future degradation, but also to sell credits to developers who are destroying seagrass elsewhere.

In fact, the city could reap up to \$20 million from selling mitigation credits, which would likely be priced between \$500,000 and \$675,000 each. Some of the money would be used to preserve more than 300 acres of existing seagrass, plus the restored sections (a smaller patch by the mouth of Coffee Pot Bayou also is planned). This week, the city picked Tampa Bay Watch, a Tierra Verde nonprofit, to complete the project.

For the city to collect the cash, it has to grow the seagrass. And that's not an easy task, said Margaret "Penny" Hall, the top seagrass expert at the state's Fish and Wildlife Research Institute in St. Petersburg. Hall has studied the success rates of mitigation permits for seagrass. She found that attempts to grow seagrass where it hadn't previously been present usually failed. The good news is the city, in restoring a seagrass meadow previously damaged by dredging, has a better chance than most at restoring seagrass. Tampa Bay Watch estimates it will take up to a decade to fully restore the damaged areas.

[more..... http://www.seagrasswatch.org/news.html](http://www.seagrasswatch.org/news.html)

Related articles:

St. Pete looking for sea grass farmers (FOX13)

<http://www.seagrasswatch.org/news.html>

St. Pete's \$20 million gamble: Growing sea grass for money (Tampa Bay Times)

<http://www.tampabay.com/news/environment/water/st-petes-20-million-gamble-growing-sea-grass-for-money/2275319>

BECQ fines Best Sunshine for repeated violations (Micronesia)

29 April 2016, Marianas Variety

The Bureau of Environmental and Coastal Quality on Thursday imposed a \$40,000 fine on Imperial Pacific International/Best Sunshine International for the repeated discharge of wastewater into the lagoon from the construction site of the Grand Mariana in Garapan.

In the order of correction and fine, BECQ-Division of Coastal Resource Management Director Fran Castro said Imperial Pacific/Best Sunshine International "has violated the conditions of the CRM permit." These violations, Castro's order stated, involved the repeated occurrence of wastewater discharge into the Garapan lagoon and reef without a permit. The order stated that there was damage to the seagrass bed and lagoon habitat as a result of the discharge.

[more..... http://www.seagrasswatch.org/news.html](http://www.seagrasswatch.org/news.html)

“This unprecedented event has now happened twice”: Huge seagrass die-off hits Everglades (FL, USA)

27 April 2016, Washington Post

The shallow coastal waters of Florida Bay are famed for their crystal clear views of thick green seagrass – part of the largest stretch of these grasses in the world. But since mid-2015, a massive 40,000-acre die off here has clouded waters and at times coated shores with floating dead grasses. The event, which has coincided with occasional fish kills, recalls a prior die-off from 1987 through the early 1990s, which spurred major momentum for the still incomplete task of Everglades restoration.

James Fourqurean, a Florida International University marine scientist, and government Everglades experts fear they’re witnessing a serious environmental breakdown, one that gravely threatens one of North America’s most fragile and unusual wild places. When most people think of the Everglades, they envision swamps — but seagrass is just as important. Fourqurean and fellow scientists think they know the cause of the die-off. It’s just the latest manifestation, they say, of the core problem that has bedeviled this system for many decades: Construction of homes, roads, and cities has choked off the flow of fresh water. Without fast moves to make the park far more resilient to climate change and rising, salty seas, the problem will steadily worsen.

The seagrass die off, according to Robert Johnson, director of the National Park Service’s South Florida Natural Resources Center, was caused when this perennial problem was further exacerbated by a 2014-2015 South Florida drought. The center of the bay then heated up last summer, saw considerable evaporation, and became quite salty – for some parts of the bay, twice as salty as normal sea water. In very salty conditions, water holds little oxygen, the conditions can become “anoxic”, which has a nasty by-product: hydrogen sulfide. The chemical “is a notorious toxin,” said Donald Boesch, president of the University of Maryland Center for Environmental Science. Once the seagrass dies off, it becomes a feedback – the water becomes filled with dead grasses that release nutrients, and those can stoke huge algal blooms. That clouds the water and prevents light from reaching remaining seagrasses, which then also die, because they need the light for photosynthesis.

The Obama administration, in collaboration with Florida state agencies and local leaders, has been moving lately to simultaneously restore historic Everglades water flows and to try to safeguard the park against climate change. But that will take years – too long to stop the current seagrass die off from running its course and perhaps having many cascading effects, scientists fear.

[more..... http://www.seagrasswatch.org/news.html](http://www.seagrasswatch.org/news.html)

Related articles:

Frustration spills over seagrass die-off in Florida Bay, the worst in decades (Florida Keys Keynoter)

<http://www.seagrasswatch.org/news.html>

Florida Bay at 'knife's edge of collapse' (KeysNet)

<http://www.seagrasswatch.org/news.html>

Scientists weigh causes and consequences of huge seagrass die-off in Florida Bay (Cortez Journal)

<http://www.cortezjournal.com/article/20160428/AP/304289699/Scientists-weigh-causes-and-consequences-of-huge-seagrass-die-off-in-Florida-Bay>

'Environmental breakdown': Florida Bay hit with huge seagrass die-off (RT)

<https://www.rt.com/usa/341197-florida-bay-hit-dying-seagrass/>

A massive die off of vital seagrass threatens Florida Bay (Washington Post)

https://www.washingtonpost.com/video/national/health-science/a-massive-die-off-of-vital-seagrass-threatens-florida-bay/2016/04/27/3efb1452-0c9d-11e6-bc53-db634ca94a2a_video.html

Underwater 'zombie grass' signals trouble for Florida fishermen (Saudi Gazette)

<http://saudigazette.com.sa/world/americas/underwater-zombie-grass-signals-trouble-florida-fishermen/>

"Zombie grass" signals trouble (The Hindu)

<http://www.thehindu.com/todays-paper/tp-in-school/zombie-grass-signals-trouble/article8505912.ece>

Underwater 'zombie grass' signals trouble for Florida fishermen (Daily Mail)

<http://www.dailymail.co.uk/wires/afp/article-3551220/Underwater-zombie-grass-signals-trouble-Florida-fishermen.html>

Underwater 'zombie grass' signals trouble for Florida fishermen (gulfnnews.com)

<http://gulfnnews.com/news/americas/usa/underwater-zombie-grass-signals-trouble-for-florida-fishermen-1.1718713>

Waiting For What's Next On Florida Bay: Will Seagrass Die-off Mean Another Collapse? (WLRN)

<http://wlrn.org/post/waiting-whats-next-florida-bay>

Clawson, local captains push for sugar land purchase (The News-Press)

<http://www.news-press.com/story/news/2016/04/06/clawson-local-captains-push-sugar-land-purchase/82703238/>

The Smelly, Icky, Heartbreaking Fish Kill Catastrophe in Florida (Care2.com)

<http://www.care2.com/causes/the-smelly-icky-heartbreaking-fish-kill-catastrophe-in-florida.html>

Fishermen charged for catching green sea turtles (Saipan)

28 April 2016, The Guam Daily Post (press release)

Associate Judge Teresa Kim-Tenorio has found probable cause to charge three fishermen who were arrested for allegedly catching three green sea turtles in Saipan waters without authorization on Feb. 2. Assistant Attorney

www.seagrasswatch.org

General Heather Barcinas representing the government said the defendants are facing charges of possession of an endangered species which carries a maximum punishment of six months imprisonment and \$5,000 fine.

The defendants were caught on surveillance camera by Commonwealth Ports Authority Police Sergeant Vincent Billy within a restricted area at about 8:30 to 9 p.m. while conducting routine patrol on Feb. 2. After hearing a flapping sound from the bed of a blue pickup truck owned by the defendants, he investigated and saw three live green sea turtles restrained with rope to control their movements.

The defense lawyers argued, on behalf of their clients that there are five kinds of turtles in Saipan waters and the government was not able to prove if the turtles the defendants caught were green sea turtle, and that Billy was not trained to identify if it was green sea turtle which is endangered species.

more..... <http://www.seagrasswatch.org/news.html>

Texas A&M drones survey damage to seagrass from boats (TX, USA)

25 April 2016, Midland Reporter-Telegram

Drones have been used by Texas A&M University in Corpus Christi to survey seagrass for damage blamed on boat propellers. School officials on Monday announced that experts will compare the images taken by drones to data collected from traditional flights. The project, co-sponsored with the Texas Parks & Wildlife Department, is meant to determine if drones flying lower can produce images as effectively as using planes at upper altitudes.

Michael Starek, who's an assistant professor of engineering, has been analyzing images collected from December drone flights about 450 feet above Redfish Bay. TPWD since 2007 has done aerial surveys using piloted aircraft flying at about 2,000 feet. Officials hope drones can better map the scar features on seagrass, which is prime environment for fish, shrimp and crabs.

more..... <http://www.seagrasswatch.org/news.html>

Related articles:

*Drone Survey of Seagrasses Tested for Texas Parks & Wildlife (GISuser.com)
<http://gisuser.com/2016/04/drone-survey-of-seagrasses-tested-for-texas-parks-wildlife/>*

Our Environment: Seagrass spotlight of festival (FL, USA)

20 April 2016, Sarasota Herald-Tribune

The Sarasota Bay National Estuary Program and Sarasota County will be co-sponsoring the First Annual Sarasota Bay SeagrassFest and second annual seagrass survey on April 30.

From 1950 to 1988, Sarasota Bay lost 30 percent of the seven major species known to exist here, out of the 52 across the globe. A variety of issues were to blame for the loss, including poor management of sewer and storm-water runoff, propeller scarring from careless boaters and dredging/filling. Due diligence by numerous agencies and concerned citizens with the welfare of the bay at heart brought about a reversal over many years. SWFWMD now has an aerial mapping done every two years which has documented an increase of seagrass acreage in the bay to 13,288 acres in 2014, up by approximately 700 acres since 2012.

The upcoming affair is a double-barreled effort to educate the public by way of the Festival itself. There will be numerous people on hand to educate the general public with talks and displays explaining the vital link between healthy seagrass and the overall quality of the marine environment. To sweeten the pot, there will be music, food vendors and the like. For the second year, a seagrass survey will take place. The SBNEP and the County could use volunteers to assist in this endeavor. Able-bodied volunteers that know how to swim and have their own snorkeling equipment are welcome to take part. Fully-equipped shallow-draft motorboats would be a big help as well.

more..... <http://www.seagrasswatch.org/news.html>

Related articles:

*First SeagrassFest to celebrate increase in seagrass in Sarasota Bay (Bradenton Herald)
<http://www.bradenton.com/news/local/article74572647.html>
SBEP Marks Gains with SeagrassFest (SRQ Magazine)
http://www.srqmagazine.com/srq-daily/2016-04-07/3775_SBEP-Marks-Gains-with-SeagrassFest*

Sarasota Bay preservation effort becomes model for others (FL, USA)

11 April 2016, WWSB ABC 7

Jon Thaxton grew up in Sarasota and has seen the health of the waters go through several shifts and changes. Perhaps the most memorable, was a dramatic decline in water quality in the 90s. That's when Thaxton and his fellow County Commissioners took action, putting into place several ordinances to remove nitrogen from the water and protect Sarasota Bay from collapse. Now, nearly a decade after those ordinances were put in place, their impact can be felt. The bay is healthy and sea grass levels are up.

Meanwhile, on the East Coast of Florida, Indian River is struggling. In the last few months, the bay has seen major fish kills all due to brown tide. Those from Indian River are now looking to Sarasota Bay as a model to keep Indian River from collapse.

more..... <http://www.seagrasswatch.org/news.html>

Dead dugong washed ashore (India)

06 April 2016, The Hindu

A dead dugong was found washed ashore at Anthoniarpuram near Manamelkudi in the district on Tuesday. Police said the dead mammal was found by the locals and alerted the Coastal Security Group police. The CGP police inspected the mammal and passed on the information to the forest and fisheries departments. A spot post mortem was carried out on the dead creature and buried thereafter.

more..... <http://www.seagrasswatch.org/news.html>

Algal blooms off Kep coast lead to swimming and seafood scares (Cambodia)

04 April 2016, The Phnom Penh Post

A massive algal bloom off the coast of Kep that has left scores of dead coastal crabs and fish in its wake resulted in warnings from the Ministry of Environment and Prime Minister Hun Sen this weekend to avoid eating seafood or swimming in the seaside province. An algal bloom is a sudden overgrowth of algae brought on by a variety of ecological factors, including warming water temperatures, an excess of waterborne nutrients and various hydrological conditions such as shifting currents.

Ministry of Environment officials are currently monitoring water samples from Kep for toxicity levels, according to Kuch Virak, director of Kep's Fisheries Administration cantonment, but have yet to reach any conclusions, he said yesterday. According to a leading conservationist in Kep who is working with authorities, the recent bloom, normally a natural, yearly phenomenon, was likely exacerbated in this case by manmade factors.

Paul Ferber, director of Marine Conservation Cambodia, theorised that decomposing seagrass ripped from the seafloor by the trawlers' nets had created an unnaturally nutrient-rich environment for plankton, which is the main food source for *Noctiluca scintillans*, the microorganism that makes up algal blooms. Higher levels of plankton would have fed and intensified the bloom, he reasoned. According to officials and Kep residents, the bloom had shown signs of subsiding yesterday but had not yet fully cleared.

more..... <http://www.seagrasswatch.org/news.html>

High bridge replacement plan spurs Save Anna Maria opposition (FL, USA)

12 April 2016, by Kathy Prucnell, The Anna Maria Islander

Environmental activists who advocated for seagrasses and fought against stormwater discharge in Anna Maria Sound when a new bridge was proposed in the 1990s are back in the ring for another round with the Florida Department of Transportation (DoT).

Save Anna Maria (SAM) leaders were at a March 11 kick-off meeting where DoT unveiled its plans to officials and residents from Manatee County, Bradenton and the Anna Maria Island cities. The grassroots organization — a fierce opponent to a proposed megabridge more than two decades ago and other environmental causes since — is opposed to the proposed replacement bridge that links Holmes Beach and Perico Island. At a SAM meeting March 26, secretary/treasurer Nancy Deal listed the group's concerns, including the proposed destruction of a "1-plus acres of mangroves, not to mention seagrass."

Margaret Jenkins of Anna Maria read from a March 22 letter received by a former Holmes Beach city commissioner, fellow SAM member Billie Martini, from project manager Kati Sherrard, stating the DOT proposes to construct the bridge a maximum of 74-feet high, including a 9-foot depth, south of the existing bridge. In the letter to Martini, Sherrard indicates the environmental surveys are not yet complete, but DOT anticipates the destruction of 1.2 acres of mangroves and 2 acres of seagrasses, "both of which will be mitigated."

Full story: <http://www.islander.org/2016/04/high-bridge-replacement-plan-spurs-save-anna-maria-opposition/>

CONFERENCES

The 13th International Coral Reef Symposium (ICRS) (Hawai'i, 19–24 June 2016)

Theme: Bridging Science to Policy.

The world's major coral reef science meeting, the International Coral Reef Symposium (ICRS), is held every four years. It is the primary international meeting focused on coral reef science and management. The Symposium will bring together an anticipated 2,500 coral reef scientists, policy makers and managers from 70 different nations in a forum to present the latest research findings, case histories and

management activities, and to discuss the application of scientific knowledge to achieving coral reef sustainability. ICRS2016 will include a Taxon-specific session on seagrass: Session H, 26 - Integrating seagrass science and management in a coral reef framework

Key Dates

- 16 May 2016 - Registration Cancellation Deadline (Last Day to Receive a Refund)
- 19-24 June 2016 - Meeting

for more information, visit <http://sgmeet.com/icrs2016/default.asp>

The 12th International Seagrass Biology Workshop (ISBW12) (Wales, 17-23 October 2016)

Theme: Declining seagrasses in a changing world.

The International Seagrass Biology Workshop (ISBW) is the only international meeting specifically tailored to seagrass scientists, professionals and students. The International Seagrass Biology Workshop (ISBW) provides a good opportunity for the scientists working on various aspects of seagrass ecosystems to come together and discuss their latest findings. The ISBW12 will be held from 17-23 October 2016 at Nant Gwytheyrn, Gwynedd, Wales, organized by Project Seagrass and the Seagrass Ecosystems Research Group. The conference email address is ISBW2016@projectseagrass.org.

We as scientists know the devastating effects that humanity is having on our worlds seagrass meadows. Although much work is needed to keep documenting, understanding and highlighting the problems facing seagrass we as a research community need to also provide a voice of optimism about how we can make changes to ensure survival of these precious ecosystems. We must go beyond science, and use it to inform policy and management, and ultimately to catalyze change. We know that there are many examples of this, from stakeholder led management and successful restoration to improvements in water quality and the management of boating activities. We encourage participants to contribute stories of seagrass conservation success in order to strengthen this theme. We also encourage submission of research stories that aim to provide evidence to make future successes.

Let's make ISBW12 a conference that celebrates seagrasses and has a spirit of #oceanoptimism

The workshop therefore has 4 key themes that will form the structure of the sessions held throughout the week. These are:

- Resilience and a changing environment
- Ecosystem services
- Restoration and management
- Raising the profile of seagrass meadows

for more information, visit <http://isbw12.org/>

SEAGRASS-WATCH on YouTube

Seagrass: Pastures of the sea <http://www.youtube.com/watch?v=66Y5vgswj20> or <http://www.seagrasswatch.org/seagrass.html>

Presentation on what seagrasses are and why they are important (over 40,734 views to date)

...seagrass matters blog

World Seagrass Association blog <http://wsa.seagrassonline.org/blog/>

Keep up to date on what's happening around the world from the WSA with regular updates from WSA President Dr Richard Unsworth and *notes from the field* by Dr Siti Yaakub.

FROM HQ

Past E-bulletins <http://www.seagrasswatch.org/publications.html#ebulletin>

Frequently Asked Questions <http://www.seagrasswatch.org/faq.html>

Seagrass-Watch Magazine <http://www.seagrasswatch.org/magazine.html>

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Seagrass-Watch E- Bulletin is compiled by Len McKenzie & Rudi Yoshida.