Annual Assessment of The Everglades

2024 Edition
Chapter 7

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Food and Resource Economics Department, Institute of Food and Agricultural Sciences, University of Florida

South Florida Ecosystem Restoration Task Force

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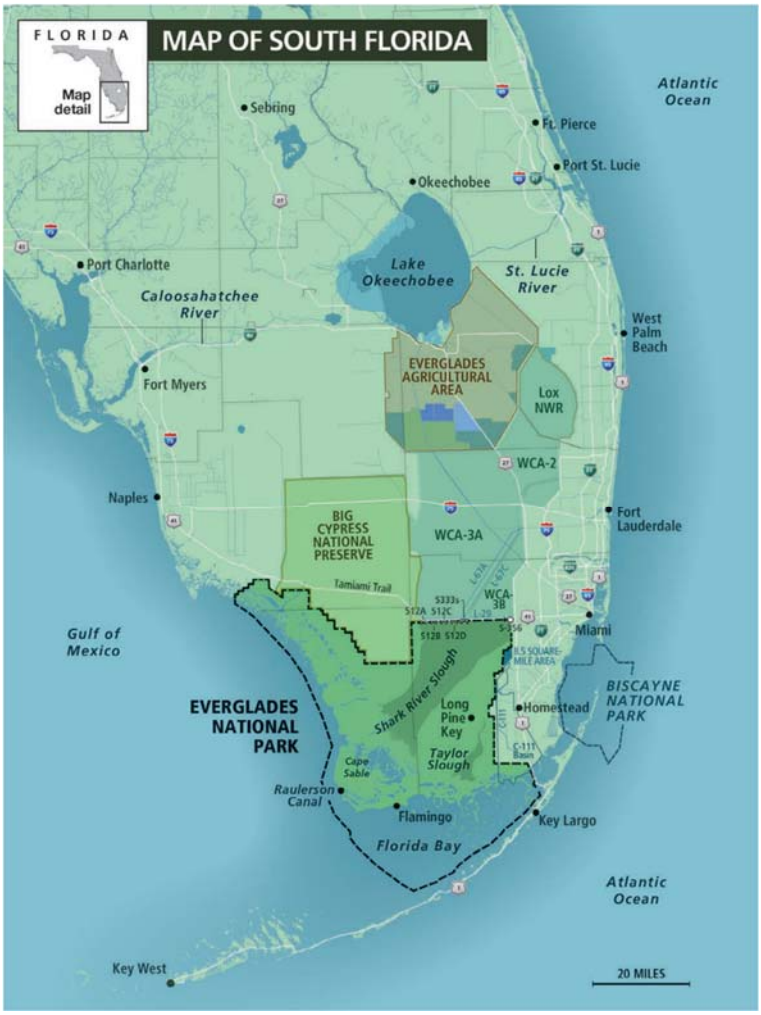
Chapter 7...The Everglades

The Florida Everglades, famously referred to as the "River of Grass," is a mosaic of sawgrass marshes, freshwater ponds, sloughs, prairies, and forested uplands that supports a diverse plant and wildlife community. The Greater Everglades ecosystem originally encompassed about 9,000,000 acres or 14,000 square miles from central Florida to the Florida Keys.[1] Historically, sheets of freshwater flowed naturally from the Kissimmee chain of lakes to Lake Okeechobee, where its flood waters traveled slowly southward through a variety of low-lying habitat types before finally reaching the Gulf of Mexico, Florida Bay, and Biscayne Bay.



Source: Everglades National Park: 2022 State of Conservation-Report to World Heritage Committee (UNESCO)

[1] Different calculations and descriptions exist. The information here relies on the U.S. Army Corps of Engineers in its Overview of the Review Study (the "Restudy") released October 1998 describing conditions in the mid-1800s. *See* Overview: Central and southern Florida project comprehensive review study, October 1998 - Project Management Reports - USACE Digital Library (oclc.org). *See* also https://crsreports.congress.gov/product/pdf/R/R42007. Alternatively, the Ninth Biennial Review published in 2022 by the National Academies of Sciences, Engineering, and Medicine's Committee on Independent Scientific Review of Everglades Restoration Progress described the Everglades as encompassing "about 3 million acres of slow-moving water." *See* National Academies of Sciences, Engineering, and Medicine. 2022. Progress Toward Restoring the Everglades: The Ninth Biennial Review - 2022. Washington, DC: The National Academies Press. https://doi.org/10.17226/26706. (All documents accessed February 2024.)

As a consequence of efforts to drain the marshland for flood control, agriculture, and development, the Everglades today is about half the size it was a century ago.[2] Yet, what remains of the Everglades is still considered one of the most unique ecosystems in the world.[3] The Everglades wetlands provide numerous benefits to South Florida (including water supply, flood control, and recreational opportunities), while serving as a unique habitat for diverse species of wildlife and plant life.[4] The Everglades also provides natural water storage for the environment during drier seasons, serves as an important water recharge area for South Florida, and plays a potentially significant role in the state's climate change response, if managed appropriately.

As a topic of study, the Everglades continues to be treated separately in this Edition since the quantity and quality of its waters are so intrinsically linked and cannot be classified as exclusively one or the other. From recharging the aquifer to enhancing water quality, the Everglades ecosystem "requires flooded or saturated soil conditions" to both maintain its wetland conditions and function at its full potential throughout the year.[5] Today this natural state continues to be severely interrupted, but efforts are underway "to send more freshwater south into the river of grass." In December 2024, RECOVER's release of its report card and system status report will be the first to actually capture the progress from a material number of implemented and completed projects.[6]

This chapter outlines the key Everglades restoration plans and identifies historic expenditures related to those initiatives. Further, this Edition continues to build upon the previously used methodology for forecasting the expenditures necessary to complete the Comprehensive Everglades Restoration Plan. Future editions will improve upon this forecast and provide additional expenditure forecasts governing discrete elements of Everglades restoration, including the state's water quality restoration initiatives.

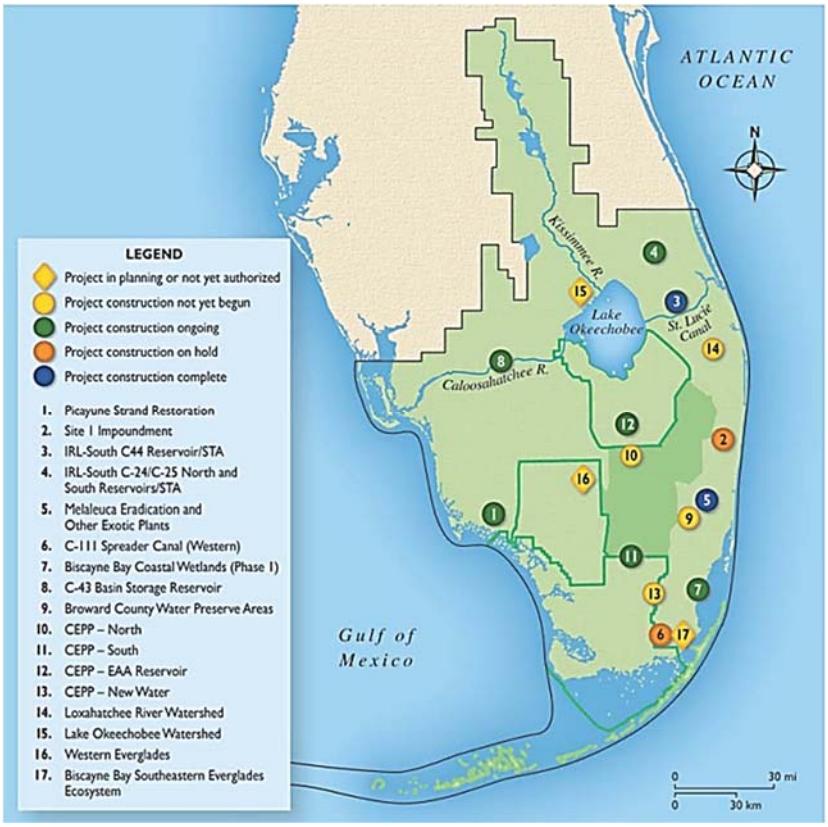
7.1 Historical and Legal Context

To restore and protect the greater Everglades ecosystem, the Florida Legislature established the State of Florida's responsibilities in a series of statutes under chapter 373, Florida Statutes. In addition to authorizing the South Florida Water Management District (SFWMD) to serve as the local sponsor (effectively, the lead entity) for the state's restoration efforts, the Legislature directed the roles and responsibilities of both the Florida Department of Environmental Protection (DEP) and SFWMD for plans or programs authorized under Florida law including the Everglades Forever

[2] *Id.*
[3] § 373.4592(1)(a), Fla. Stat.
[4] § 373.4592(1), Fla. Stat.
[5] Davis, S. *Water and the Everglades - Why is it important?* Science Insider, Summer 2023, Volume 8. *See* https://www.evergladesfoundation.org/post/water-and-the-everglades-why-is-it-important. Also *see* from August 20, 2018: https://www.sciencenews.org/article/florida-everglades-freshwater-saltwater-sea-level-rise. (Both articles accessed February 2024.)
[6] RECOVER (REstoration COordination & VERification) is a multi-agency team of scientists, modelers, planners and resource specialists who conduct scientific and technical evaluations and assessments for improving CERP's ability to restore, preserve and protect the south Florida ecosystem while providing for the region's other water-related needs. For information on prior reports, s*ee* https://www.saj.usace.army.mil/Missions/Environmental/Ecosystem-Restoration/RECOVER/2019-System-Status-Report/. (Accessed February 2024.) Other forthcoming reports include the 2024 South Florida Ecosystem Restoration Task Force Biennial Report and the Biennial Review by the National Academies' Committee on Independent Scientific Review of Everglades Restoration Progress. Two additional major reports are due next year: the 2025 South Florida Environmental Report, and the CERP 2025 Five-Year Report to Congress.

Act,[7] the Northern Everglades and Estuaries Protection Act,[8] and the Comprehensive Everglades Restoration Plan Regulation Act.[9] An important—but not exclusive—focus of these laws is operationalizing the state-federal partnership for implementation of the Comprehensive Everglades Restoration Plan (CERP).[10]

For a "forward-looking snapshot" of schedules and estimated costs for completing projects that implement CERP and non-CERP Everglades restoration initiatives, see the Integrated Delivery Schedule (2023 Update) produced by the U.S. Army Corps of Engineers (Corps).[11] For a summary of all the South Florida ecosystem restoration activities by state and federal entities for the reporting period of July 1, 2020 through June 30, 2022, see the South Florida Ecosystem Restoration Task 2022 Biennial Report.[12] The major restoration programs that require state or regional funding are discussed in the sections below.



Source: Progress Toward Restoring the Everglades; The Ninth Biennial Review - 2022

[7] § 373.4592, Fla. Stat.
[8] § 373.4595, Fla. Stat.
[9] § 373.1502, Fla. Stat.
[10] §§ 373.470, 373.1502, Fla. Stat.
[11] U.S. Army Corps of Engineers, Integrated Delivery Schedule (2023 Update), https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll11/id/6589. (Accessed February 2024.) *See* also the Fiscal Year 2024 Cross-Cut Budget Request, available at: https://static1.squarespace.com/static/5d5179e7e42ca1000117872f/t/651459b795b673782324a731/1695832504228/2024+Cross+Cut+Budget.pdf. (Accessed February 2024.)
[12] South Florida Ecosystem Restoration Task Force: 2022 Biennial Report, available at: https://static1.squarespace.com/static/5d5179e7e42ca1000117872f/t/63a493a62905c4171d028c83/1671730088082/December+2022+Final+Biennial+Report.pdf. (Accessed February 2024.)

Comprehensive Everglades Restoration Plan

Congress authorized the Corps to implement phases of the Central and Southern Florida Project for Flood Control (C&SF Project) under the Flood Control Act of 1948[13] and the Flood Control Act of 1954,[14] with subsequent modifications authorized by later acts of Congress. With construction beginning in 1950 and running through the 1970s, the C&SF Project drained portions of the Everglades in order to provide "flood control; water supply for municipal, industrial, and agricultural uses; prevention of saltwater intrusion; water supply for the Everglades National Park (ENP); and protection of fish and wildlife resources."[15] The resulting 1,000 miles of canals, 720 miles of levees, and more than 150 water control structures that collectively made up the massive South Florida water management system severely altered the Everglades ecosystem. The unintended adverse effects on the environment prompted Congress to require the Corps to conduct a reexamination of the C&SF Project in order to develop a comprehensive plan for the restoration, preservation and protection of the South Florida ecosystem, with the objective of protecting the water quality in, and the reduction of the loss of fresh water from, the Everglades.[16]

With the passage of the Water Resources Development Act of 2000 (WRDA 2000), Congress formally designated CERP as the primary framework for all modifications and operational changes to the C&SF Project. The purpose of WRDA 2000 was to provide a coordinated plan for restoring the water resources of central and southern Florida, including the Everglades, while meeting other water-related needs such as water supply and flood protection.[17] Notably, the original authorization by Congress included an "Assurance of Project Benefits" and "Agreement" that stated specifically:

> *The Plan shall be implemented to ensure the protection of water quality in, the reduction of the loss of fresh water from, the improvement of the environment of the South Florida Ecosystem and to achieve and maintain the benefits to the natural system and human environment described in the Plan, and required pursuant to this section, for as long as the project is authorized...[W]ater made available by each project in the Plan shall not be permitted for a consumptive use or otherwise made unavailable by the State until such time as sufficient reservations of water for the restoration of the natural system are made under State law in accordance with the project implementation report for that project and consistent with the Plan.*[18]

The CERP has become the largest hydrologic restoration initiative ever undertaken in the United States.[19] It represents a comprehensive, long-term partnership between the federal government and the State of Florida with a primary focus on the restoration of the water quality, quantity, timing,

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[13] Pub. L. 80-858, § 201, 62 Stat. 1176 (1948).
[14] Pub. L. 83-780, § 203, 68 Stat. 1248, 1257 (1954).
[15] U.S. Army Corps of Engineers, Jacksonville District, Central and Southern Florida (C&SF) Project Fact Sheet, May 2023, https://www.saj.usace.army.mil/About/Congressional-Fact-Sheets-2023/C-SF-Project-C/. (Accessed February 2024.)
[16] Water Resources Development Act of 1996, Pub. L. 104-303, § 601, 110 Stat. 3767, 3768. Congress initially required the restudy in 1992, but became more specific in the 1996 law. Section 528 of the Water Resources Development Act of 1996 also defined the "South Florida ecosystem" as the "area consisting of the lands and waters within the boundary of the South Florida Water Management District, including the Everglades, the Florida Keys, and the contiguous near-shore coastal waters of South Florida."
[17] Public Law 106-541, 114 Stat. 2680, 2681.
[18] *Id.*
[19] According to SFWMD, it is "...the most ambitious and largest environmental restoration program in the world." *See* https://www.sfwmd.gov/sites/default/files/SFWMD_SB2516_Report.pdf.

and distribution within the Everglades ecosystem.[20] The Florida Legislature authorized SFWMD to act as the local sponsor for CERP projects within the district, subject to certain oversight by DEP.[21]

Several projects included in CERP are comprised of multiple components due to their complexity and size. In total, CERP consists of more than 50 projects with 68 individual components[22] at a present day value for FFY 2020 of $23.2 billion.[23] The federal government is responsible for 50 percent of the overall cost of implementing CERP, although any land acquisition, easements, rights-of-way, and relocations necessary for CERP projects are the responsibility of the State (the amount of which is credited towards the State's share).[24]

While the CERP itself has been approved by Congress as a modification to the C&SF Project, the projects identified therein are only conditionally approved. Those that cannot be approved under the Corps' programmatic authority require federal authorization for the construction before being eligible for federal appropriation.[25] After CERP's approval, Congress authorized a number of specific projects in 2007 and 2014 referred to as "Generation 1 Projects" and "Generation 2 Projects", respectively. In addition, there is a set of previously authorized projects that pre-date CERP, which were assumed to reach completion during the CERP planning period. These projects are referred to as "Foundation Projects" as they were expected to become the foundation underlying CERP's implementation.[26]

Considerable progress has been made toward CERP implementation since 2014. It has been driven in part by the commitment of long-term state funding for Everglades restoration, a push by the state to expedite the implementation of certain restoration activities, and more consistent federal

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[20] While variations exist, the use and sequencing of the words "quality, quantity, timing, and distribution" in the text match U.S. Army Corps of Engineers, Jacksonville District, Central and Southern Florida (C&SF) Project Fact Sheet, May 2023, available at: https://www.saj.usace.army.mil/About/Congressional-Fact-Sheets-2023/C-SF-Project-C/. (Accessed February 2024.)

[21] § 373.1501, Fla. Stat. For federal purposes, the U.S. Army Corps of Engineers (USACE) is the lead federal agency responsible for undertaking implementation of CERP; SFWMD is the lead non-federal partner.

[22] 2015 - 2020 Central and Southern Florida Project, Report to Congress, Comprehensive Everglades Restoration Plan, at 6, available at: https://issuu.com/usace_saj/docs/final_2020_report_to_congress_on_cerp_progress_hig. (Accessed February 2024.) This is a periodic report released every five years. The latest report was released in 2020; the next report will be released in 2025. Other documents use a different number of projects depending on their purpose and release date. Of the 69 projects currently listed in the 2023 Update to the Integrated Delivery Schedule (released November 2023), 22 are listed as Complete or Phase 1 Implemented, with another 3 shown as de-authorized. The 69th project is Melaleuca Eradication.

[23] 2015 - 2020 Central and Southern Florida Project, Report to Congress, Comprehensive Everglades Restoration Plan, at 75, available: https://issuu.com/usace_saj/docs/final_2020_report_to_congress_on_cerp_progress_hig. (Accessed February 2024.) According to this document, the cost estimate increase of $6.78 billion since the prior report in 2015 is due to price level (inflation) adjustment from October 2014 to October 2019, changes in project scope and schedule, and new project authorizations, including CEPP and EAA. The same report indicated cumulative expenditures from federal and state partners through September 30, 2019, of $3.23 billion: $1.41 billion (44%) creditable to USACE, and $1.82 billion (56%) creditable to the State. The Congressional Research Service has since updated the expenditure figures in its December 27, 2023 release: "Through FY2023, the federal government and the State of Florida have each spent $2.6 billion (nominal dollars) on CERP construction projects, according to cost-share transparency reporting." *See* https://crsreports.congress.gov/product/pdf/IF/IF11336. (Accessed February 2024.) This is slightly higher than the amounts reported in the 2023 Update to the Integrated Delivery Schedule (released November 2023) which indicated $2.28 billion from federal sources and $2.58 billion from non-federal sources.

[24] Pub. L. 106-541, § 601, 114 Stat. 2680, 2684.

[25] Pub. L. 106-541, § 601, 114 Stat. 2680, 2683-2684.

[26] South Florida Ecosystem Restoration Task Force, 2022 Biennial Report, at 2 and 8, available at: https://static1.squarespace.com/static/5d5179e7e42ca1000117872f/t/63a493a62905c4171d028c83/1671730088082/December+2022+Final+Biennial+Report.pdf. (Accessed January 2023.) This is a biennial report released every two years. The latest report was released in 2022; the next report will be released in 2024.

approval of water resource projects within CERP. Regarding the latter issue, Congress approved the Central Everglades Planning Project (CEPP) in 2016, a suite of restoration projects targeting the central Everglades, which is estimated to cost a total of $2.09 billion.[27] A part of CERP, the CEPP is designed to send more water south from Lake Okeechobee.[28] Likewise, in October 2018, the Everglades Agricultural Area (EAA) reservoir was federally authorized as a change to the water storage components of CEPP.[29] This $3.31 billion project will provide additional water storage south of Lake Okeechobee and is intended to reduce high-volume discharges from the lake into the St. Lucie and Caloosahatchee estuaries and restore the hydrological connection to the Everglades.[30] All four phases of CEPP are currently under construction.[31] In addition, the Corps confirmed in FFY 2022 that they had allocated an additional $1.098 billion in funding from the Infrastructure Investment and Jobs Act for specific Everglades projects.[32]

Today, Florida is still making targeted investments ahead of the full federal approval process. Some of these steps come with risks. For example, the Ninth Biennial Review - 2022 indicated that, "Full implementation of key Comprehensive Everglades Restoration Plan (CERP) projects are predicated on water being discharged into the Everglades Protection Area meeting established STA discharge limits for phosphorus; thus, the state's efforts to remediate the quality of Everglades inflows is foundational to CERP implementation." As it undertakes construction on CEPP North, the State of Florida continues to work through its restoration strategies and aligned infrastructure improvements to meet the stringent water quality-based effluent limit (WQBEL) for phosphorus in the Everglades Protection Area.[33] According to a recent Congressional Research Service report:

> *The State of Florida anticipates the plan's projects to be constructed and operational by 2025. Assessment of effluent limit attainment for these efforts is required to begin in 2026. The timing of attainment may affect implementation progress for CEPP North and the EAA Reservoir. The report of the USACE Chief of Engineers specified, and the ASACW reaffirmed in 2022, that no federal investment in CEPP North infrastructure can occur until the effluent limit is met. The State of Florida currently is proceeding with CEPP North construction prior to an attainment determination. In addition, until the plan's STAs comply with the effluent limit, USACE intends to limit EAA Reservoir operations to store,*

[27] Pub. L. No: 115-270 (2018). The U.S. Army Corps of Engineers and SFWMD entered into a CEPP South Project Partnership Agreement in July 2020. The projected cost of $2.09 billion reflects the present day value in 2019.
[28] U.S. Army Corp of Engineers, Central Everglades Planning Project Facts & Information document, January 2023, available at https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll11/id/6004. (Accessed February 2024.) The project is designed to send an additional annual average of approximately 370,000 acre-feet of new water south to the Everglades.
[29] America's Water Infrastructure Act of 2018, Pub. L. No: 115-270 (2018). Note that in 2017, prior to federal authorization, section 373.4598, Florida Statutes, was enacted by the Florida Legislature to establish an expedited schedule for the design and construction of the Everglades Agricultural Area (EAA) reservoir project. The U.S. Army Corps of Engineers and SFWMD entered into a CEPP EAA Project Partnership Agreement in April 2021.
[30] *See* 373.4598, Fla. Stat. The projected cost of $3.31 billion reflects the present day value in 2019.
[31] Overall, the project components of CEPP are sometimes collectively referred to as the Generation 3 projects. In addition, WRDA 2020 authorized the Loxahatchee River Watershed Restoration Project (CERP) for construction as part of Generation 4.
[32] *See* Public Law 117-58 (2021) and https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll6/id/2249 at 2. (Accessed February 2024.)
[33] *See* https://www.sfwmd.gov/sites/default/files/documents/RS_Update_2023_07_FINAL.pdf. (Accessed February 2024.) Because meeting water quality requirements is a state responsibility, restoration strategies and aligned infrastructure improvements are fully funded by the State of Florida and are external to the Comprehensive Everglades Restoration Plan. For additional information, *see* Progress Toward Restoring the Everglades: The Ninth Biennial Review – 2022, which can be downloaded at https://nap.nationalacademies.org/download/26706.

and ultimately release, only the amount of water that can be treated to satisfy all applicable water quality standards.[34]

The Ninth Biennial Review - 2022 sums up its assessment by saying "However, the challenge of meeting the WQBEL starting in WY 2027 is substantial." Until this step is accomplished or another resolution is found, the CERP will not be fully implemented.

Everglades Forever Act

The first seeds of the looming WQBEL target date facing the state germinated over 30 years ago. Beginning well before its direct involvement in CERP and its subsequent federal authorizations, Florida began to carve out its own path for the protection of the Everglades.[35] These early efforts were ultimately energized by the federal court's approval of a landmark consent decree in 1992. The consent decree effectively incorporated the settlement agreement between the federal government, the State of Florida, and the SFWMD, which resolved claims brought by the federal government concerning discharges of water with excess phosphorus levels into the Everglades National Park and the Loxahatchee National Wildlife Refuge in violation of the state's own water quality standards. Key elements required the state parties to construct and operate large freshwater treatment wetlands known as Stormwater Treatment Areas (STAs) to reduce total phosphorus concentrations in surface water runoff before the water is discharged into the Everglades Protection Area. Moreover, the consent decree obligated the state to implement a regulatory best management practices (BMP) program in the Everglades Agricultural Area to reduce total phosphorus loads.

Bogged down in a bitter legal and administrative fight over the phosphorus concentration limits and other provisions of the settlement agreement, the Florida Legislature enacted the Everglades Forever Act (EFA) in 1994.[36] The EFA established the state's long-term commitment to restoring and protecting the remaining Everglades ecosystem by improving water quality and water quantity through the implementation of the Everglades Construction Project, source control measures, and a research and monitoring program.[37] The Everglades Construction Project contained 17 projects, with six STAs comprising the primary components. The EFA also required DEP and SFWMD to conduct research in order to propose a numerical Class III phosphorus standard in the Everglades Protection Area, with adoption of a rule by December 31, 2003. Otherwise, a default numerical Class III phosphorus standard of 10 parts per billion (ppb) would become effective.[38] A separate deadline of December 31, 2006, was established for DEP and SFWMD to "take all necessary steps to ensure that water delivered to the Everglades Protection Area achieves state water quality standards, including phosphorus criterion, in all parts of the Everglades Protection Area."[39]

In March 2003, Burns & McDonnell, consultants to SFWMD, found that the Everglades Construction Project had exceeded expectations, but that additional work was necessary to reach

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[34] *See* https://crsreports.congress.gov/product/pdf/IF/IF11336. (Accessed February 2024.)
[35] The Save Our Everglades initiative was first announced in August 1983 by then Governor Bob Graham.
[36] § 373.4592(1)(d), Fla. Stat. This was the successor to the 1991 Everglades Protection Act.
[37] Ch. 94-115, §§ 1-2, Laws of Fla. (codified as amended in § 373.4595, Fla. Stat.).
[38] *See* page 4 of the Senate Staff Analysis and Economic Impact Statement for CS/SB 626 in 2003 for history. Document on file with EDR.
[39] *See* page 5 of the Senate Staff Analysis and Economic Impact Statement for CS/SB 626 in 2003 for history. Document on file with EDR.

the goal of 10 ppb—proffering in lieu of the 2003-2006 period, a proposed planning horizon of 2003-2016. Later that year, the Florida Legislature amended the EFA to incorporate SFWMD's Long-Term Plan for Achieving Water Quality Goals (Long-Term Plan) finding that the plan sets forth the best available phosphorus reduction technology through BMPs and STAs and that it was a good-faith effort to maintain consistency with the settlement agreement.[40,41] The Long-Term Plan consists of a combination of source controls, STAs, Advanced Treatment Technologies, and regulatory programs—all of which were required to be integrated and consistent with CERP so that unnecessary and duplicative costs were avoided.

In 2013, the EFA was amended again to include, as a modification to the Long-Term Plan, the State of Florida and U.S. Environmental Protection Agency's consensus plan on new strategies for improving water quality in the Everglades.[42] Known as the Restoration Strategies Regional Water Quality Plan dated April 27, 2012 (Restoration Strategies), this technical plan includes the creation of 6,500 acres of new STAs and 116,000 acre-feet of additional water storage (flow equalization basins or FEBs) to work in conjunction with existing water quality features to achieve compliance with the state's numeric phosphorus criterion (as established in the WQBEL) for the Everglades Protection Area.[43]

The cost of implementing the Restoration Strategies is estimated to be $880 million over a 13-year period that began in 2012. Currently, all projects are scheduled to be constructed by December 2025. According to SFWMD, total program expenditures through September 30, 2023, were approximately $680.8 million,[44] with 9 of the 13 scheduled projects already completed by July 2023.[45,46] To meet its share of the cost, the 2013 Legislature dedicated $32 million of annual documentary stamp tax receipts for 11 years (beginning Fiscal Year 2013-14 and ending Fiscal Year 2023-24) to the program. For more detailed information on the status of these projects, see the 2024 South Florida Environmental Report (SFER), Chapter 5A, Restoration Strategies.[47]

In order to present a forecast of these expenditures in future editions, the Office of Economic and Demographic Research (EDR) will begin working with legislative, DEP and SFWMD staff to determine next steps. While scheduled to be completed prior to the end of the 2025 calendar year, portions of the consent orders, as well as the National Pollutant Discharge Elimination System (NPDES) and EFA permits for the operation of SFWMD's STAs, will remain in effect until discharges from each STA meet the WQBEL. This will ensure that the State's water quality standard for the Everglades is achieved. According to the 2024 South Florida Environmental

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[40] § 373.4592, Fla. Stat.
[41] Florida Administrative Code Rule 62-302.540 establishes the applicable water quality standards for phosphorus within the Everglades Protection Area.
[42] Ch. 2013-59, § 1, Laws of Fla. (amending § 373.4592, Fla. Stat.)
[43] South Florida WMD, Restoration Strategies Regional Water Quality Plan. 2012. Available at: rs_waterquality_plan_042712_final.pdf (sfwmd.gov). (Accessed February 2024.) For additional information, *see also* Armstrong, C., Piccone, T.T., & Dombrowski, J. (2023). The largest constructed treatment wetland project in the world: The story of the Everglades stormwater treatment areas. *Ecological Engineering*.
[44] Unaudited data provided by SFWMD upon request; email on file.
[45] South Florida Water Management District, Restoration Strategies Program Update (July 2023), available at: https://www.sfwmd.gov/sites/default/files/documents/RS_Update_2023_07_FINAL.pdf. (Accessed February 2024.) Total expenditures provided by SFWMD; email on file.
[46] According to the 2022 Biennial Report published by the South Florida Ecosystem Restoration Task Force, the remaining projects are ongoing, with 63 of the 74 consent order milestones having been achieved overall—58 of them ahead of their deadlines.
[47] *See* https://apps.sfwmd.gov/sfwmd/SFER/2024_sfer_final/v1/chapters/v1_ch5a.pdf. (Accessed February 2024.)

Report (SFER), permit renewals for EFA and NPDES watershed permits were issued in September 2022 and are valid through September 2027. This requirement also interacts with CERP implementation as discussed above.

Northern Everglades and Estuaries Protection Act

In 2007, the Florida Legislature enacted the Northern Everglades and Estuaries Protection Program (NEEPP), which expanded the then-existing Lake Okeechobee Protection Act[48] by substantially amending the provisions related to the protection and restoration of the Lake Okeechobee watershed and incorporating the Caloosahatchee and St. Lucie rivers and estuaries.[49] As part of NEEPP's passage, the Legislature found that it is imperative for the state, local governments, and agricultural and environmental communities to commit to restoring and protecting the surface water resources of the Lake Okeechobee watershed, the Caloosahatchee River watershed, and the St. Lucie River watershed.[50] The Legislature also found that total maximum daily loads (TMDLs) established in accordance with section 403.067, F.S., provided both an appropriate basis and a means of identifying and addressing the pollutants contributing to the water quality problems in the three watersheds. The total projected project cost for the three watersheds was estimated to be $2.7 billion.[51]

In 2016, the Florida Legislature amended NEEPP to designate the Basin Management Action Plans (BMAPs) adopted for Lake Okeechobee (2014), the Caloosahatchee Estuary Basin (2012), and the St. Lucie River and Estuary Basin (2013), as the primary pollution control planning tools for these watersheds. The amendments clarified the roles and responsibilities of SFWMD, DEP, and the Department of Agriculture and Consumer Services in expeditiously implementing the program and shifted primary responsibility for water quality protection measures through the associated BMAPs from SFWMD to DEP.[52]

The NEEPP requires these BMAPs to achieve the adopted total maximum daily loads (TMDLs) within 20 years of BMAP adoption with 5-year, 10-year, and 15-year milestones to measure progress. The department is also required to conduct a review of each of these BMAPs every five years in order to identify further load reductions that may be necessary to achieve compliance with the applicable TMDLs. An update to the Caloosahatchee River and Estuary BMAP was adopted in February 2020, expanding the BMAP area; replacing the original BMAP; incorporating new TMDLs for tributaries to the Caloosahatchee River; and including other components that were recommended in the 5-Year Review. Similarly, an updated BMAP for the St. Lucie River and Estuary was adopted in February 2020, expanding the BMAP area; replacing the original BMAP; and including components that were recommended in the 5-Year Review. Finally, an updated BMAP was also adopted in February 2020 for Lake Okeechobee, replacing the original BMAP for it as well.

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[48] Ch. 2000-130. Laws of Fla. (amending § 373.4595, Fla. Stat.).
[49] Ch. 2007-253, § 3, Laws of Fla. (amending § 373.4595, Fla. Stat.).
[50] § 373.4595(1)(d), Fla. Stat.
[51] *See* https://www.flsenate.gov/Session/Bill/2007/392/Analyses/20070392SGA_2007s0392.ga.pdf. (Accessed February 2024.)
[52] Ch. 2016-1, § 15, Laws of Fla. (amending § 373.4595, Fla. Stat.). For more information on basin management action plans associated with NEEPP, see DEP, Basin Management Action Plans, available at: https://floridadep.gov/dear/water-quality-restoration/content/basin-management-action-plans-bmaps. For the contemporaneous Senate Bill Analysis and Fiscal Impact Statement for the 2016 revisions, see 2016 S0552 AP (flsenate.gov). (Both documents accessed February 2024.)

As of December 2022, the completed projects identified in the Lake Okeechobee Basin Management Action Plan are estimated to achieve only 28 percent of the reduction needed to meet the total phosphorus (TP) TMDL in 2032.[53] The 2022 STAR report lists $824.1 million in BMAP projects that are ongoing, planned or underway. The next 5-Year Review for Lake Okeechobee is expected to be released in December 2024.

In January 2023, DEP reported in its second 5-Year Review of the Caloosahatchee River and Estuary Basin Management Action Plan that completed projects are estimated to achieve 80 percent of the reduction needed to meet the total nitrogen (TN) TMDL in 2032.[54] This reduction level was slightly above the 10-year milestone; however, DEP advised, "Considering the increased loading shown by monitoring data, and the recent increase in the size of the Caloosahatchee River and Estuary BMAP, it is unlikely that currently underway and planned projects will be enough to meet the 20-year milestone for the Caloosahatchee River Watershed."

In June 2023, DEP reported in its second 5-Year Review of the St. Lucie River and Estuary Basin Management Action Plan that completed projects are estimated to achieve 67 percent of the reduction needed to meet the TN TMDL and 50 percent of the reduction needed to meet the TP TMDL in 2028.[55] However, the department advised, "To achieve the TMDL in 15 years, stakeholders must identify and submit additional local projects, and the Coordinating Agencies (DEP, Florida Department of Agriculture and Consumer Services [FDACS], and South Florida Water Management District [SFWMD]) must identify additional regional projects as well as determine sources for the significant funding that will be necessary." The department has recommended that the plan deadline be extended another 5 years to sync the timing with Lake Okeechobee and the Caloosahatchee River and Estuary.

For more information on the progress of the Caloosahatchee River and Estuary, St. Lucie River and Estuary, and Lake Okeechobee BMAPs, see DEP's STAR Report.[56] In future editions of EDR's report, expenditures necessary to complete these particular BMAPs may be isolated from the statewide BMAP implementation analysis presented in Chapter 4. For now, these expenditure projections are included there.

Comprehensive Everglades Restoration Plan Regulation Act

Passed in 2001, the purpose of the Comprehensive Everglades Restoration Plan Regulation Act (CERPRA)[57] is to provide efficient and effective permitting of all project components. CERPRA permits are issued in lieu of all other permits issued under Chapters 373 and 403, with the exception

[53] *See* https://apps.sfwmd.gov/sfwmd/SFER/2024_sfer_final/v1/chapters/v1_ch8a.pdf. (Accessed February 2024.)
[54] *See* the review document at: https://floridadep.gov/sites/default/files/Caloosahatchee%20BMAP%202022%205-Year%20Review_.pdf. (Accessed February 2024.) According to the 2024 South Florida Environmental Report (SFER), completed and ongoing projects in the tributaries are estimated to achieve only 27% reductions needed to meet the TP TMDL for the tributaries.
[55] *See* the review document at: https://publicfiles.dep.state.fl.us/DEAR/DEARweb/BMAP/St.%20Lucie%20River%20and%20Estuary/St%20Lucie%20BMAP%202023%205-Year%20Review%20Final.pdf. (Accessed February 2024.)
[56] Florida Department of Environmental Protection, 2022 Statewide Annual Report on Total Maximum Daily Loads, Basin Management Action Plans, Minimum Flows or Minimum Water Levels, and Recovery or Prevention Strategies. This report addresses verified projects through December 31, 2022. *See* https://floridadep.gov/dear/water-quality-restoration/content/statewide-annual-report. (Accessed February 2024.)
[57] Ch. 2001-172, § 2, Laws of Fla.

of NPDES permits. Amended in 2003, the law now requires permit applications to provide reasonable assurances that: "State water quality standards, including water quality criteria and moderating provisions, will be met. Under no circumstances shall the project component cause or contribute to violation of state water quality standards."[58] At this time, no projected expenditures are included for this function.

Everglades Restoration Investment Act

In 2000, the Legislature passed the Everglades Restoration Investment Act, section 373.470, Florida Statutes, which provided the framework for the state to fund its share of the partnership, through cash or bonds, to finance or refinance the cost of acquisition and improvement of land and water areas necessary for implementing CERP.[59] Among other things, the legislation created the Save Our Everglades Trust Fund to serve as the primary repository for state, local, and federal project contributions in accordance with section 373.470(4), Florida Statutes. In 2007 and 2008, the Legislature expanded the use of the Save Our Everglades Trust Fund and bonds issued for Everglades restoration to include the Lake Okeechobee Watershed Protection Plan and the River Watershed Protection Plans under the Northern Everglades and Estuaries Protection Program, and the Keys Wastewater Plan.[60] At this time, there are no dedicated revenue sources for this fund.[61]

Lake Okeechobee Watershed Restoration Project

In 2021, the Legislature passed Senate Bill 2516 to expedite the implementation of the Lake Okeechobee Watershed Restoration Project (LOWRP). While it is a CERP eligible project, it has not yet been authorized by Congress for federal funding and cost-share. Despite that, the state legislation requires SFWMD to take all necessary steps to expedite LOWRP's project design, engineering and construction phases. To accelerate the funding, an annual distribution of $50 million from the state's documentary stamp tax receipts began in Fiscal Year 2021-22. The most recent federal action occurred when the U.S. Army Corps of Engineers / Jacksonville District (USACE) announced a 45-day public comment period for the Lake Okeechobee Watershed Restoration Project Third Revised Draft Project Implementation Report and Supplemental Environmental Impact Statement (PIR/SEIS), meaning the required study is officially still in progress. Comments on this version were due August 1, 2022. The revised Recommended Plan (identified as Alternative ASR) consists of 55 (underground) watershed aquifer storage and recovery wells with a maximum storage volume of approximately 308,000 acre-feet per year and two wetland restoration sites, Paradise Run (approximately 4,700 acres) and Kissimmee River Center (approximately 1,200 acres), to restore wetland areas. According to SFWMD, USACE recently obtained a waiver to continue the planning effort, and the LOWRP Revised Final PIR/EIS is estimated to be completed by summer 2024 for submission into WRDA 2024.[62] In the interim, SFWMD's 2024 SFER indicates that, "Test wells, pump tests, demonstration treatment facilities, and cycle testing are important next steps to evaluating the scope and scale of the ASR program."

[58] Ch. 2003-394, § 19, Laws of Fla.
[59] Ch. 2000-129, § 5, Laws of Fla.
[60] The Keys Wastewater Plan is defined as "the plan prepared by the Monroe County Engineering Division dated November 2007 and submitted to the Florida House of Representatives on December 4, 2007." § 373.470(2)(e), Fla. Stat.
[61] Supplementary funding from the Land Acquisition Trust Fund (LATF) is also used for certain Everglades projects.
[62] Information provided by SFWMD upon request; email on file.

7.2 Everglades Expenditures

The primary sources for Everglades restoration appropriations are the federal government, the State of Florida, and the SFWMD. The share that each of these sources provides for projects varies depending upon the particular restoration plan or program being implemented. Many of the restoration projects are funded by shares of federal and state funding, with the state funding including SFWMD. As such, distinguishing between state and regional expenditures on Everglades restoration can be challenging. In this section, state and regional expenditures are largely reported together.

Federal Expenditures on Everglades Restoration

Federal funding for Everglades restoration is provided through the Corps and the U.S. Department of the Interior. EDR received data from SFWMD which breaks down historic CERP expenditures by year and government entity. Under CERP, the federal government is required to fund half of the total cost of implementing CERP projects. Despite this, the federal government has made just over 40.4 percent of the total expenditures that implement CERP. Table 7.2.1 shows annual federal expenditures on CERP through December 31, 2023. Note that the partial FFY 2023-24 is excluded.

Table 7.2.1 Federal Expenditures on CERP (in $millions)

Federal	FFY 99-00	FFY 00-01	FFY 01-02	FFY 02-03	FFY 03-04	FFY 04-05	FFY 05-06	FFY 06-07
Real Estate	$-	$-	$-	$-	$38.08	$-	$-	$-
Design	$1.32	$10.61	$21.43	$30.69	$40.64	$49.59	$49.17	$57.00
Construction	$-	$-	$-	$-	$-	$-	$-	$-
Studies	$-	$0.38	$1.58	$1.24	$1.38	$1.30	$1.83	$0.10
Total	**$1.32**	**$10.99**	**$23.00**	**$31.92**	**$80.11**	**$50.89**	**$51.01**	**$57.10**

	FFY 07-08	FFY 08-09	FFY 09-10	FFY 10-11	FFY 11-12	FFY 12-13	FFY 13-14	FFY 14-15
Real Estate	$-	$2.93	$0.06	$0.03	$0.03	$0.06	$0.01	$0.00
Design	$48.43	$48.46	$51.27	$46.60	$37.42	$34.41	$23.34	$19.57
Construction	$-	$-	$10.19	$47.15	$67.29	$68.28	$50.36	$43.24
Studies	$0.49	$1.08	$0.21	$0.29	$0.12	$0.01	$0.01	$-
Total	**$48.92**	**$52.48**	**$61.73**	**$94.07**	**$104.86**	**$102.75**	**$73.72**	**$62.81**

	FFY 15-16	FFY 16-17	FFY 17-18	FFY 18-19	FFY 19-20	FFY 20-21	FFY 21-22	FFY 22-23
Real Estate	$71.59	$0.00	$0.10	$0.02	$-	$0.03	$0.18	$0.01
Design	$17.98	$21.82	$21.85	$28.87	$36.10	$63.23	$67.89	$59.35
Construction	$32.21	$43.83	$52.12	$69.11	$75.32	$52.34	$58.09	$105.29
Studies	$-	$0.02	$-	$-	$-	$-	$-	$-
Total	**$121.78**	**$65.67**	**$74.07**	**$98.00**	**$111.42**	**$115.60**	**$126.16**	**$164.65**

While the federal government has expended nearly $1.79 billion on CERP-related projects during this period, its total known obligation is much higher—approximately $2.57 billion. The difference would raise its percentage to just under 50 percent, assuming the state obligations are also met.
In addition to CERP expenditures, the Integrated Delivery Schedule provides running totals of expenditures for certain non-CERP Everglades restoration activities. Table 7.2.2 shows the cumulative non-CERP federal expenditures on Everglades Restoration through September 30, 2022. These numbers are very similar to the last Edition. EDR will continue to work with SFWMD staff to determine annual expenditures and progress where applicable.

Table 7.2.2 Non-CERP Federal Expenditures on Everglades Restoration (in $millions)

Modified Water Deliveries to Everglades National Park	$395
Critical Projects	$89
Kissimmee River Restoration	$409
Herbert Hoover Dike	$1,511
Central and South Florida Project (Non-CERP)	$831
Total	**$3,235**

Source: Integrated Delivery Schedule 2023 Update. Values are cumulative totals as of September 30, 2022.

State and Regional Expenditures on Everglades Restoration

The State of Florida (inclusive of the SFWMD) has spent just over $2.63 billion for credited CERP-related projects over the entire history of the project. Previously, some of these expenditures have been included in the reported expenditures for water quality restoration projects and initiatives in Chapter 2.[63] This year, they are only included in this chapter. In addition, significant expenditures have been made for non-CERP projects. Table 7.2.3 has been reformulated to be more inclusive and provides a 10-year history of annual cash expenditures for various state projects or initiatives that together comprise a more expansive interpretation of the State's direct investment in the Everglades. The majority of the funding is for projects that support CERP and the Restoration Strategies. Note that activity in the last two reported years has substantially increased.

Table 7.2.3 State Expenditures for Everglades Restoration (in $millions)

State Expenditures	FY13-14	FY14-15	FY15-16	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	FY21-22	FY22-23
Everglades Restoration	$ 54.77	$ 35.25	$ 55.50	$ 89.70	$ 119.41	$ 153.98	$ 185.32	$ 235.64	$ 348.42	$ 406.78
FL Keys Wastewater	$ 39.16	$ 10.72	$ 26.20	$ 6.23	$ 6.01	$ 10.49	$ 1.19	$ -	$ -	$ -
Lake Okeechobee / Indian River	$ -	$ 3.88	$ 27.37	$ 27.36	$ 10.46	$ 7.95	$ 5.60	$ 0.03	$ 1.25	$ 0.10
Lake Okeechobee / Agriculture	$ -	$ 4.72	$ 6.65	$ 5.72	$ 7.53	$ 19.07	$ 7.48	$ 3.64	$ 5.07	$ 3.53
Land Acquisition	$ -	$ -	$ 0.05	$ 6.52	$ 22.61	$ 14.52	$ 3.80	$ 0.11	$ 0.09	$ 0.00
NEEPP	$ -	$ -	$ -	$ 4.83	$ 18.51	$ 20.26	$ 28.77	$ 28.45	$ 26.01	$ 36.80
C51 Reservoir	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3.22	$ 22.58	$ 4.20
Grand Total	**$ 93.92**	**$ 54.56**	**$ 115.77**	**$ 140.37**	**$ 184.53**	**$ 226.28**	**$ 232.16**	**$ 271.10**	**$ 403.41**	**$ 451.41**

Note: Historical values in this table may be updated annually as additional data becomes available. Data in this table supersedes that reported in previous editions.

[63] *See* Table 2.3.4 in last year's Edition.

State funding sources for Everglades restoration projects have included General Revenue, trust fund balances, and bond proceeds. Prior law had authorized the issuance of bonds to finance or refinance the cost of Everglades restoration from Fiscal Year 2002-03 through Fiscal Year 2019-20 in an amount not to exceed $100 million per fiscal year except under certain conditions.[64] This authorization is no longer effective. Prior to its expiration, the state had issued approximately $336.8 million of Everglades bonds. The most recent year in which bonding was authorized was Fiscal Year 2014-15, when the Legislature authorized bonds of up to $50.0 million for the purpose of constructing sewage collection, treatment, and disposal facilities located within the Florida Keys Area of Critical State Concern.[65]

After the net debt service of approximately $22.50 million is paid in Fiscal Year 2023-24, the aggregate principal amount of outstanding bonds is $87.67 million. Thereafter, debt service is generally expected to decline each year through Fiscal Year 2034-35, at which time the Everglades bonds will be retired. Table 7.2.4 shows the estimated debt service that is due each fiscal year.

Table 7.2.4 Everglades Restoration Bonds Outstanding Debt Service (in $millions)

	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30
Principal	*$17.64*	$18.52	$12.87	$13.52	$7.54	$7.87	$5.68
Interest	*$4.86*	$3.98	$3.06	$2.41	$1.74	$1.41	$1.07
Outstanding Debt Service	*$22.50*	$22.50	$15.93	$15.93	$9.28	$9.28	$6.75

	FY 30-31	FY 31-32	FY 32-33	FY 33-34	FY 34-35	FY 35-36	Cumulative Outstanding
Principal	$5.91	$6.15	$3.10	$3.20	$3.32	$0.00	**$87.67**
Interest	$0.84	$0.59	$0.33	$0.23	$0.12	$0.00	**$15.78**
Outstanding Debt Service	$6.74	$6.74	$3.43	$3.43	$3.43	$0.00	**$103.45**

The Everglades bonds have been issued on a parity basis with the Florida Forever bonds, which means both bond programs share a first lien on pledged revenues (*i.e.*, Documentary Stamp Tax). The debt service is paid from the Land Acquisition Trust Fund.

Similar to the federal expenditure data above, SFWMD provided data on annual CERP expenditures by itself and from the state through December 31, 2023. Over the full history of the program, the state and regional governments have contributed nearly 59.6 percent of the total expenditures or over $2.63 billion. Table 7.2.5 details the state and regional expenditures on CERP through September 30, 2022; however, it should be noted that the Integrated Delivery Schedule

[64] § 215.619, Fla. Stat. Specifically, § 215.619(1)(a), Fla. Stat, authorized bonds to exceed $100 million per fiscal year if DEP requested additional amounts to achieve cost savings or accelerate the purchase of lands, or the Legislature authorized additional bonds to fund the Florida Keys and Key West Areas of Critical State Concern.
[65] Specific Appropriation 1626A, ch. 2014-51, Laws of Fla. (Fiscal Year 2014-15 General Appropriations Act).

(2023 Update) indicated that another $894 million of CERP-related expenditures had yet to be officially credited to the State as cost share.

Table 7.2.5 State/SFWMD CERP Expenditures for Everglades Restoration (in $millions)

State / Regional	FY 98-99	FY 99-00	FY 00-01	FY 01-02	FY 02-03	FY 03-04	FY 04-05	FY 05-06
Real Estate	$-	$-	$-	$-	$-	$75.39	$-	$-
Design	$0.58	$1.88	$9.62	$17.83	$31.62	$41.67	$64.83	$105.42
Construction	$-	$-	$-	$-	$0.02	$0.82	$2.00	$0.62
Studies	$-	$-	$0.09	$0.94	$1.95	$1.91	$1.37	$1.35
Total	**$0.58**	**$1.88**	**$9.71**	**$18.77**	**$33.58**	**$119.79**	**$68.20**	**$107.40**

	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14
Real Estate	$-	$-	$433.59	$-	$1.64	$1.06	$4.61	$0.55
Design	$66.29	$59.63	$33.43	$22.02	$16.90	$8.37	$10.31	$8.70
Construction	$12.84	$0.79	$0.11	$5.15	$7.37	$2.91	$4.36	$1.65
Studies	$3.19	$1.42	$0.31	$0.07	$0.04	$0.05	$0.04	$0.01
Total	**$82.32**	**$61.83**	**$467.44**	**$27.23**	**$25.95**	**$12.39**	**$19.32**	**$10.92**

	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Real Estate	$0.41	$518.57	$-	$-	$-	$0.03	$-	$-
Design	$7.61	$9.49	$14.65	$23.93	$20.52	$27.13	$37.80	$44.09
Construction	$32.56	$42.19	$66.82	$44.69	$81.16	$145.29	$214.23	$231.39
Studies	$-	$-	-$0.02	$-	$-	$-	$-	$-
Total	**$40.58**	**$570.25**	**$81.45**	**$68.62**	**$101.68**	**$172.45**	**$252.03**	**$275.49**

Note: Historical values in this table may be updated annually as additional data becomes available. Data in this table supersedes that reported in previous editions. Meaningful sponsor data also lags federal data by one year, but began one year earlier.

In addition to CERP expenditures, the Integrated Delivery Schedule provides running totals of expenditures for certain non-CERP Everglades restoration activities. Table 7.2.6 shows these non-CERP state and regional expenditures over time. The only significant change from the last Edition is the combined total on the Integrated Delivery Schedule (2023 Update) for the Restoration Strategies and the Everglades Construction Project which significantly increased.

(See Table on following page.)

Table 7.2.6 State/SFWMD Non-CERP Expenditures for Everglades Restoration (in $millions)

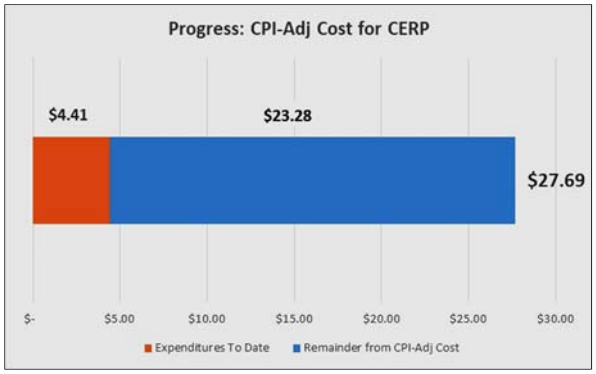
Critical Projects	$88
Kissimmee River Restoration*	$401
Herbert Hoover Dike	$100
Restoration Strategies & Everglades Construction Project	$2,446
Central and South Florida Project (Non-CERP)	$227
Total	**$3,262**

Source: Integrated Delivery Schedule 2023 Update. Values are cumulative totals as of September 30, 2022.

Expenditures Necessary to Comply with Laws and Regulations Governing CERP

When CERP was originally authorized in 2000, it was estimated that it would cost $8.2 billion and take 30 years to complete.[66] This cost was updated in 2019 to $23.2 billion.[67] A significant portion of the increase since 2014 (estimated at the time to be $16.4 billion) is related to the inclusion of two additional projects: the $2.09 billion ($2019) Central Everglades Planning Project (CEPP) and the $3.31 billion ($2019) Everglades Agricultural Area (EAA) Storage Reservoir.

Adjusting the 2019 present value for an additional four years of inflation results in a suggested implementation cost of $27.69 billion in December 2023. Summing the CERP expenditure totals from Tables 7.2.1 and 7.2.5 results in a total of $4.41 billion spent through that same date, leaving another $23.28 billion (84.1 percent) to fund.



Over a 5-year period with complete data (Fiscal Year 2017-18 through Fiscal Year 2021-22), total expenditures have averaged nearly $279.1 million per year, suggesting that CERP would require an additional 83.4 years to reach full implementation at the current pace. This inordinate length of

[66] Everglades Restoration: Federal Funding and Implementation Progress. Congressional Research Service. Available at: Everglades Restoration: Federal Funding and Implementation Progress (congress.gov). This differs from the Overview of the Review Study (the "Restudy") released in October 1998 by the Corps which indicated a cost of $7.8 billion and 20 years to completion. *See*: Overview: Central and southern Florida project comprehensive review study, October 1998 - Project Management Reports - USACE Digital Library (oclc.org). (Both documents accessed January 2023.)

[67] 2020 Central and Southern Florida Project, Report to Congress, Comprehensive Everglades Restoration Plan, at 75, available at: 2015 – 2020 Momentum: Report to Congress: Comprehensive Everglades Restoration Plan, Central and Southern Florida Project (eenews.net). (Accessed January 2023.)

time would be detrimental to the success of the underlying restoration efforts, as well as impede any reversal of the ongoing ecosystem degradation.[68] According to the 2018 Seventh Biennial Review of Everglades Restoration by the National Academies of Science, Engineering, and Medicine: "Funding for Everglades restoration remains an important constraint on achieving a rate of progress that would be consistent with the original vision for the CERP." Similarly, the Everglades Report Card produced by the Comprehensive Everglades Restoration Plan (CERP) REstoration COordination and VERification (RECOVER) program states:

> *The key finding of the 2012–2017 Everglades Report Card is that ecosystem health is in fair condition. Everglades' ecosystems are vulnerable to further ecological degradation and is providing minimal ecosystem functions. Essential ecological functions are degraded and unsustainable, leading to inadequate habitats for plants and animals. The overall condition is an area-weighted average of the four sub-region scores. The Southern Coastal Systems scored poorly while Lake Okeechobee, Northern Estuaries, and Greater Everglades scored fair.*[69]

If the original 30 year goal were to be met by 2030, total annual expenditures would need to increase to a total of nearly $3.3 billion per year. If the more acknowledged alternative goal of 2050 were to be met,[70] annual expenditures would need to more than triple to $862 million per year. These costs would be shared approximately 50-50 between the federal government and the state of Florida, including the South Florida Water Management District. If Florida accelerates the pace of its spending to meet a 30- or 50-year goal, it is unlikely—based on history—that the federal government would accelerate its funding in tandem. However, if the state advances the full cost, it runs the risk that such funds would not be fully reimbursed.

7.3 Next Steps and Recommendations

As part of the 2023 Session, the Legislature appropriated $624.6 million to benefit Everglades restoration and its related projects.

EVERGLADES	AMOUNT
Restoration Strategies Water Quality Plan	$58,000,000
Comprehensive Everglades Restoration Plan (CERP)	$356,520,477
EAA Reservoir	$64,000,000
Northern Everglades and Estuaries Protection Plan (NEEP)	$86,084,653
Dispersed Water Management (base funding)	$5,000,000
Okeechobee Restoration Agricultural Projects (Florida Dept. of Agriculture)	$5,000,000
Everglades Water Quality Improvements (LOWRP)	$50,000,000
TOTAL	**$624,605,130**

Source: Audubon Florida.[71]

[68] Progress Toward Restoring the Everglades: The Eighth Biennial Review – 2020. National Academies of Sciences, Engineering, and Medicine. National Academic Press. Available at: Everglades 2021 4-Pager-2.pdf (nationalacademies.org). (Accessed March 2022.) Also see "Everglades: The catalyst to combat the world's water crisis," Colonel Alfred A. Pantano, Jr., Master's Thesis (2009), U.S. Army War College.

[69] *See* https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/11519. (Accessed January 2023.)

[70] *See* Congressional Research Service, Recent Developments in Everglades Restoration, August 30, 2022 (stating that CERP will take approximately 50 years [from 2000] to implement), available at: https://crsreports.congress.gov/product/pdf/IF/IF11336. (Accessed January 2023.)

[71] *See* https://fl.audubon.org/sites/default/files/sote_spring2023_web_may.pdf. (Accessed February 2024)

The pace at which this appropriated funding turns into actual expenditures will not be seen until the data is received for next year's report. Based on this new insight, future editions of this report will continue to refine the forecast of expenditures necessary to complete CERP. Additionally, EDR will work with legislative, DEP and SFWMD staff to produce a forecast of the expenditures necessary to implement non-CERP Everglades restoration projects required by law. These include the state's water quality initiatives related to the Restoration Strategies, but also next steps if the WQBEL is not achieved. In tandem with this work, EDR will be monitoring the development of the comprehensive study to improve or modify existing water resources development projects in central and southern Florida as described in Appendix A.

Finally, EDR will undertake a special project to evaluate the Florida labor market (both demand and supply) for the specialized occupations, skillsets and training needed for the work required by the various Everglades projects. This analysis is prompted by the January 16, 2024, meeting of the Joint Working Group (WG) and Science Coordination Group (SCG) where attendees discussed the looming challenge to find contractors for the extremely large volume of high-dollar projects that are currently underway or starting within the next few years.

At this time, EDR has no formal recommendations for legislative consideration regarding Everglades restoration.

Appendix A

WATER RESOURCES DEVELOPMENT ACT OF 2022 (WRDA 2022)
See https://www.govinfo.gov/content/pkg/CRPT-117hrpt347/html/CRPT-117hrpt347.htm.

- *Explanation*: This section authorizes a comprehensive study to improve or modify existing water resources development projects in central and southern Florida.

- *Estimated Time for Completion*: Originally Fall 2025; now September 2026 (in time for incorporation into WRDA 2026)

- *SFWMD Updates*: https://www.sfwmd.gov/our-work/central-and-southern-florida-flood-resiliency-study.

- *US Army Corps of Engineers Fact Sheet*: https://www.saj.usace.army.mil/About/Congressional-Fact-Sheets-2023/C-SF-Flood-Resiliency-Study-I/.

SEC. 214. COMPREHENSIVE CENTRAL AND SOUTHERN FLORIDA STUDY.

(a) In General.--The Secretary is authorized to carry out a feasibility study for resiliency and comprehensive improvements or modifications to existing water resources development projects in the central and southern Florida area, for the purposes of flood risk management, water supply, ecosystem restoration (including preventing saltwater intrusion), recreation, and related purposes.

(b) Requirements.--In carrying out the feasibility study under subsection (a), the Secretary--

(1) is authorized to--

(A) review the report of the Chief of Engineers on central and southern Florida, published as House Document 643, 80th Congress, 2d Session, and other related reports of the Secretary; and

(B) recommend cost-effective structural and nonstructural projects for implementation that provide a systemwide approach for the purposes described in subsection (a); and

(2) shall ensure the study and any projects recommended under paragraph (2) will not interfere with the efforts undertaken to carry out the Comprehensive Everglades Restoration Plan pursuant to section 601 of the Water Resources Development Act of 2000 (114 Stat. 2680; 132 Stat. 3786).