

Section 216 C&SF - Initial Draft Project Considerations for Baseline and FWO

Additional projects are still being evaluated and will be added to this table as the project team advances the required analysis and validations.

Draft CERP projects considerations for Baseline and FWO

CERP Projects	CSFFRS Baseline 2035	CSFFRS FWO 2085	Relationship to CSFFRS
<p>Biscayne Bay Coastal Wetlands (BBCW)</p> <p>Authorized in 2014.</p> <p>Phase I, under construction and design.</p> <p>Construction to be completed in 2026.</p> <p>Phase II under feasibility.</p>	<p>Phase I, features operational.</p>	<p>Phase I, features operational.</p>	<p>The project is in Reach D. The BBCW project will divert an average of 59 percent of the annual coastal structure discharge into freshwater and saltwater wetlands instead of direct discharges to Biscayne Bay and Biscayne Bay Park.</p> <p>BBCW Phase I includes extension of the C-100A Spur Canal and delivery of fresh water to Cutler Creek and coastal wetlands along Biscayne Bay.</p> <p>Phase I, also includes the L-31E Flow-way/North Canal Flow-way features. This includes pumps, spreader canals, and several culvert structures to manage flow between the C-102 Canal, the L-31E Canal, Military Canal, the C-103 Canal.</p> <p>Full Biscayne Bay Coastal Wetlands Phase 1 project as authorized:</p> <ul style="list-style-type: none"> • Deering Estate Flow-way including a 100-cfs inflow pump from C-100A canal triggered by S-123HW • Cutler Flow-way • L-31E Flow-way includes 10 culverts between C-102 and C-103 and 2 culverts south of C-103 <p>Note: L-31E Florida Power & Light Everglades Mitigation Bank 40 culverts across levee L-31E south of S-20 were included. All culverts are set to flow only downstream (out of watershed Model Land) consistent with their flap gate design.</p> <p>Project features will likely influence structures S-21A, S-20G and S-20F and canals C-101, C-102 and C-103. These features were included in the preliminary alternatives of the C&SF flood resiliency study as possible measures for conveyance improvement and structure enhancement in Reach D.</p>

<p>Broward County Water Preserve Areas (BCWPA)</p> <p>Authorized in 2014.</p> <p>Project features are under design.</p> <p>All the project features expected to be completed by 2034.</p>	<p>BCWPA features operational.</p>	<p>BCWPA features operational.</p>	<p>The project is in Reach A and B. Projects features (C-11 and C-9 impoundments) will capture and store excess surface water runoff from the Western C- 11 West Basin (C-11 and C-9 canals) that is currently discharged into the Water Conservation Areas (WCA 3A and WCA 3B).</p> <p>Seepage managements areas (SMA) will influence the seepage gradient in the area.</p> <p>Capture water from the C-11 West Basin will have an influence on structures S-13, located on the C-11 canal and structure S-29 located on the C-9 canal.</p> <p>The C-11 canal, and S-13 structure are included in the preliminary C&SF flood resiliency study alternatives for conveyance and structure enhancement in Reach A.</p> <p>Canal C-9 and S-29 structure are included in the preliminary C&SF flood resiliency study alternatives for conveyance and structure enhancement in in Reach B.</p> <p>Although the C-9 and C-11 Impoundment projects are being designed to operate together in the future, for the purposes of this study they are operated independently. As part of the Reach B project, the C-9 Impoundment is simulated to operate under the assumption that the C-11 would divert water to it during the design storm events, to represent a reasonable worst-case scenario for the C-9 Basin. This was a reasonable assumption as they could be operated that way in the future. For this study, the C-11 Impoundment is operated without diverting water to the C-9 Impoundment, as this represents a reasonable worst-case scenario for the C-11 Basin. Please note that plans for the two impoundments do not include the ability to divert water from the C-9 Impoundment to the C-11 Impoundment, as it is only intended to be transferred the opposite way. Therefore, the worst-case scenario for C-11 Impoundment is that it becomes full and is unable to divert water away to C-9 Impoundment.</p> <p>Seepage managements areas (SMA) will influence the seepage gradient in the area.</p>
<p>Site 1 Impoundment</p> <p>Authorized in 2007.</p>	<p>Phase I, features operational.</p>	<p>Phase I, features operational.</p>	<p>This project is in reach A. The Phase I features will reduce the amount of seepage loss from the adjacent Loxahatchee National Wildlife Refuge</p>

<p>Phase I construction, completed in 2016.</p> <p>Phase II not completed.</p>			<p>(LNWR), also known as Water Conservation Area 1. This will help increase the amount of water that remains in the natural system, especially during dry periods. Maintaining additional water will allow for ecological habitat improvements in the LNWR. (Under review as flood control was not a project purpose)</p> <p>Site 1 is located north of the G-08 canal, the canal and the Site 1 area were identified in the preliminary C&SF flood resiliency study alternatives as possible storage and conveyance measures in Reach A.</p>
<p>Central Everglades Planning Project (CEPP).</p> <p>CEPP components authorized in the Water Resources Development Acts (WRDA) 2016, 2018 and 2020.</p> <p>CEPP features are under construction and design.</p> <p>All the project features expected to be completed by 2032.</p>	<p>CEPP features operational.</p>	<p>CEPP features operational.</p>	<p>This project has components that influence all Reaches.</p> <p>Distribution conveyance features include:</p> <ul style="list-style-type: none"> • Conveyance improvements to Miami and North New River canals. • Diversion of L-6 flows, infrastructure, and L-5 canal improvements. • Remove western approximately 2.9 miles of L-4 levee west of S-8. • Construct pump station (S-630) at western terminus of L-4 levee removal. • Backfill Miami Canal and Spoil Mound Removal from approx. 1.5 miles south of S-8 to I-75. <p>Seepage management features include:</p> <ul style="list-style-type: none"> • Construct S-356E pump station. • Construct 4.2-mile partial-depth seepage barrier south of Tamiami Trail (along L-31N). • G-211 operational refinements; use coastal canals to convey seepage. <p>Storage and Treatment features include:</p> <ul style="list-style-type: none"> • Construct the EAA reservoir and stormwater treatment area and integrate with A-1 FEB operations. • Lake Okeechobee operational refinements. <p>CEPP is located west of the C&SF flood resiliency study reaches, project area. Water deliveries south of Lake Okeechobee, water management including seepage management will influence all the study reaches.</p>
<p>C-111 Spreader Canal.</p> <p>Authorized in 2012.</p>	<p>Features operational.</p>	<p>Features operational.</p>	<p>Project list:</p> <p>Additional projects are:</p> <ul style="list-style-type: none"> • 8.5 Square Mile Area • L-359 Detention Area

<p>Features are completed.</p>			<ul style="list-style-type: none"> • C-111 Northern Detention Area • C-111 Southern Detention Area • S332D Detention Area <p>Frog Pond Detention Area</p> <p>This project is in Reach D. The C-111 Spreader Canal Western Project will create a hydraulic ridge adjacent to Everglades National Park (ENP) that will keep more of the natural rainfall and water flows within Taylor Slough. The hydraulic ridge will be created by constructing an aboveground detention area in the Frog Pond area, installing pump stations, and integrating other project features.</p> <p>Frog Pond Detention Area and the Aerojet canals as well as the G737 structure per the SFWMD Florida Bay plan. The S199 and S200 pumps are operated per the SFWMD's operating permit and are constrained from Mar 15 – Jun 30 based on stage at the EVER4 and R3110, respectively for the protection of the CSSS Critical Habitat.</p> <p>The project will also begin restoration of the Southern Glades and Model Lands with an operable structure in the lower C-111 canal, incremental operational changes at the S-18C structure, a plug at S-20A, operational changes at the S-20 structure, and construction of earthen plugs at the C-110 canal.</p> <p>Canal C-111 and structure S-197 located in the C-111 canal were identified in the preliminary C&SF flood resiliency study alternatives as possible storage and conveyance measures in Reach D.</p>
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Draft State, County and Municipal projects considerations for ECB and FWO

State Projects	CSFFRS ECB (2035)	CSFFRS FWO (2085)	Relationship to CSFFRS
<p>SFWMD: S-27 Coastal Structure and C-7 Basin Resiliency Project (which includes S-27)</p>	<p>Completed and operational with 500 cfs capacity</p>	<p>Completed and operational with 500 cfs capacity</p>	<p>Located in Reach B (Little River & Nearby Basins) of the C&SF Flood Resiliency Study.</p> <p>S-27 is a reinforced concrete, gated spillway, with discharge controlled by two vertical lift gates with a discharge capacity of 2,800 cfs. S- 27 is a gravity structure, and the designed discharge capacity is achieved when the gradient between head and tail water are sufficient to pass the flow. Operation of the gates is automatically controlled. The structure is in the City of Miami near the mouth of C-7 Canal about 700 feet from the shore</p>

<p>was authorized and constructed by the USACE.</p> <p>FEMA Design & implementation funding. Completed and operational with 500 cfs capacity by 2035</p>			<p>of Biscayne Bay. The C-7 Basin has a population of about 270,000 people within 32 square miles, in the northeastern portion of Miami-Dade County. The area drained by the C-7 Canal is fully developed with primarily residential and commercial uses. The C-7 Canal is the central flood control feature that receives and conveys basin flood waters by gravity through the S-27 Coastal Structure to sea. This structure was designed to 1) maintain optimum water control stages upstream in C-7 (Little River Canal), 2) release the design flood (75 percent of the Standard Project Flood) without exceeding upstream flood design stage 3) restricts downstream flood stages and discharge velocities to non-damaging levels, and 4) prevent saltwater intrusion during periods of high tides.</p> <p>The proposed project consists of flood mitigation and enhancement strategies at C-7 Basin, known as Little River, in Miami Dade County, to build flood resiliency and increase protection against saltwater intrusion. Specifically, the project includes:</p> <ul style="list-style-type: none"> • Enhancing major components of the S-27 Structure and converting the gate opening system to a more robust mechanism, upgrading the existing gates with elevated, corrosion resistant stainless steel gates, enhancing and elevating the control building, and adding a corrosion control system to the structure. • Building a new forward pump station that will convey flood waters to tide when downstream water elevations are too high to allow gravity flow. The design of the proposed forward pump station will be adaptable and will include the ability to easily add additional pump capacity in the future as conditions continue to change. Current funding accommodates the completion and operation of the forward pump station with 500 cfs capacity. • Constructing a tie back flood barrier/salinity barrier to provide flood and storm surge protection and supporting the required function of the spillway gates and pump for the selected scenario of 100-year event with three-foot SLR. • Building an approximately 2-acre flow-through wetland/stormwater detention area to reduce local runoff on the W.H. Turner High School property (owned by Miami-Dade County Public Schools). This project feature will increase the ability to leverage partners and enhance outreach activities and emphasize community engagement. This stormwater detention area will be incorporating 750 Biosorption Activated Media (BAM), an innovative stormwater best management practice in South Florida that has been deployed across agencies and in varied use cases and has consistently reduced harmful nutrients such as Nitrogen and Phosphorus and other contaminants in stormwater. BAM is a patented unique combination of recycled tire crumb, silt, clay, and sand that is optimized for inert filtration, reactive filtration, and to provide an ideal habitat for microbes to facilitate biosorption & biological uptake. • Installing 1,500 linear feet of living shoreline along the C-7 Canal Bank to assist in reducing bank erosion and improve aesthetics and storm resiliency. The flow-through wetland/stormwater detention area and living shoreline features will be incorporated into the W.H. Turner High School curriculum for environmental science students. In addition, a shaded gathering area, a community garden, educational signage, and outdoor
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			classroom amenities for public use and to increase community engagement will be incorporated to the project.
SFWMD: S-28 Coastal Structure and C-8 Basin Resiliency Partially funded \$50M FEMA BRIC + SFWMD & MDC Match. Not Started. Conceptual Design Completed	Completed and operational with 500 cfs capacity	Completed and operational with 500 cfs capacity	<p>Located in Reach B (Little River & Nearby Basins) of the C&SF Flood Resiliency Study.</p> <p>This project proposes to use a combination of NBS and gray infrastructure is the District's C-8 Basin project in Miami-Dade County. The area drained by the C-8 Canal is fully developed with primarily residential and commercial uses. The C-8 Canal is the central flood control feature that receives and conveys basin floodwaters by gravity through the S-28 Coastal Structure to sea.</p> <ul style="list-style-type: none"> • S-28 Coastal Structure Replacement: replacing major components of the S-28 Structure with a new elevated, gated, water control structure. Converting the gate opening system to a more robust mechanism, replacing the existing gates with corrosion resistant stainless-steel gates and increased height, replacing the control building with a hardened and elevated control building, and adding a corrosion control system to the structure • Forward Pump: building a new forward pump station that will convey flood waters to tide when downstream water elevations are too high to allow gravity flow. The design of the proposed forward pump station will be adaptable and will include the ability to add additional pumps in the future as conditions continue to change. Per the FPLOS Phase II Studies in the C-8 Basin (2023): M2A(SLR 1') 1,550 cfs; M2B (SLR 2') 2,550 cfs; M2C (SLR 3') 3,550 cfs. Current funding accommodates the completion and operation of the forward pump station with 500cfs capacity. • Tie Back Flood Barrier: Constructing a tie-back flood barrier to provide flood and storm surge protection and supporting the required function of the spillway gates and pump during a 100-year event with three foot SLR. • Canal Improvements: including elevating and enhancing secondary canal banks throughout the basin to 6ft, including the S-28 Coastal Structure immediate of C-8 Canal, as well as the most vulnerable locations along the secondary system (Marco Canal, NW 17 AVE Canal, Red Road/NW 57 AVE Canal, Spur #4 Canal, Spur Canal, Upper Rio Vista Canal), in partnership with Miami Dade county. • Storage: Adding approximately 250-acre feet of distributed storage in the C-8 Basin • Building vegetated berms and constructing a temporary impoundment to reduce runoff, therefore reducing peak flood elevations by storing water on the Miami Shores Golf Course during extreme events until canal elevations subside allowing the impoundment to drain slowly and including a gated culvert to connect the detention area to the C-8 Canal. Beneficial reuse of excavated sediments from ditches/ponds to build levees, berms. • Installing living shoreline features to assist in reducing bank erosion, improve aesthetics and storm resiliency. Ancillary benefits include creation

			of aquatic habitat and water quality benefits which will increase recreational value in the project area (kayaking, canoeing, wildlife observation and fishing).
SFWMD: S-29 Coastal Structure and C-9 Basin Resiliency FEMA Design & implementation funding. Completed and operational with 500 cfs capacity by 2035	Completed and operational with 500 cfs capacity	Completed and operational with 500 cfs	<p>Located in Reach B (Little River & Nearby Basins) of the C&SF Flood Resiliency Study.</p> <p>S-29 is a gravity structure, and the designed discharge capacity is achieved when the gradient between head and tail water are sufficient to pass the flow. Operation of the gates is automatically controlled so that the gates open or close in accordance with the seasonal operational criteria. The structure's original design did not account for SLR of the magnitudes that are being experienced today along the coastline of south Florida.</p> <p>This resiliency project is mainly tied to the District's mission to provide flood control, water supply protection, and ecosystem restoration. This project proposes flood risk reduction measures for the C-9 Basin, a region of about 549,964 389 people (Census Tracts, 2022), encompassing 100 square miles, located in the southern portion of Broward County and northeastern portion of Miami-Dade County. The basin area is fully developed with primarily residential and commercial uses. The C-9 Canal and the S-29 Coastal Structure are the primary flood control features of this basin. The C-9 Canal receives and conveys flood waters by gravity through the S-29 Coastal Structure to the Oleta River (tide). The S-29 Coastal structure is a reinforced concrete, gated spillway, with discharge controlled by four cable operated, vertical lift gates with a discharge capacity of 4,780 cfs. The S-29 Structure is located near the mouth of the C-9 Canal, in an urbanized area of North Miami Beach east of Biscayne Boulevard and just north of Northeast 165th Terrace. The structure controls fresh waterflows out of the C-9 Canal into the Oleta River and drains the C-9 East and C-9 West watersheds. The C-9 Canal extends approximately 19.5 miles east from the L-33 Canal adjacent to Water Conservation Area 3B and the lake belt region, before traversing the densely populated area between Miramar to the north and Miami Gardens to the south. The canal drainage area is developed with a mixture of commercial structures along Biscayne Boulevard, high rise residences immediately to the east and a public park to the north.</p> <p>The proposed project consists of flood mitigation and enhancement strategies at the C-9 Basin to build flood resiliency and increase protection against saltwater intrusion. Specifically, the project includes:</p> <ul style="list-style-type: none"> • S-29 Coastal Structure Enhancement: converting the gate opening system to a more robust mechanism, upgrading the existing gates to elevated, corrosion resistant stainless-steel gates and enhancing, elevating, and hardening the control building, and adding a corrosion control system to the structure. • Forward Pump: building a new forward pump station that will convey flood waters to tide when downstream water elevations are too high to allow gravity flow. The design of the proposed forward pump station will be adaptable and will include the ability to add additional pumps in the

			<p>future as conditions continue to change. Per the FPLOS Phase II Studies in the C-8 and C-9 Basins (2023): M2A (1' SLR) 1,550 cfs; M2B (2' SLR) 2,550 cfs; M2C (3' SLR) 3,550 cfs. Current funding accommodates the completion and operation of the forward pump station with 500cfs capacity.</p> <ul style="list-style-type: none"> • Tie Back Flood Barrier: constructing a tie back flood barrier/salinity barrier to provide flood and storm surge protection and supporting the required function of the spillway gates and pump during a 100-year event with three-foot SLR. • Canal Improvements: raising secondary canal bank elevations to the flood criteria elevation for the area. • Storage: Adding approximately 250-acre feet of distributed storage in the C-9 Basin • Enhancing an approximately 16-acre flow-through wetland/stormwater detention area at Pickwick Lake (Figure 9-7), which is owned by the City of North Miami Beach, to reduce local runoff in the area. The stormwater detention area will incorporate Biosorption Activated Media (BAM), an innovative stormwater best management practice in South Florida that has been deployed across agencies and in varied use cases and has consistently reduced harmful nutrients such as nitrogen and phosphorus and other contaminants in stormwater. • Installing 1,850 linear feet of living shoreline to assist in reducing bank erosion and improve aesthetics and storm resiliency. In addition, a shaded gathering area, educational signage, and other amenities to help increase community engagement and public use will be incorporated to the project
County Projects	CSFFRS ECB	CSFFRS FWO	Relationship to CSFFRS
<p>Broward County: Sample Road Improvement Project (C1-C2 Canal Interconnect)</p> <p>Solely funded by Broward County Water Control District 2. The project was completed July 2023.</p>	Complete and operational	Complete and operational	<p>Design info in the FPLOS model. The connection between Broward County Water Control District 2's C-1 and C-2 Canals provides an alternative flow path within the secondary canal system to route discharge to the Hillsboro Canal during wet periods and allows canal operation during both dry and wet times to move water east and hold a more consistent water level along the coast preventing saline water intrusion and protecting public water supply water sources. The ability to move water and maintain consistent water levels is of benefit to the operation of the Water Control District.</p> <p>The Sample Road Recharge Line is the addition of a gated culvert located at Sample Road and Military Trail, in Deerfield Beach. This new structure would release water from Crystal Lake (also known as Sailboat Lake) to the 2_C1 Canal, which runs along the western side of I-95 and outfalls about 1-mile downstream of Structure G-56 on the Hillsboro Canal. For the purposes of this study, this gated culvert was opened at the start of the design storm rainfall.</p> <p>Located in Reach A (Broward & Hillsboro Basins) of the C&SF Flood Resiliency Study.</p>

<p>Broward & Hillsboro Basins: North Springs Improvement District (NSID) Pump Station 3</p> <p>Funded by NSID Bond. Permitted (ERP #06-00073-S) and constructed</p>	<p>Complete and operational</p>	<p>Complete and operational</p>	<p>Design info in the FPLOS model. This pump is located between the east of Meridian Drive North in Broward County, at the Hillsboro Canal. During on-peak operations (assumed to be during the rainfall event and up to 24-hours later), the pump has a discharge capacity of 25,000 GPM and will discharge to the Hillsboro Canal whenever the upstream stage (water level in the secondary system) is greater than 8.7 ft NGVD29 and will turn off when the upstream stage falls below 8.5 ft NGVD29. During off-peak operation (assumed to be more than 24-hours after rainfall event), the pump has a discharge capacity of 50,000 GPM and will discharge to the Hillsboro Canal whenever the upstream stage in Hillsboro Canal (in proximity of the pump) is less than 10 ft NGVD29 and will turn off when the upstream stage falls below 8.5 ft NGVD29. (from FPLOS)</p> <p>Located in Reach A (Broward & Hillsboro Basins) of the C&SF Flood Resiliency Study.</p>
<p>Broward County: FLL Ravenwood System Interconnection</p> <p>2022 Funded by Resilient Florida Grant. In the early design stage. Current grant agreement expires on 9/30/2026. Complete and operational by 2035</p> <p>The final designer has been selected. The name of the firm is Keith & Associates. It is expected that the engineering design will start in September 2023.</p>	<p>Complete and operational</p>	<p>Complete and operational</p>	<p>This Project will interconnect the Northern Stormwater Management System (“Northern System”) to the Ravenswood System, to the west of I-95, and will be constructed in 2 phases. The first phase includes a proposed 72-inch equalizer stormwater pipe to interconnect the Northern System and the Ravenswood System. It will also involve expanding the existing stormwater management area in the Ravenswood System. This improvement will provide additional storage volume for stormwater runoff and improve flood attenuation while increasing water quality treatment capacity. The second phase includes retrofitting a proposed stormwater pump station within the interconnection between the 2 systems. This improvement will mitigate the impacts of future sea level rise by maintaining a consistent discharge flow via the interconnection.</p> <p>Design info located in supporting documentation folder > Broward Co. - (4) FLL project designs: 211029 FLL SWMP - Stormwater Master Plan Update Final_SFWMMD.pdf FLL Stormwater Primary System Basin and projects.pdf</p> <p>The final designer has been selected. The name of the firm is Keith & Associates. It is expected that the engineering design will start in September 2023.</p> <p>Located in Reach A (Broward & Hillsboro Basins) of the C&SF Flood Resiliency Study.</p>
<p>Broward County:</p>	<p>Complete and operational</p>	<p>Complete and operational</p>	<p>The proposed Project will improve the stormwater management system within Edgewood Park, located just north of FLL. The recommended improvements include the upsizing of drainage culverts and restoration of</p>

<p>FLL Edgewood Park Stormwater Project</p> <p>2023 Funded by Resilient Florida Grant. Grant expires 9/30/2026.</p> <p>The final designer has been selected. The name of the firm is Keith & Associates. It is expected that the engineering design will start in September 2023.</p>			<p>the original cross sections which consist of open drainage ditches at Edgewood Park. Completion of the Project will ensure that a consistent stormwater discharge rate is maintained from the existing stormwater management system into Osceola Creek, located just north of Edgewood Park and will prepare FLL for potential impacts of future sea level rise.</p> <p>Design info located in supporting documentation folder > Broward Co. - (4) FLL project designs: 211029 FLL SWMP - Stormwater Master Plan Update Final_SFWMD.pdf FLL Stormwater Primary System Basin and projects.pdf</p> <p>The final designer has been selected. The name of the firm is Keith & Associates. It is expected that the engineering design will start in September 2023.</p> <p>Located in Reach A (Broward & Hillsboro Basins) of the C&SF Flood Resiliency Study.</p>
<p>Broward County: FLL System 1 Basin A Stormwater Interconnection Project</p> <p>2023 Funded by Resilient Florida Grant. Grant expires 9/30/2026.</p> <p>The final designer has been selected. The name of the firm is Keith & Associates. It is expected that the engineering design will start in September 2023.</p>	<p>Complete and operational</p>	<p>Complete and operational</p>	<p>The master stormwater management system at FLL is subdivided into 7 primary drainage basins with independent positive outfalls that discharge stormwater runoff off-site. The Project will include improvements to the master stormwater management system which will interconnect the Northern Stormwater Management System ("Northern System") and the System 1 Basin A ("Basin A") within the North Airfield at FLL. The improvements provide flood protection and include the installation of a new control structure and 48-inch stormwater pipe between the Northern System and Basin A. The interconnectivity will maximize the effectiveness and discharge capacity from each of the existing primary drainage basins.</p> <p>Design info located in supporting documentation folder > Broward Co. - (4) FLL project designs: 211029 FLL SWMP - Stormwater Master Plan Update Final_SFWMD.pdf FLL Stormwater Primary System Basin and projects.pdf</p> <p>The final designer has been select-ed. The name of the firm is Keith & Associates. It is expected that the engineering design will start in September 2023.</p> <p>Located in Reach A (Broward & Hillsboro Basins) of the C&SF Flood Resiliency Study.</p>

<p>Broward County: FLL System 1 Basin B Stormwater Interconnection Project</p> <p>2023 Funded by Resilient Florida Grant. Grant expires 9/30/2026.</p> <p>The final designer has been selected. The name of the firm is Keith & Associates.</p> <p>It is expected that the engineering design will start in September 2023.</p>	<p>Complete and operational</p>	<p>Complete and operational</p>	<p>The master stormwater management system at FLL is subdivided into 7 primary drainage basins with independent positive outfalls that discharge stormwater runoff off-site. The Project will include improvements to the master stormwater management system which will interconnect the Northern Stormwater Management System (“Northern System”) and the System 1 Basin B (“Basin B”) within the North Airfield at FLL. The improvements provide flood protection and include the installation of a new 24-inch stormwater pipe connection between the Northern System and Basin B. The interconnectivity will maximize the effectiveness and discharge capacity from each of the existing primary drainage basins.</p> <p>Design info located in supporting documentation folder > Broward Co. - (4) FLL project designs: 211029 FLL SWMP - Stormwater Master Plan Update Final_SFWMMD.pdf FLL Stormwater Primary System Basin and projects.pdf</p> <p>The final designer has been select-ed. The name of the firm is Keith & Associates. It is expected that the engineering design will start in September 2023.</p> <p>Located in Reach A (Broward & Hillsboro Basins) of the C&SF Flood Resiliency Study.</p>
<p>Broward County: Broward County Canal Structure S-27 Resilience Improvements</p> <p>Fully funded in 2023 by Resilient Florida Grant. The design will be complete by July 2024. Construction will be complete by June 2026.</p>	<p>Complete and operational</p>	<p>Complete and operational</p>	<p>This Project will enhance the reliability and strength of the Broward County S-27 structure to withstand sea level rise pressures, minimize tidally controlled water from contaminating freshwater canals, and protect existing vegetation in the adjacent County-owned Easterlin Park. The project will be active year-round holding freshwater inland during dry times, releasing water to the tidal side of the District’s C-13 canal during wet times, and preventing the backflow of saline water at high tide and during storm surges. This project will prevent saline water from the tidal section of the C-13 canal from contaminating inland fresh water sources.</p> <p>Design info located in Supporting Documents folder > Broward Co S-27 Structure Replacement Design: S27 Design Plans_URS.pdf</p> <p>To view location go to: https://geohub-bcgis.opendata.arcgis.com/apps/bf33feac7c2c4c3cbd5fd0f1a6730f7c/explore</p> <p>The structure location is at these coordinates: 26.16792, -80.162897.</p> <p>Located in Reach A (Broward & Hillsboro Basins) of the C&SF Flood Resiliency Study.</p>

<p>Miami-Dade County: planned canals as shown on the Water Control Map: Reach B) The canal bank deficiencies will be addressed for basins C-7, C-8, and C-9 by 2035.</p> <p>None of the planned Canal Bank Extensions are expected to be completed by 2035.</p>	<p>Canal bank elevations for C-7, C-8 and C-9 (Planning Reach B)</p>	<p>All MDC canal bank extensions. Canal bank elevations for Planning Reach C and D.</p>	<p><u>None of the planned secondary canal extensions on the Water Control Map are expected to be completed by 2035. The canal bank extension and canal bank elevation shapefiles were shared by Alberto Pisani on 8.25.2023. Similarly, the shapefile for the control structures as shown on the Water Control Map was shared on 9.07.2023.</u></p> <p><u>CFC_2ndCANAL_10ft – shapefile of locations along the secondary canals identified as having canal bank deficiencies per the County Flood Criteria. The points were created from a raster of 10x10 ft cells. The canal bank deficiencies will be addressed for basins C-7, C-8, and C-9 by 2035. The rest are in Reach C (Miami River & Nearby Basins) & Reach D (South Miami Basins) of the C&SF Flood Resiliency Study and will be included in FWOP.</u></p> <p><u>CANAL Water Control MDC- shapefile of all types of projects (primary and secondary canals, ditches, flow rights, flood control projects, other waterways and sloughs. Planned primary and secondary canals are the features considered for ECB and FWOP.</u></p> <p><u>Planning Reach B</u></p> <p><u>C-7</u> Elevating secondary system canal banks to the flood criteria elevation for the area:</p> <ul style="list-style-type: none"> • Biscayne Canal Spur No. 1 • Canal Spur • Gratigny Canal • NW 127 ST Canal • Palm Springs Canal • Peter’s Pike Canal • Red Road Canal NW 57 Ave Canal • Rio Vista Canal • Spur Canal No. 1 • Upper Rio Vista Canal <p><u>C-8</u> Elevating secondary system canal banks to the flood criteria elevation for the area:</p> <ul style="list-style-type: none"> • Burlington Canal • Golden Glades Canal • Grahams Dairy Canal • Grahams Dairy I-75 Interch • Marco Canal • NW 17 Ave Canal • Opa Locka Canal • Peter’s Pike Canal • Red Road Canal NW 57 Ave Canal • Spur #4 Canal

- Spur Canal No. 1
- Upper Rio Vista Canal

Planned Secondary canals or ditches:

- NW 107 Ave Canal West
- NW 97 Ave Canal Improvements

C-9

Elevating secondary system canal banks to the flood criteria elevation for the area:

- Calder Canal
- Carol City Canal (A, A-2, A-2A, A-2B, A-3, A-4, A-6, A-7, A-8, A-9, B, B-1)
- East Andover Canal
- Golden Glades Canal
- Highland Oaks Canal
- Lake Lucerne Canal
- North Dade Golf Canal
- NW 107 Ave Canal
- NW 202 St Canal
- NW 27 Ave Canal
- Palm Canal
- Palm Springs North Canal
- Peter's Pike Canal
- Real Site
- Red Road Canal NW 57 Ave Canal
- West Andover Canal

Planned Secondary canals or ditches:

- Golden Glades Ditch

Planning Reach C

C-6

Elevating secondary system canal banks to the flood criteria elevation for the area:

- Dressels Dairy Canal
- North Line Canal
- NW 58 ST Canal
- Snapper Creek Extension Canal
- F.E.C. Canal
- Melrose Canal
- NW 25 ST Canal
- Comfort Canal
- Lawrence Waterway
- NW 97 Ave Canal
- Russian Colony Canal
- NW 87 Ave Canal
- Red Road Canal NW 57 Ave Canal
- NW Wellfield Canal
- Grahams Dairy Canal

- Gratigny Canal

Planned Secondary canals or ditches:

- NW 107 Ave Canal West

C-4

Elevating secondary system canal banks to the flood criteria elevation for the area:

- DADE BROWARD LEVEE
- MUD CREEK CANAL
- SW 132 AVE CANAL
- CORAL PARK CANAL
- CORAL WAY CANAL
- SNAPPER CREEK EXTENSION CANAL
- SW 97 AVE CANAL
- WESTBROOK CANAL
- CORAL GABLES CANAL
- WESTCHESTER CANAL
- MUD CANAL NEW 137 AVE
- NORTH LINE CANAL
- NW 12 ST
- NW 41 ST DITCH SOUTH
- DRESSELS DAIRY CANAL
- F. E. C. CANAL
- VENETIAN CANAL
- COMFORT CANAL
- NW WELLFIELD CANAL

Planned Secondary canals or ditches:

- PENNSUCO

C-2

Elevating secondary system canal banks to the flood criteria elevation for the area:

- SW 60 ST CANAL EXTENSION
- SW 64 ST CANAL
- SUNSET PARK CANAL
- SW 60 ST CANAL
- WESTWOOD LAKES CANAL
- WESTWOOD LAKES CANAL I
- BROAD CANAL
- LUDLAM GLADES CANAL
- TWIN LAKE CANAL
- BIRD DRIVE EXTENSION CANAL
- ROYAL GREEN CANAL
- SW 132 AVE CANAL
- SW 144 AVE CANAL
- SW MANOR CANAL
- CORAL WAY CANAL
- HEFTLER HOMES L

- HEFTLER HOMES M
- HEFTLER HOMES N
- HEFTLER HOMES O
- HEFTLER HOMES P
- SOUTHERN ESTATES CANAL
- WESTWOOD LAKES CANAL G
- WESTWOOD LAKES CANAL H
- WESTWOOD LAKES CANAL J
- WESTWOOD LAKES CANAL L
- SW 92 AVE CANAL

Planned Secondary canals or ditches:

- SW 157 AVE
- SW 63 ST CANAL PLANNED
- SW 170 AVE CANAL
- SW 167 AVE CANAL

Planning Reach D

C-1

Elevating secondary system canal banks to the flood criteria elevation for the area:

- SW 87 AVE CANAL
- BEL-AIRE CANAL E-2
- BEL AIRE CANAL W_1
- BEL AIRE CANAL W_2
- BEL AIRE CANAL W_3
- BEL AIRE CANAL E_1
- CUTLER RIDGE CANAL
- GUAVAL CANAL
- SW 122 AVE CANAL

Planned Secondary canals or ditches:

- Sw 232 St from SW 97 Ave to Sw 87 Ave
- Sw 232 St from SW 97 Ave to West
- C-1 EXT @ SW 150 ST

C-100

Elevating secondary system canal banks to the flood criteria elevation for the area:

- BELAIRE SECTION CANAL
- LINDGREN CANAL
- BIGMAN CANAL
- SW 70 AVE CANAL
- SW MARAL ESTATES CANAL
- C-100A EXTENSION CANAL
- KENDALE SPUR CANAL 1
- KENDALE SPUR CANAL 3
- KENDALE SPUR CANAL
- KENDALE SPUR CANAL 2

			<ul style="list-style-type: none"> • KENDALE SPUR CANAL 4 • KENDALE SPUR CANAL 5 • KENDALE SPUR CANAL 6 <p>C-102 Elevating secondary system canal banks to the flood criteria elevation for the area:</p> <ul style="list-style-type: none"> • GOULDS CANAL • MILITARY CANAL • C 102N EXTENSION CANAL • QUAIL ROOST TRAILER PARK CANAL <p>Planned Secondary canals or ditches:</p> <ul style="list-style-type: none"> • SW 204 ST <p>C-103 Elevating secondary system canal banks to the flood criteria elevation for the area:</p> <ul style="list-style-type: none"> • NARANJA CANAL • MILITARY CANAL <p>Planned Secondary canals or ditches:</p> <ul style="list-style-type: none"> • SW 169 AVE • Redlands Canal Improvements • C-103N EXTENSION CANAL <p>C-111 AG Planned Secondary canals or ditches:</p> <ul style="list-style-type: none"> • C-113 Extension <p>L-31NS Planned Secondary canals or ditches:</p> <ul style="list-style-type: none"> • C-103N Extension Canal
South Miami-Dade County: proposed structure in the Florida City canal @ SW 107 Avenue.			<p>Design info in the FPLOS model. Culverts included in design based on MDC. Includes a 40cfs pump, however this pump is not operated during design events. Structure S-20 is included in the FPLOS model using flood control criteria for future conditions.</p> <p>Located in Reach D (South Miami Basins) of the C&SF Flood Resiliency Study.</p>
MDC LMS Projects			<p>Miami-Dade County has over 200 mostly Local Mitigation Strategy (LMS) projects in Reach B, over 350 in Reach C and, over 200 in Reach D that consist of culverts and small drainage improvements which were not included in the plan formulation due to minimum impact on the C&SF primary system or structure.</p>
Municipal Projects	CSFFRS ECB	CSFFRS FWO	Relationship to CSFFRS

<p>Fort Lauderdale: Progresso Stormwater Flooding Improvements:</p> <p>Substantially designed as part of the Jan 2018 Stormwater Master Plan. Funding committed in the City's Five-Year Community Investment Plan starting in FY 2024.</p> <p>This project has been designed, permitted, with construction bid documents prepared for advertisement, and is considered shovel ready. Current timeline for bidding and initiating construction is scheduled for FY 2024. Estimated 2-year construction time frame.</p>	<p>Complete and operational.</p>	<p>Complete and operational.</p>	<p>The Progresso Neighborhood, located just northeast of downtown Fort Lauderdale, is approximately 315 acres encompassing 1100+ properties which include warehouses and industrial usage, as well as multifamily buildings.</p> <p>The project will include replacing the aging, undersized, and fragmented stormwater management infrastructure with a new system designed for the current and future climate. The project will reduce the frequency, intensity, and duration of flooding in the neighborhood and provide water quality treatment prior to being discharged into the North Fork of the New River and, ultimately, into the Intracoastal Waterways.</p> <p>This project is located east of the salinity control structures of the C&SF system.</p> <p>Located in Reach A (Broward & Hillsboro Basins) of the C&SF Flood Resiliency Study.</p>
<p>Fort Lauderdale: Dorsey Riverbend Stormwater</p>	<p>Complete and operational</p>	<p>Complete and operational</p>	<p>The Dorsey-Riverbend Neighborhood stormwater project area is approximately 382 acres with ~1300 parcels of primarily low to moderate income residences located within the City of Fort Lauderdale.</p> <p>The project will replace the 60+ year old aging and undersized stormwater management infrastructure with a comprehensive system that will provide protection against large tropical storm events, such as</p>

<p>Flooding Improvements</p> <p>Substantially designed as part of the Jan 2018 Stormwater Master Plan. Funding committed in the City's Five-Year Community Investment</p> <p>This project has been designed and permitted, with construction bid documents prepared for advertisement, and is considered shovel ready. Current timeline for bidding and initiating construction is scheduled for FY 2024. Estimated 2-year construction time frame.</p>			<p>hurricanes, as well as future sea level rise. The improvements will significantly reduce the frequency, intensity and duration of flooding in the neighborhood and improve water quality treatment prior to discharged into the North Fork of the New River and ultimately into the Intracoastal Waterways.</p> <p>This project is located east of the salinity control structures of the C&SF system.</p> <p>Located in Reach A (Broward & Hillsboro Basins) of the C&SF Flood Resiliency Study.</p>
<p>Port Everglades: Bulkhead Replacement Project (Only Bulkhead Replacement Project, Group 1, Project 1 is</p>	<p>Bulkhead Replacement Project, Group 1, Project complete.</p>	<p>Bulkhead Replacement Project, Group 1, Project complete.</p>	<p>North Bulkhead to the Entrance Channel ($\pm 1,220'$). Designed to accommodate five feet of SLR after the design date (~2022).</p> <p>Design info located in Supporting Documentation folder > Broward Co – Port Everglades Seawall Replacement Design: Port Everglades Bulkhead Replacement Design_DF22-1131FINAL-.pdf Port Everglades Bulkhead Replacement Project Group 1 (003).pdf</p> <p>Located in Reach A (Broward & Hillsboro Basins) of the C&SF Flood Resiliency Study.</p>

currently active).			
BRP Group 1 Project 1 is funded by multiple sources including: <ul style="list-style-type: none">• FDEP's Resiliency Grant• USDO T's MARAD Grant Project 1 design completion is 100%, currently in pre-construction and has been advertised.			