2012–2017 RECOVER EVERGLADES REPORT CARD

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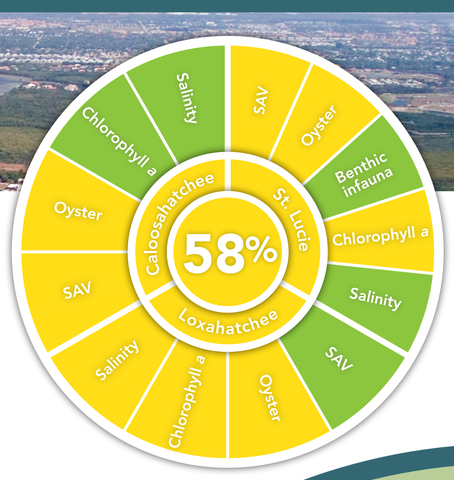
Provides a high-level summary of the 2019 System Status Report

This is the first report card on the ecological health of the Everglades. It is a product of RECOVER (REstoration, COordination, and VERification program) and provides a transparent, timely, and geographically detailed assessment of health of the entire Everglades from Lake Okeechobee to Florida Bay.

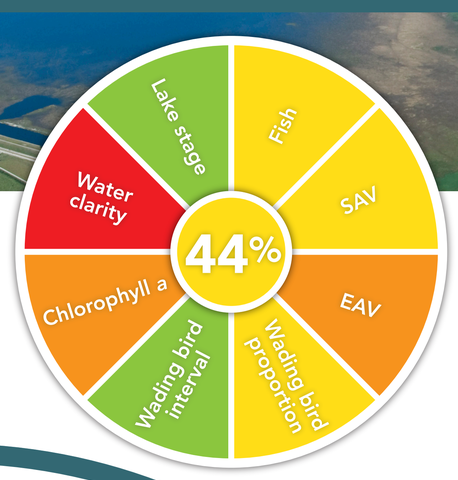
Northern Estuaries



Impacted by altered freshwater inflows

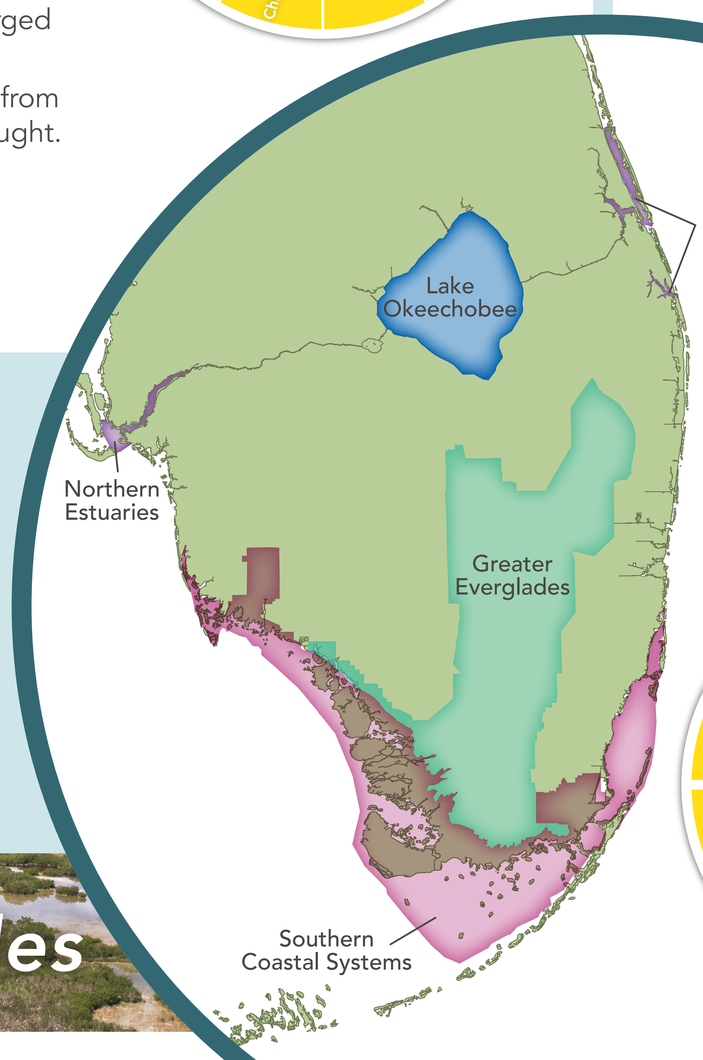
- Condition for entire period was fair, but conditions ranged from poor to good.
- Key indicators are salinity, chlorophyll a, submerged aquatic vegetation (SAV), and oysters.
- Negative impacts from high-volume discharges from Lake Okeechobee, hurricanes, El Niño, and drought. Recovery occurs between discharge events.

Lake Okeechobee

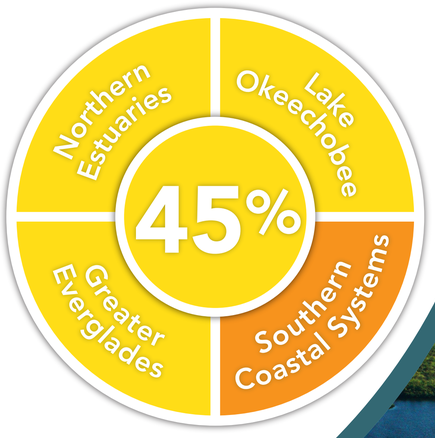


Extreme high-water events degrade ecological conditions

- Overall condition was fair, but different indicators gave contrasting results.
- Key indicators are lake stage, chlorophyll, water clarity, aquatic vegetation, fish, and wading birds.
- Lake stages were near desired targets, good over most of the period.
- Extreme high-water events led to very poor to poor conditions for water clarity, chlorophyll, and emergent aquatic vegetation.



The Everglades Suffered with Continued Degradation from Human Activities



Overall Everglades Results

The overall score of 45%, fair, is concerning. Not enough restoration projects have been completed across the entire system—at all levels; federal, state, and local—to reverse the decline in the condition of the Everglades ecosystems. The ecological indicators measured by RECOVER show that the Everglades lacks resilience to the impacts of climatic events.

What do the scores mean?

0–20% Very poor
These regions or indicators are extremely vulnerable and are unable to provide ecosystem function. Essential ecological functions are extremely degraded and unsustainable.

20–40% Poor
These regions or indicators are highly vulnerable and are struggling to provide ecosystem function. Essential ecological functions are highly degraded and unsustainable.

40–60% Fair
These regions or indicators are vulnerable to further ecological degradation and provide minimal ecosystem function. Essential ecological functions are degraded and unsustainable.

60–80% Good
These regions or indicators are slightly vulnerable, but are maintaining ecosystem function. Essential ecological functions are somewhat sustainable.

80–100% Very good
These regions or indicators are minimally vulnerable and are maintaining high ecosystem function. Essential ecological functions are sustainable.

Greater Everglades

Wet years impacted conditions

- Overall condition was fair, but conditions varied due to the effects of multiple wet years.
- Key indicators are landscape structure, periphyton, prey fish, wading birds, alligators, and invasive fish and reptiles.
- Periphyton conditions, an indicator of nutrient impacts, were good.
- Wet years resulted in poor conditions for prey fish, wading birds, and alligators.
- Invasive reptiles continued to increase in number and range.

Southern Coastal Systems

Lack of freshwater creates a crisis

- Overall condition was poor, primarily due to elevated salinity and consequent effects on all aspects of the ecosystem.
- Key indicators are salinity, chlorophyll, seagrass, various fish, Spoonbills, and crocodiles.
- Reduced inflow of freshwater from the Everglades and sea level rise has increased salinity.
- Hypersaline conditions in 2014 and 2015 negatively impacted crocodiles, gulf pipefish and seagrasses in Biscayne and Florida Bays, followed by an algal bloom in Florida Bay.

The Report Card Represents the Work of Many People

The process of creating the Everglades Report Card consisted of five key steps (see right). Many individuals and organizations working within the Everglades scientific and management community contributed their data and expertise. The report card was produced by RECOVER and the Integration and Application Network, University of Maryland Center for Environmental Science. RECOVER scientists and managers have participated in every step of the report card process and most importantly have assessed and scored their data for inclusion in the report card.

The report card scores are calculated for 48 indicators selected to evaluate key aspects of the Everglades ecosystem, based the availability of data. For each indicator, a score is assigned by assessing observed conditions against desired conditions, evaluated based on a pass/fail or multiple threshold criteria. Individual indicators are scored, first, by station, then, each station score within a sub-region is averaged together to a sub-region score for that indicator. Each overall sub-region score is area-weighted into the overall score.

THE REPORT CARD PROCESS

1 CONCEPTUALIZE
2 CHOOSE INDICATORS
3 DETERMINE THRESHOLDS
4 CALCULATE GRADES
5 COMMUNICATE

University of Maryland Center for Environmental Science