Myakka River Basin Water Quality Status Report

WATER QUALITY IMPROVEMENT

Summary

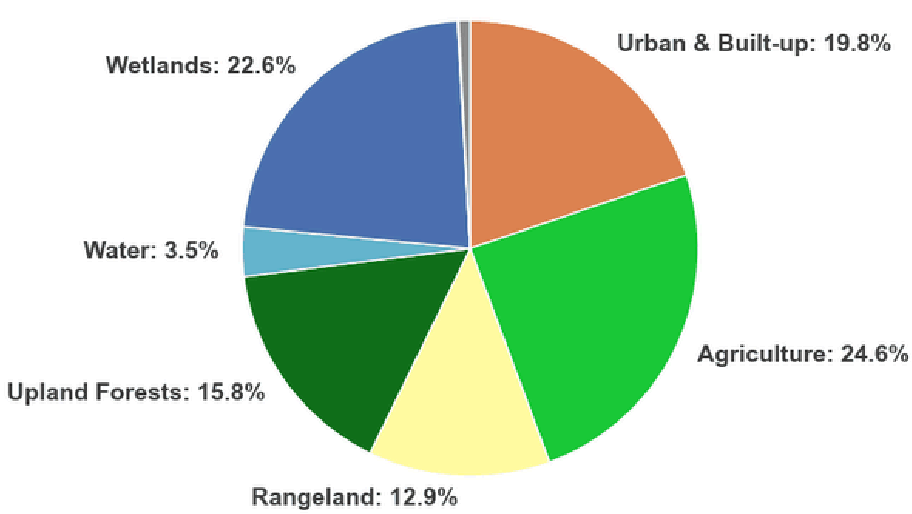
The 598-square mile Myakka River Basin has the largest contiguous wetland landscape of the CHNEP basins. The 66-mile river begins its southerly flow from headwaters in Manatee and Hardee counties. After following a narrow floodplain forest corridor, the river slows and enters a series of lakes in Myakka River State Park. Deer Prairie Creek and Big Slough feed the river as it widens and enters Charlotte Harbor. The 34-mile portion of Myakka River in Sarasota County is designated a “Florida Wild & Scenic River.”

Cattle ranching dominates the majority of the watershed, especially upstream of Myakka River State Park. To satisfy the need for range and pastureland, much of the watershed was drained and diverted. These alterations enabled some of the drained area to also be used for row crops and citrus groves. In the lower portion of the Myakka River watershed, urban development is displacing agriculture. Former grazing lands along the banks of the lower Myakka River are now being converted to urban uses.

The Coastal & Heartland National Estuary Partnership (CHNEP) and its partners conduct water quality monitoring in this area, which is available on the CHNEP Water Atlas (www.chnep.wateratlas.usf.edu). This report describes waterbodies that are not currently meeting water quality standards pursuant to the Impaired Waters Rule (IWR 62-303 F.A.C.).

Land Use / Land Cover Categories as a Percentage of Basin Area

Myakka River Basin, 2020



Source(s): Southwest Florida Water Management District

CHNEP WATER ATLAS

MYAKKA RIVER BASIN PAGE

Nutrients

Nutrient pollution in waterbodies is one of the most widespread water quality problems, caused by excess nitrogen and phosphorus. Too much nitrogen and phosphorus in the water can cause algae to grow excessively, degrading aquatic habitat and decreasing the dissolved oxygen that fish and other aquatic life need to survive.

Below are some examples of sources of nutrients:

- Sewage treatment plants/domestic point sources
- Atmospheric deposition from air pollution
- Septic systems improperly placed or maintained
- Groundwater pollution
- Fertilizers in residential and agricultural runoff
- Animal waste from residential or agricultural areas

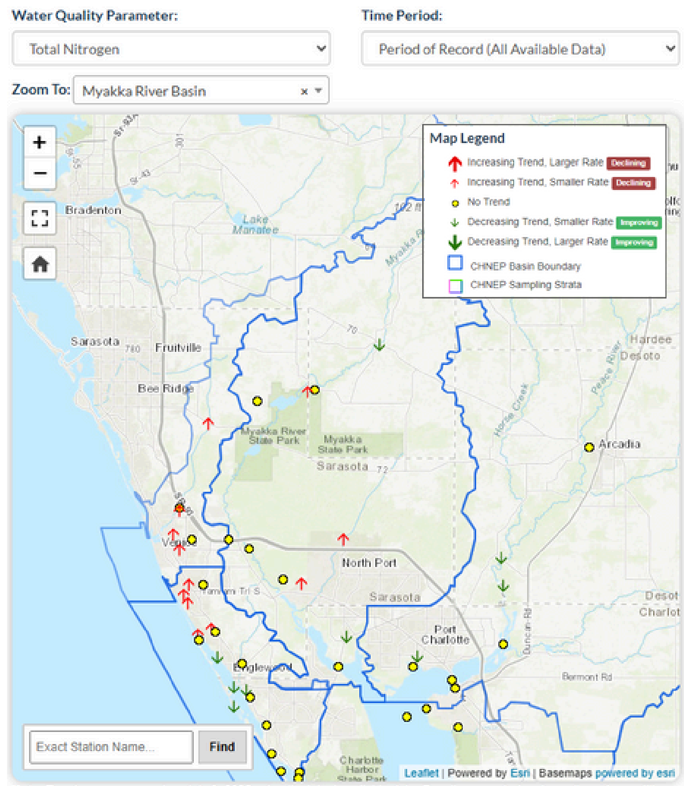
Top graphic shows Nitrogen trends for long-term monitoring stations in the Myakka River Basin.

The Florida Department of Environmental Protection (FDEP) uses water quality data that meets its quality control standards to identify waterbodies and water segments “WBIDs” that are not meeting the applicable water quality standards and designated uses based on the IWR 62-303 and 62-302, F.A.C. Once a WBID is verified impaired, it is to be placed on a schedule for TMDL development. TMDLs are waterbody-specific pollutant limits aimed at restoring attainment of water quality standards.

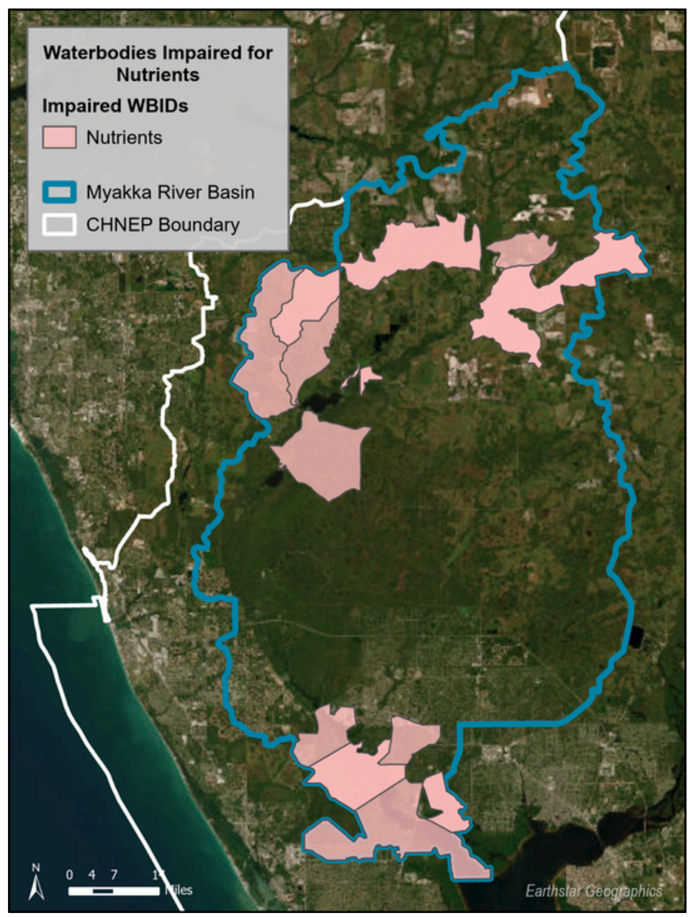
The following WBIDs are currently not meeting water quality standards for nutrients:

- Indian Creek
- Maple Creek
- Myakka River
- Myakka River (North Fork)
- Tippecanoe Bay
- Ogleby Creek
- Owen Creek
- Howard Creek
- Howard Creek (Northeast Branch)
- Myakka River at Clay Gully East
- Apollo Waterway

Pink areas are verified impaired for nutrients on the map to the right. No TMDL development has yet occurred at the state level for nutrients within the Myakka River Basin.



Note: Trends were prepared on July 9, 2025 using the latest available data. Results presented replace all previous editions.



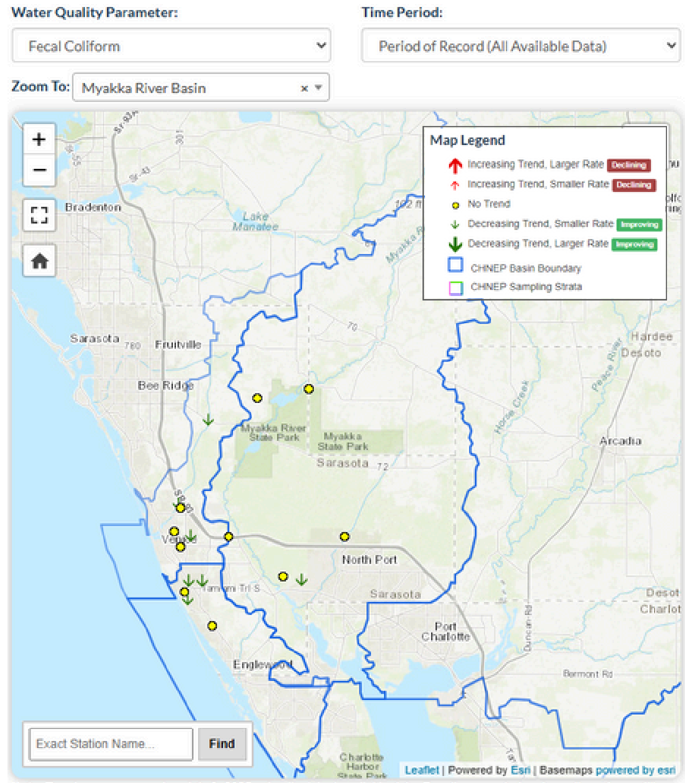
Bacteria

Bacteria in the water affect our ability to use the water for drinking, swimming, and shellfishing. The state water standards establish bacteria limits for different types of uses. The most stringent standards are for shellfishing areas, followed by drinking water and water used for recreation such as swimming and fishing.

Bacteria come from a variety of sources, but those of most human health concern come from fecal waste of animals and people. Sources of fecal bacteria include:

- Malfunctioning septic systems
- Leaking sanitary sewers
- Confined animal feedlots / overgrazing
- Wastewater plant overflows
- Urban pet waste
- Stormwater

The map above shows the trend for Bacteria (Fecal coliform) at long-term monitoring stations throughout Myakka River Basin.



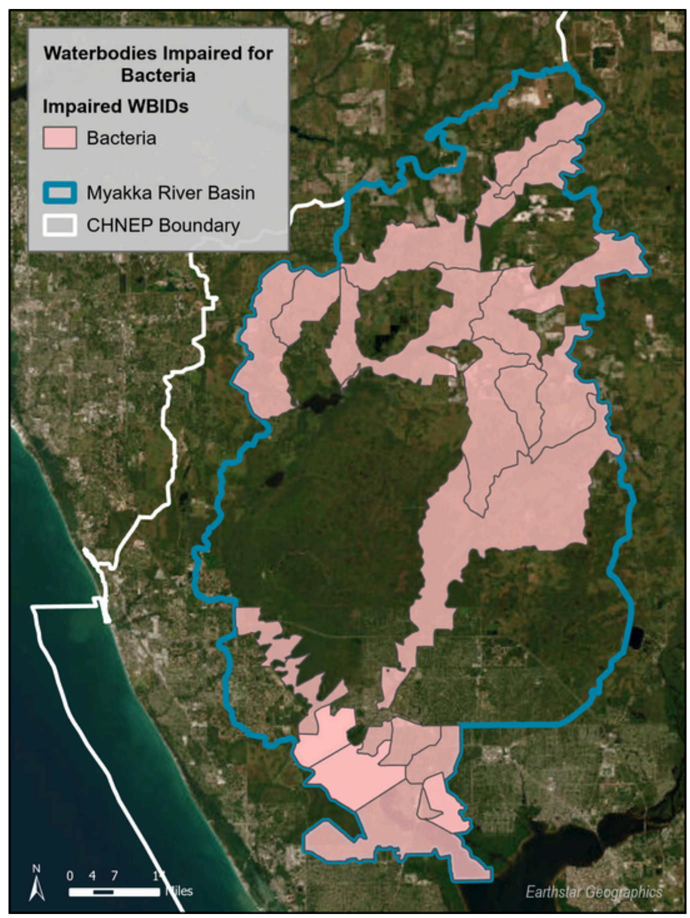
Note: Trends were prepared on July 9, 2025 using the latest available data. Results presented replace all previous editions.

Bacteria impairment is determined by FDEP using the same processes as nutrients. In addition, TMDLs are developed for impaired waters to identify the waterbody-specific pollutant target needed for attaining applicable water quality standards.

The following WBIDs are currently not meeting water quality standards for bacteria:

- Apollo Waterway
- Bud Slough
- Sam Knight Creek
- Trailer Park Canal
- Mud Lake Slough
- Myakka River
- Myakka River (North Fork)
- Myakka River (Tidal Segment)
- Myakka River (Upper Segment)
- Myakka River below Blackburn Bridge
- Ogleby Creek
- Young Creek
- Owen Creek
- Indian Creek
- Rock Creek
- Howard Creek
- Tippecanoe Bay
- Wildcat Slough
- Big Slough Canal (Potable Portion)

Pink areas are verified impaired for bacteria on the map to the right. No TMDL development has yet occurred at the state level for bacteria in the Myakka River Basin.



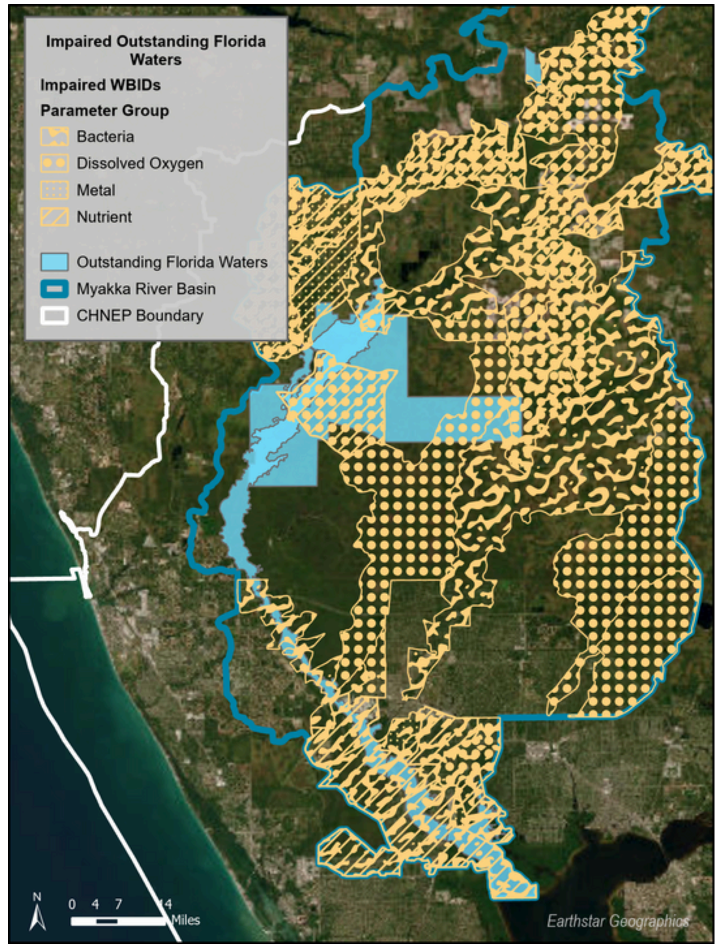
Outstanding Florida Waters

An Outstanding Florida Water (OFW) is a water designated worthy of special protection because of its natural attributes. This special designation is applied to certain waters and is intended to protect existing good water quality. Most OFWs are areas managed by the state or federal government as parks, refuges, or preserves.

Generally, the waters within these managed areas are OFWs because the managing agency has requested this special protection. However, some of these OFWs are now impaired (as indicated by light blue with peach fill pattern on the map to the right).

The following OFWs are currently not meeting water quality standards:

- Myakka River
- Myakka Florida Wild and Scenic River Segment
- Myakka River State Park
- Beker Tracts (Wingate Creek St. Park)
- Gasparilla Sound-Charlotte Harbor Aquatic Preserve



WBID	Waterbody Name	Impairment(s)	Status
1869B	Myakka River (Upper Segment)	Mercury (in fish tissue)	TMDL Complete
1869B	Myakka River (Upper Segment)	Fecal Coliform	Impaired
1869B	Myakka River (Upper Segment)	Dissolved Oxygen (Percent Saturation)	Study List
1869C	Myakka River (Upper Segment)	Fecal Coliform	Impaired
1869C	Myakka River (Upper Segment)	Mercury (in fish tissue)	TMDL Complete
1869C	Myakka River (Upper Segment)	Dissolved Oxygen (Percent Saturation)	Study List
1877A	Myakka River (Upper Segment)	Escherichia coli	Impaired
1877A	Myakka River (Upper Segment)	Mercury (in fish tissue)	TMDL Complete
1877B	Myakka River (Upper Segment)	Mercury (in fish tissue)	TMDL Complete
1877C	Myakka River (North Fork)	Nutrients (Macrophytes)	Impaired
1877C	Myakka River (North Fork)	Mercury (in fish tissue)	TMDL Complete
1877C	Myakka River (North Fork)	Escherichia coli	Study List
1877C	Myakka River (North Fork)	Nutrients (Chlorophyll-a)	Study List
1877C	Myakka River (North Fork)	Dissolved Oxygen (Percent Saturation)	Study List
1882	Johnson Creek	Biology	Study List
1894	Young Creek	Dissolved Oxygen (Percent Saturation)	Study List
1894	Young Creek	Fecal Coliform	Impaired
1917	Long Creek	Dissolved Oxygen (Percent Saturation)	Study List
1927	Ogleby Creek	Nutrients (Total Nitrogen)	Study List
1927	Ogleby Creek	Fecal Coliform	Impaired
1927	Ogleby Creek	Dissolved Oxygen (Percent Saturation)	Impaired
1927	Ogleby Creek	Nutrients (Total Phosphorus)	Study List
1933	Owen Creek	Nutrients (Chlorophyll-a)	Study List
1933	Owen Creek	Nutrients (Total Phosphorus)	Study List
1933	Owen Creek	Nutrients (Total Nitrogen)	Study List
1933	Owen Creek	Biology	Study List
1933	Owen Creek	Escherichia coli	Impaired
1933	Owen Creek	Dissolved Oxygen (Percent Saturation)	Study List
1935	Maple Creek	Nutrients (Macrophytes)	Impaired
1935	Maple Creek	Dissolved Oxygen (Percent Saturation)	Study List
1940	Howard Creek	Nutrients (Total Phosphorus)	Study List
1940	Howard Creek	Iron	Impaired
1940	Howard Creek	Biology	Study List
1940	Howard Creek	Escherichia coli	Impaired
1940	Howard Creek	Dissolved Oxygen (Percent Saturation)	Study List
1943	Indian Creek	Nutrients (Total Phosphorus)	Impaired
1943	Indian Creek	Nutrients (Macrophytes)	Impaired
1943	Indian Creek	Iron	Impaired
1943	Indian Creek	Escherichia coli	Impaired
1949	Howard Creek (Northeast Branch)	Nutrients (Total Phosphorus)	Study List
1949	Howard Creek (Northeast Branch)	Iron	Impaired
1955	Wildcat Slough	Fecal Coliform	Impaired
1958	Mud Lake Slough	Dissolved Oxygen (Percent Saturation)	Study List
1958	Mud Lake Slough	Fecal Coliform	Impaired
1967	Bud Slough	Fecal Coliform	Impaired
1967	Bud Slough	Dissolved Oxygen (Percent Saturation)	Study List
1970	Sardis Branch	Dissolved Oxygen (Percent Saturation)	Study List
1972A	Myakka River at Clay Gully West	Dissolved Oxygen (Percent Saturation)	Study List
1972A	Myakka River at Clay Gully West	Mercury (in fish tissue)	TMDL Complete
1972B	Myakka River at Clay Gully East	Nutrients (Total Phosphorus)	Study List
1972B	Myakka River at Clay Gully East	Mercury (in fish tissue)	TMDL Complete
1972B	Myakka River at Clay Gully East	Nutrients (Chlorophyll-a)	Study List
1976B	Big Slough Canal (Potable Portion)	Escherichia coli	Study List
1978	Deer Prairie Creek	Dissolved Oxygen (Percent Saturation)	Study List
1978	Deer Prairie Creek	Dissolved Oxygen (Percent Saturation)	Study List
1981	Lake Myakka (Lower Segment)	Mercury (in fish tissue)	TMDL Complete
1981B	Myakka River	Dissolved Oxygen (Percent Saturation)	Study List
1981B	Myakka River	Mercury (in fish tissue)	TMDL Complete
1981B	Myakka River	Nutrients (Algal Mats)	Impaired
1981C	Lake Myakka (Upper Segment)	Mercury (in fish tissue)	TMDL Complete
1981C	Lake Myakka (Upper Segment)	Biology	Study List
1989	North New Castle Waterway	Dissolved Oxygen (Percent Saturation)	Study List
1991A	Myakka River	Nutrients (Total Nitrogen)	Impaired
1991A	Myakka River	Fecal Coliform (SEAS Classification)	Impaired
1991A	Myakka River	Mercury (in fish tissue)	TMDL Complete
1991B	Myakka River	Mercury (in fish tissue)	TMDL Complete
1991B	Myakka River	Fecal Coliform (SEAS Classification)	Impaired
1991B	Myakka River	Nutrients (Total Nitrogen)	Impaired
1991B	Myakka River	Fecal Coliform (3)	Impaired
1991B	Myakka River	Nutrients (Total Phosphorus)	Impaired
1991B	Myakka River	Fecal Coliform	Study List
1991C	Myakka River	Nutrients (Total Nitrogen)	Impaired
1991C	Myakka River	Fecal Coliform (3)	Impaired
1991C	Myakka River	Mercury (in fish tissue)	TMDL Complete
1991C	Myakka River	Fecal Coliform (SEAS Classification)	Impaired
1991C	Myakka River	Enterococci	Impaired
1991C	Myakka River	Fecal Coliform	Impaired
1991E	Myakka River (Tidal Segment)	Mercury (in fish tissue)	TMDL Complete
1991E	Myakka River (Tidal Segment)	Enterococci	Study List
1991F	Myakka River above Blackburn Bridge	Mercury (in fish tissue)	TMDL Complete
1991G	Myakka River below Blackburn Bridge	Enterococci	Impaired
1991G	Myakka River below Blackburn Bridge	Mercury (in fish tissue)	TMDL Complete
2010A	East Cocoplum Waterway	Dissolved Oxygen (Percent Saturation)	Study List
2026	Little Salt Creek (Warm Mineral Spring)	Dissolved Oxygen (Percent Saturation)	Study List
2026	Little Salt Creek (Warm Mineral Spring)	Mercury (in fish tissue)	TMDL Complete
2043	Apollo Waterway	Nutrients (Chlorophyll-a)	Impaired
2043	Apollo Waterway	Enterococci	Impaired
2043	Apollo Waterway	Mercury (in fish tissue)	TMDL Complete
2045	Rock Creek	Enterococci	Impaired
2045	Rock Creek	Mercury (in fish tissue)	TMDL Complete
2045	Rock Creek	Iron	Impaired
2048A	Sam Knight Creek	Mercury (in fish tissue)	TMDL Complete
2048A	Sam Knight Creek	Enterococci	Impaired
2048A	Sam Knight Creek	Dissolved Oxygen (Percent Saturation)	Impaired
2052	Rock Creek	Mercury (in fish tissue)	TMDL Complete
2053	Trailer Park Canal	Iron	Impaired
2053	Trailer Park Canal	Mercury (in fish tissue)	TMDL Complete
2053	Trailer Park Canal	Fecal Coliform	Impaired
2053	Trailer Park Canal	Copper	Impaired
2055	Tippecanoe Bay	Fecal Coliform (SEAS Classification)	Impaired
2055	Tippecanoe Bay	Nutrients (Total Nitrogen)	Impaired
2055	Tippecanoe Bay	Fecal Coliform	Impaired
2055	Tippecanoe Bay	Nutrients (Chlorophyll-a)	Impaired
2055	Tippecanoe Bay	Mercury (in fish tissue)	TMDL Complete

Source(s): Florida Department of Environmental Protection

CONTACT INFORMATION

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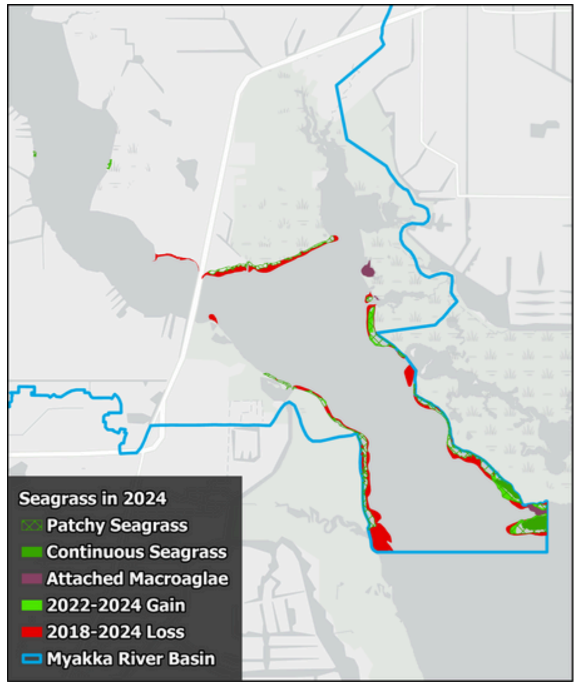
Seagrass in Myakka River Basin

FISH, WILDLIFE & HABITAT PROTECTION



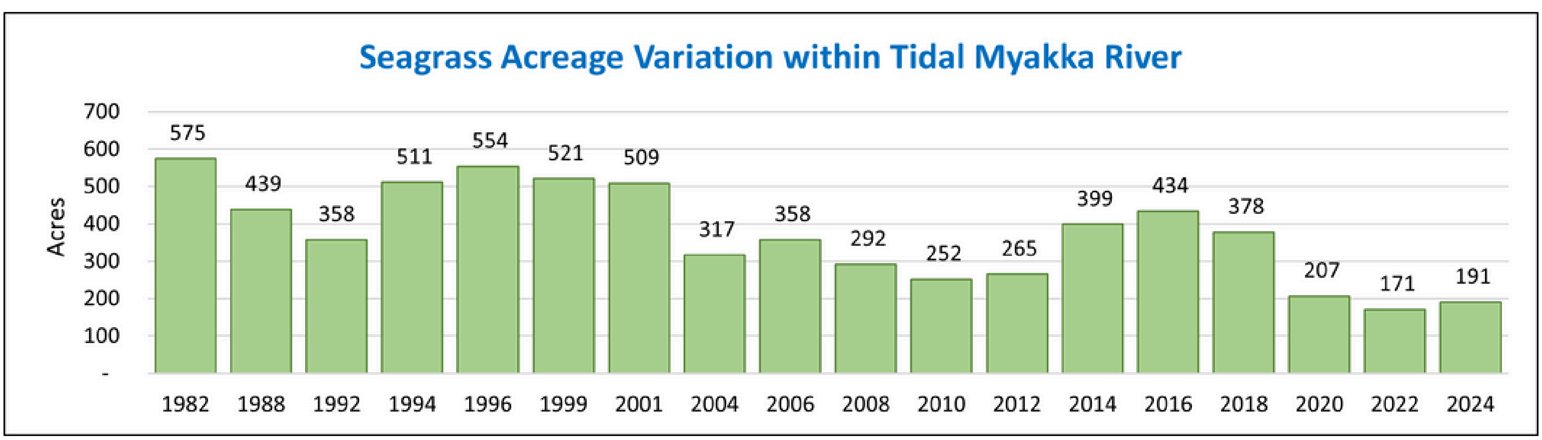
Seagrass Measures Water Quality & Improves Estuary Health

Seagrass beds provide many benefits. It is nursery habitat for fish and shellfish and it contributes to better water quality by trapping sediments, storing carbon, and filtering nutrients from stormwater runoff. Seagrass requires clean water and ample sunlight to grow, and therefore it is used by agencies and local governments as a way to measure water quality. This is documented in two ways:

- Mapping changes in seagrass acreage and location over time with aerial photography (spatial coverage). This is valuable for estimating seagrass locations, acres and broad changes over time.
- On-the-ground monitoring of changes in species composition, estimation of bottom cover in a seagrass bed (abundance), and maximum depth in which seagrass can grow due to light availability and water clarity (deep edge). This monitoring works to characterize the density, complexity, and stability of those seagrass meadows.

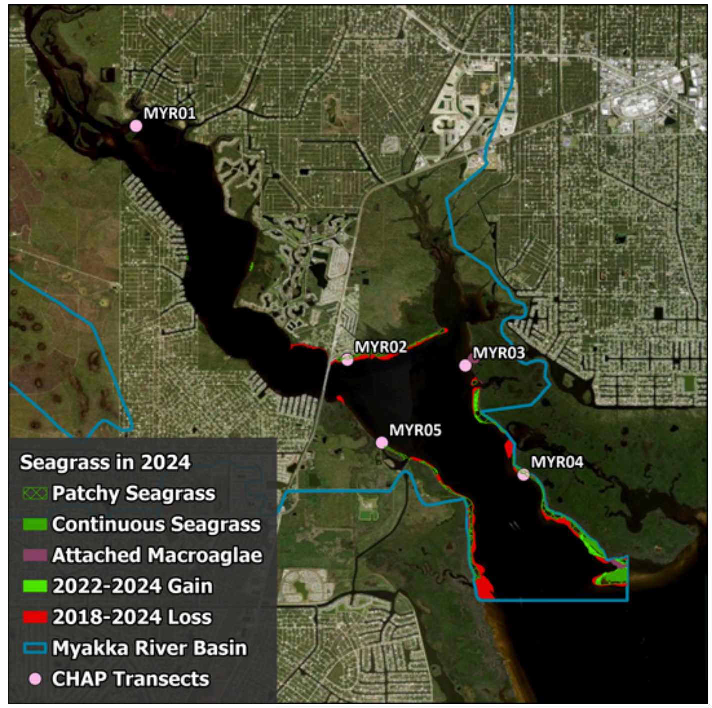
Seagrass Acreage

The graph below depicts results from biannual seagrass mapping in the Tidal Myakka River from 1982–2024. Although seagrass acreage was increasing from 2010-2016, it began to decline in 2018 and demonstrated more losses from 2018 to 2022. Between 2018 and 2022, the Tidal Myakka River lost 207 acres of seagrass, representing a 55% loss overall. Data collected in 2024 showed a small increase in seagrass acreage, though not full recovery. The reason for this decline is complex and likely involves several factors. This includes impacts from recent storm events and hurricanes, increased temperatures and rainfall, additional nutrient runoff from land, as well as prolonged red tide and algae blooms in the region. The CHNEP continues to work with our partners to better understand causes and investigate solutions.



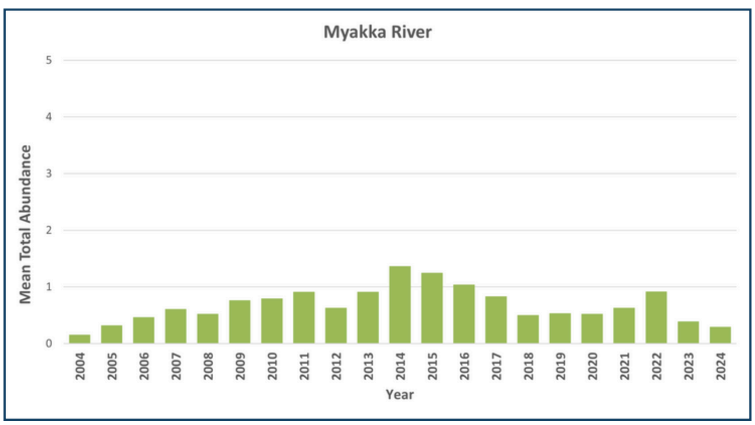
For more information, please visit the CHNEP Water Atlas at chnep.wateratlas.usf.edu.

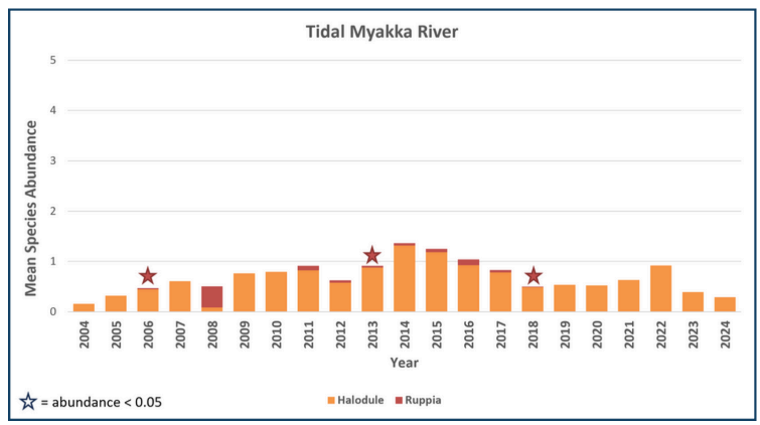
The map to the right shows locations of monitoring sites (highlighted in pink) in selected meadows in the Myakka River by the Florida Department of Environmental Protection Aquatic Preserve staff. Annual seagrass monitoring in the Harbor examines species types, density, distribution and how deep the grass will grow (this is dependent on light availability).

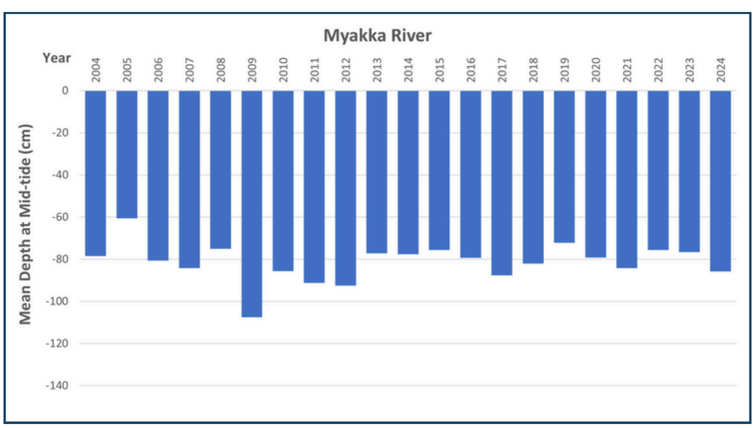


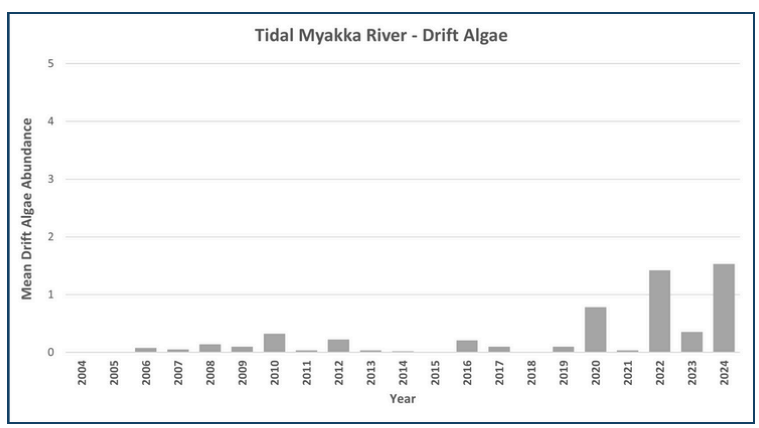
Seagrass Diversity and Health

The bar graphs here depict the changes in presence of different species of seagrass found at monitored locations in the region. In the Tidal Myakka River this includes Shoal grass (*Halodule wrightii*), as well as Widgeon grass (*Ruppia maritima*) in areas that are less salty, for the years 2004–2024. Shoal grass experienced declines at multiple monitoring locations starting as far back as 2016, preceding the decline in overall acreage observed in the region between 2018 and 2020. Widgeon grass has not been found at monitoring sites since 2018.









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