



REStoration, COordination, VERification (RECOVER)

RECOVER 2024 System Status Report

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Joint WG/SCG Meeting
January 16, 2024

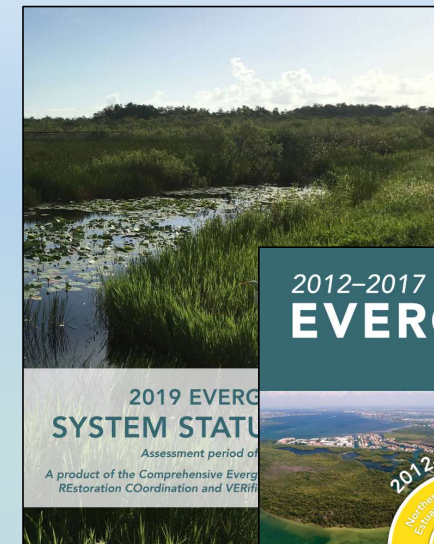
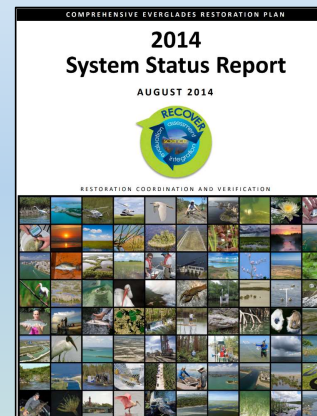
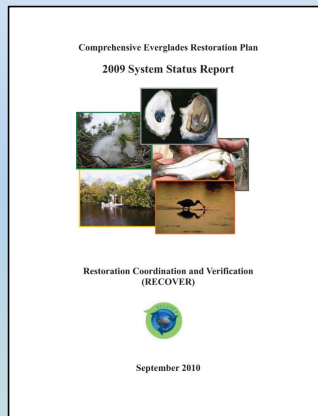
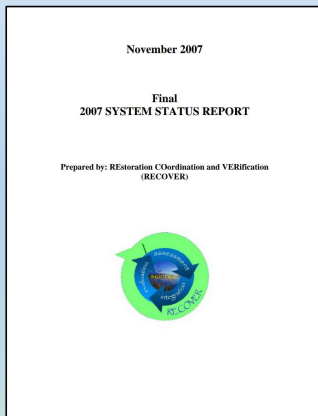


RECOVER Reporting Requirements

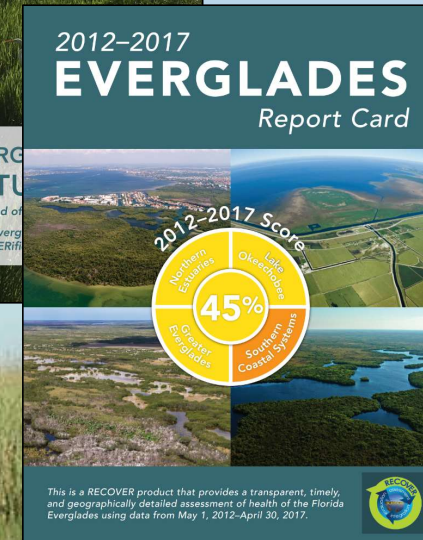
- **The CERP Programmatic Regulations (“Pro Regs”)** specify that “whenever it is deemed necessary, but at least every five years, RECOVER shall prepare a technical report that presents an assessment of whether the goals and purposes of the Plan, including the Interim Goals and Interim Targets, are being achieved or are likely to be achieved”.
- The specific tool(s) established by section 601(h) are the **interim goals and targets** for evaluating the restoration success of the Plan
- The CERP MAP was conceived as the primary tool by which RECOVER will assess the performance of the South Florida ecosystem as it responds to CERP implementation

System Status Reports Past...

- **System Status Reports: 2006, 2009, 2012, 2014, 2019**

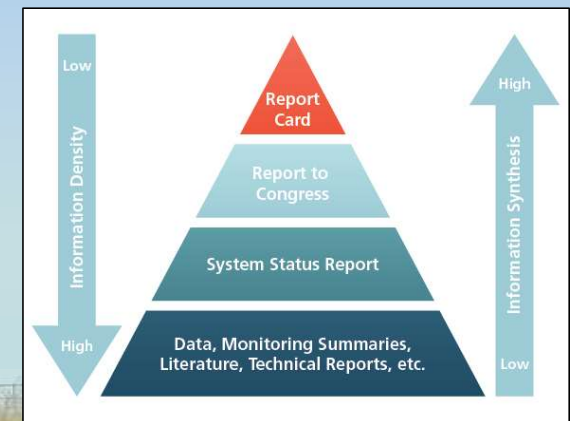
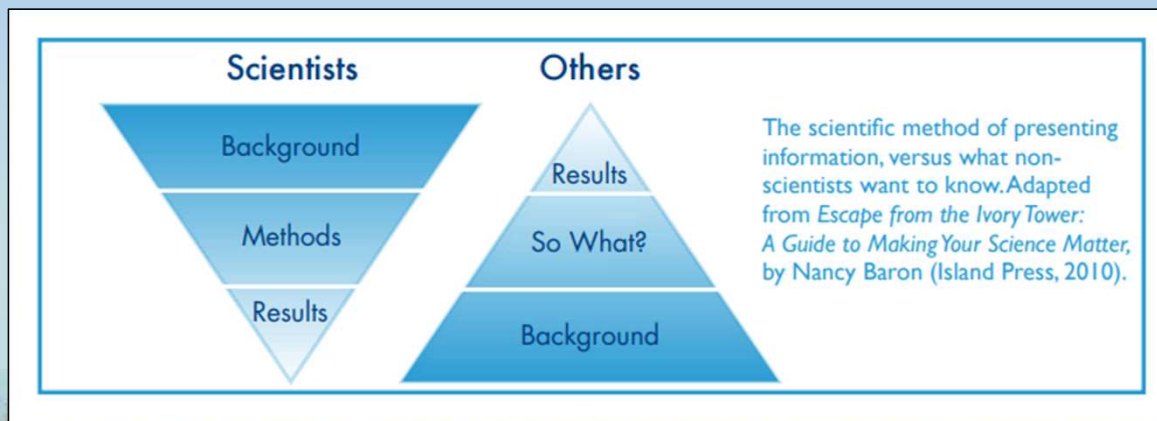


SSR



...System Status Report Present

- **Audience:** Congress, Agency Leadership, CERP Project Managers
- **Reporting period:** WY2018 – WY2024 (May 1, 2017 through April 30, 2024)



2019 Communication Strategy



Key Questions informed by Pro Regs

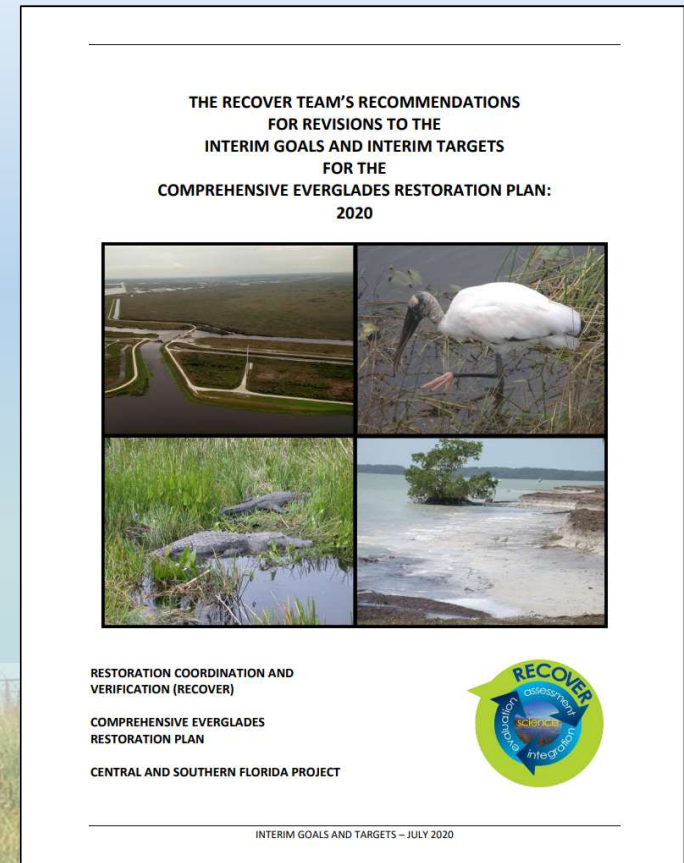
Are the goals and purposes of the plan being achieved?

- Are interim goals and interim targets being achieved?
- Are interim goals and interim targets likely to be achieved?
 - What status and trends are we expecting in the future? Why?
- Should corrective actions be considered based on regional ecological needs?
 - What else needs to occur (be implemented) to increase our chances of reaching interim goals and interim targets?
 - Conclusions and recommendations for the future
- Should corrective actions be considered based on system-wide ecological and social needs?
 - What else needs to occur (be implemented) to increase our chances of reaching interim goals and interim targets?
 - Conclusions and recommendations for the future



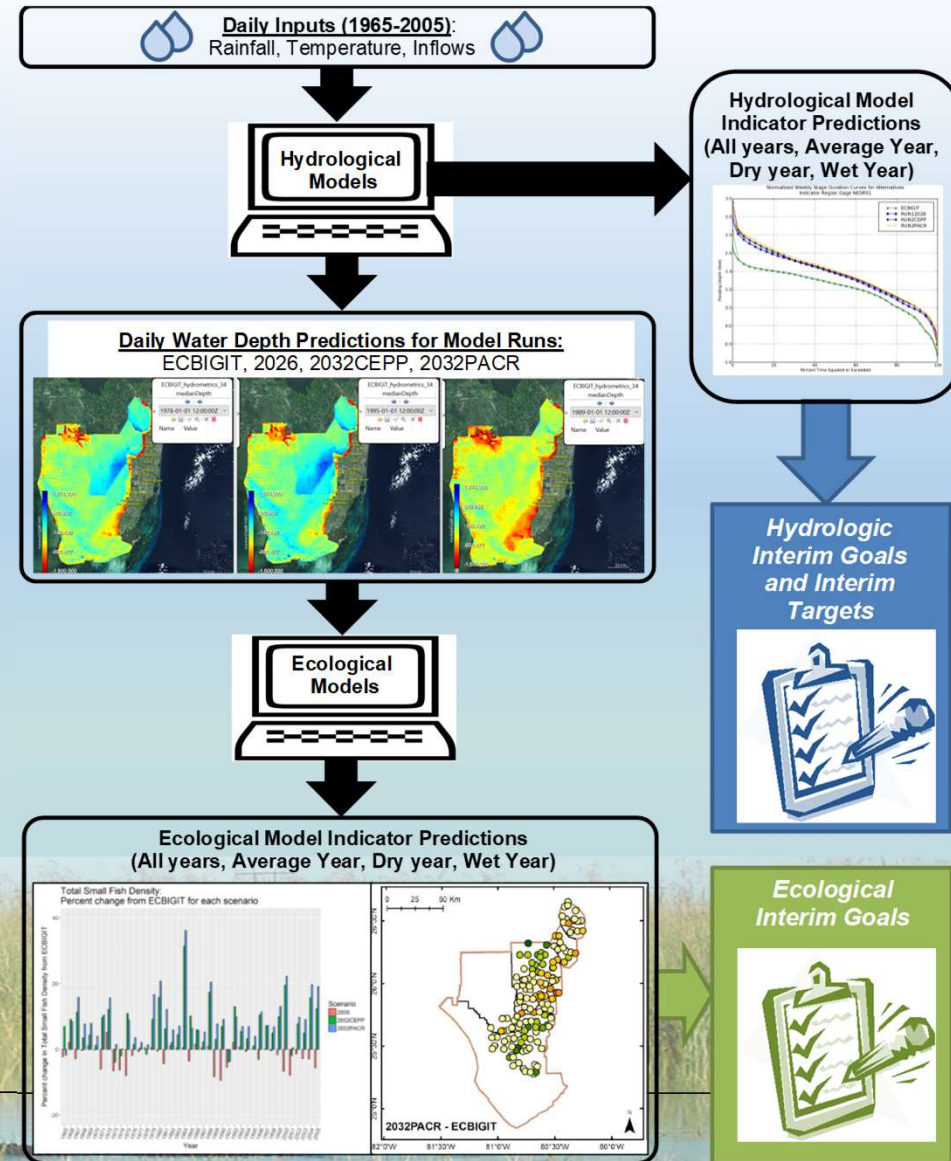
What are Interim Goals/Interim Targets?

- Required per the Pro Regs (2003)
 - **Interim Goals** - *“a means to evaluate the ecosystem restoration success of CERP by tracking restoration performance”*
 - **Interim Targets** - *“a means to evaluate the success of CERP in providing for other water-related needs of the region, including water supply and flood protection”*
 - Interim Goals & Targets *“shall be developed [by RECOVER] through the use of appropriate models and tools...and best available science and information”*



How were 2020 Interim Goals & Targets Developed?

- **Evaluation (modeling) exercise**
- 41 simulation years (1965-2005)
- **Hydrological:** Regional Simulation Models – Basins, Glades/Lower East Coast Service Area
- **Produced hydrological predictions of future project futures:**
 - 2017 Existing Condition Baseline
 - 2026 Based on July 2018 IDS projects (e.g., C-43 and C-44 Reservoirs)
 - Two (2) 2032 scenarios (CEPP original authorization; CEPP w/ EAA Res & STA)
- **Ecological models run from hydrologic data**



SSR: Status/Trends & Interim Goals/Targets

- **What will be reported in the SSR?**
 1. Indicators with established Interim Goals/Interim Targets (IG/IT)
 2. Current, RECOVER-funded 2009 CERP MAP indicators

RECOVER Module	2020 IG/IT Hydrologic Indicator	2020 IG/IT Ecological Indicator	Current, RECOVER-funded MAP 2009 Indicators
Lake Okeechobee	<ul style="list-style-type: none"> •Lake Stage 	<ul style="list-style-type: none"> •Submerged Aquatic Vegetation (SAV) •Emergent Aquatic Vegetation (EAV) 	<ul style="list-style-type: none"> •Wading Birds •Phytoplankton •Benthic Macroinvertebrate
Northern Estuaries	<ul style="list-style-type: none"> •St. Lucie Estuary and Caloosahatchee River Estuary Flow 	<ul style="list-style-type: none"> •Eastern Oyster 	<ul style="list-style-type: none"> •SAV •Benthic Infauna •Salinity •Fish
Greater Everglades	<ul style="list-style-type: none"> •Red Line •Sheetflow •Hydroperiod •Stage •Soil Oxidation 	<ul style="list-style-type: none"> •Spatial Extent of Vegetation Communities •Ridge and Slough Pattern •Tree Islands •Marl Prairies •Aquatic Fauna •Alligators •Wading Birds •Everglades Snail Kite 	<ul style="list-style-type: none"> •Periphyton
Southern Coastal Systems	<ul style="list-style-type: none"> •Flow across transects into FL Bay •Flows through canals into Manatee and Biscayne Bays 	<ul style="list-style-type: none"> •Salinity Patterns •SAV •Juvenile Pink Shrimp •American Crocodile •Juvenile Spotted Seatrout 	<ul style="list-style-type: none"> •Chlorophyll A •Roseate Spoonbills •Shoreline seagrass and epifauna •Mangrove fish community

Framework

- **Status and change compared to baseline**
 - Status for each indicator may vary (WY18 – WY24)
 - “Baseline”: May 1, 2004 – April 30, 2017 (WY05 – WY24)
- **Reporting on progress towards Interim Goals & Interim Targets (IG/IT)**
 - Only applicable to indicators with established IG/IT
 - Are we headed in the right direction?
 - Coordination between PIs and SSR POCs will be needed to understand how IG/IT and monitoring metrics can be comparable

Oyster Example

Interim Goals Metrics



Habitat Suitability ■ Poor (0-0.25) ■ Fair (0.25-0.50) ■ Good (0.50-0.75)

# of Days in Optimal Salinity Range for Oysters (10-25)	Monitoring Metrics	
	WY2022 Results	Change from WY2021
St. Lucie Estuary	288	↑ 24%
Caloosahatchee River Estuary Cape Coral	230	↑ 3%
Caloosahatchee River Estuary Shell Point	245	↑ 9%

Methodology

- **Projects expected to be operational within the reporting period**

CERP Projects	Non-CERP Projects
<ul style="list-style-type: none">• Indian River Lagoon-South C-44 Stormwater Treatment Area• Biscayne Bay Coastal Wetlands• Picayune Strand Restoration Project• C-111 Spreader Canal Western Project	<ul style="list-style-type: none">• Lake Okeechobee Regulation Schedule 2008/ Lake Okeechobee System Operating Manual• Combined Operational Plan/Modified Water Deliveries to Everglades National Park/C-111 South Dade• Tamiami Trail Next Steps Phase 1• Kissimmee River Restoration

- **The System Status Report will include:**


- **Description of status** (WY18 – WY24)
- **Comparison to “baseline”** (WY05 – WY17)
- **Answer Key Questions:** Progress towards IG/ITs (where applicable)
- Leverage existing data to extent practicable

Mock Ups of Select Report Sections

Task Team Will Develop Summaries

- Highly graphical
- 2-4 pages max (1 to 2 pages front and back) per region/indicator
- Bullet points only or short paragraphs (2-5 short sentences)
- Working with a graphic designer and tech editor


System-Wide Assessment



KEY FINDINGS

- PROREG QUESTION: Are the goals and purposes of the plan being achieved?
- Key findings relevant to ProReg question
- Key findings relevant to ProReg question

FAIR



Volume Aft

Project: C-43 Reservoir
YB Components: ...
Percent Complete: xx%
Indicators Status & Trends:

Oyster	...	●	↑
SAV	...	●	↑
Infauna	...	●	↑

Project: Indian River Lagoon-South
YB Components: 2, 39, 6
Percent Complete: xx%
Indicators Status & Trends:

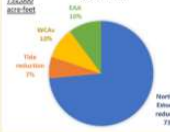
Oyster	...	●	↑
SAV	...	●	↑
Infauna	...	●	↑

PROGRESS TOWARDS IG/I/T, LIKELIHOOD OF ACHIEVING IG/I/T
PROREG QUESTION: Are interim goals and interim targets being achieved?

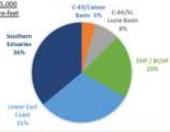
Water Made Available/ And/or Other Topic


- X
- X
- X

SOURCES OF 'ADDITIONAL' WATER MADE AVAILABLE' 2032 PACR




RECIPIENTS OF 'ADDITIONAL' WATER MADE AVAILABLE' 2032 PACR



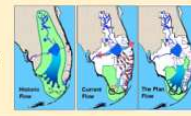


GREATER EVERGLADES: HYDROPERIOD & WATER DEPTH



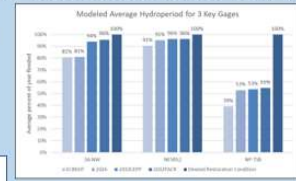
IMPORTANCE

- Water is everything in the Everglades. Getting the Quantity, Timing, and Distribution of water right is critical for restoring the flora and fauna.
- Reduction in inflows, drainage, and compartmentalization have decreased water depths in some areas and increased them in others, reduced the duration of flooding (hydroperiod), and changed the distribution of water across the system and across the seasons.



MODEL EXPECTATIONS OF PROGRESS TOWARDS INTERIM GOALS

- Northern Water Conservation Area 3A:
 - > No change expected by 2026 at 3A-NW gage but concerns raised about potential shortened hydroperiods in throughout north,
- Northeast Shark River Slough and Taylor Slough Bridge:
 - > Small increase in median Hydroperiod and Water Depths expected by 2026
- Note: Effects of Combined Operational Plan were not included in modeling.



Picture

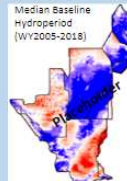
Map of Gage Locations

REAL WORLD STATUS AND TRENDS

ASSESSMENT APPROACH

- Brief description of monitoring methods
- X
- X
- X

Baseline



Median Baseline Hydroperiod (WY2005-2018)

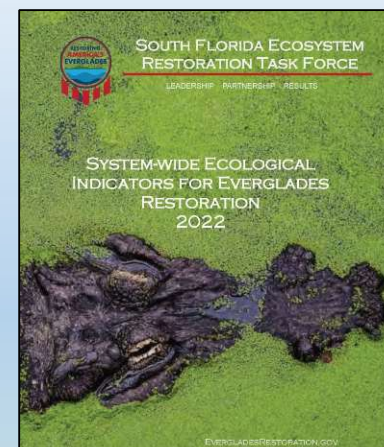
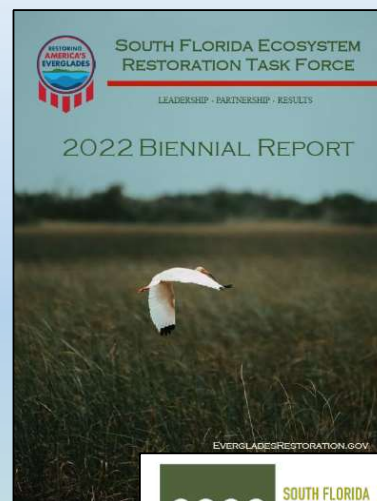
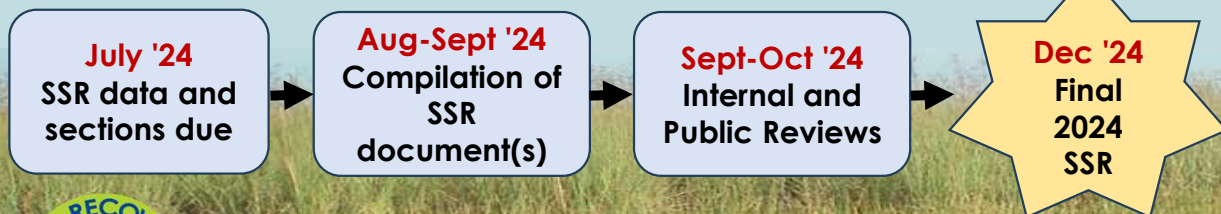


Coordination with other Reporting Efforts

Tracking parallel reporting efforts:

- 2024 SFERTF Biennial Report to Congress
- Combined Operations Plan Biennial Report
- Everglades National Park World Heritage Report
- 2025 South Florida Environmental Report
- CERP 2025 Five-Year Report to Congress

Goal is to minimize effort, maximize overall communication, maximize sharing of information among reports



QUESTIONS?



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