DRAFT (11/21/14)

Caloosahatchee River Watershed Projects List

Information contained in the attached tables (one for regional projects, the other for local projects) reflects project data developed for the 2012 update of the Caloosahatchee River Watershed Protection Plan and information provided by local governments. The information has been updated to reflect project status as of summer 2014. It has also been updated to include results from implementers' individual assessments of each project's relative importance.

Project Phase has been categorized as: Near-term to reflect projects anticipated to be completed within the next 5 years, Long-term to reflect projects that are anticipated to be completed in 5 years or longer, and Ongoing to reflect activities that are anticipated to span both near- and long-term.

Category Projects which are located in or will affect more than one county have been categorized as Regional. The remaining projects are categorized as Local.

Agency reflects the principle agency(s) responsible for the implementation of the project.

Estimate Cost reflects the most current estimate provided by the agency and reflects the costs needed to complete the project.

Estimated Nutrient Removal is based on preliminary load reduction estimates from the 2012 CRWPP Update, modified as appropriate, or as provided by the agency. Estimates in the CRWPP were calculated using Southwest Florida Feasibility Study reductions for project types (i.e. filter marsh, STA, shallow water reservoir, restored wetlands etc.).

Unless otherwise noted, estimates for Nitrogen and Phosphorus removal are in metric tons per year.

Estimated Storage is described in acre-feet.

Caloosahatchee River Watershed Projects
REGIONAL PROJECTS

CRWPP ID	Project/Activity	Description	Project Status	Phase	Category/ Agency	Estimated Cost	Estimated Nutrient Removal (source)	Estimated Storage (ac-ft)
		IMMEDIATE REGIONAL PRIORITIES						
CRE-W Res	C-43 West Basin Storage Reservoir Project	CERP component involves an above-ground reservoir (170,000 ac-ft capacity) located south of the CR and west of the Ortona Lock (S-78); this will comprise a significant portion of total water storage requirement for the C-43 Basin. Project is expected to provide multiple benefits including flood control, recreation, habitat enhancement and water recharge. The project will provide for timed releases of water to the estuary and will have O&M costs associated with the pumping operations.	In April 2011, a Record of Decision was issued by the USACE and an approved Project Implementation Report was submitted to the U.S. Congress. Project was authorized in June 2014. Funding to construct an interim project at the site was appropriated by the Florida Legislature in 2014.	Long-term	Regional State	$452.1m (const.)	97 mt/yr TN 8 mt/yr TP (agency)	170,000
CRE 04 CRE 05 CRE-LO 40	Lake Hicpochee North Hydrologic Enhancement Project	The channelization of the Caloosahatchee River in the 1800's drained the lake and bisected it into two distinct parts, north and south. The objective of this project is to enhance the hydrology of Lake Hicpochee North with ancillary benefits of habitat restoration and water quality improvements. Phase I involves construction of a shallow storage feature on approximately 640 acres of land and construction of a spreader canal to deliver water to Lake Hicpochee North. Phase II involves the acquisition of an additional 2,454 acres for use as a flow equalization basin. Project is expected to provide multiple benefits including flood control, habitat enhancement and water recharge.	Design activities for Phase I are ongoing and construction is scheduled to begin by June 2015. Phase II requires land acquisition and the design and construction of the flow equalization basin. Project has linkages to Nicodemus Slough water storage project.	Short-term (Phase I)	Regional SFWMD	Phase I $17,200,000 (funded) Phase II $16,600,000 (acq.)		
CRE 10	C-43 Water Quality Treatment and Demonstration Project (BOMA Property)	The objective of this project is to demonstrate and implement cost effective wetland-based strategies for reducing TN load, and other constituents including TP and TSS, to the Caloosahatchee River and its downstream estuarine ecosystems. Special attention will be given to reducing dissolved organic nitrogen (DON) as it constitutes the most abundant and recalcitrant form of TN in the Caloosahatchee River. This is a multi-phased project involving bioassays, mesocosms, test cells, and field-scale cells to test, optimize, and demonstrate wetland-based technology effectiveness ultimately leading to implementation of a full sized treatment facility. It is envisioned that information gained from this project will be applicable to other South Florida Systems.	In late 2012, a conceptual design for a testing facility was completed. Full engineering design and permitting of the testing facility is contingent upon funding. The District will be performing the bioassays and mesocosms study in FY15 and 16.	Long-term	Regional SFWMD, Lee County	$8,000,000 (des. & const.)	23% TN min. reduction goal (agency)	
	Babcock Ranch Preserve Water Storage Project	Project purpose is to reduce stormwater runoff to the Caloosahatchee River originating from approximately 4,220 acres of watershed located in the southwest portion of the Babcock Ranch State Preserve. The project will provide shallow water storage by improving existing berms, constructing new berms, modifying existing water control structures and installing new water control structures. Project is expected to provide multiple benefits including flood control, habitat enhancement and water recharge.	Design to be conducted in FY14/15; funded by DACS. Construction funding will be required in FY15/16. Project has linkages to Jacks Branch/County Line Ditch project.	Near-term	Regional TBD	$1,200,000 (des. & const.)		1,500

		NEAR-TERM REGIONAL PRIORITIES						
CRE 13	West Caloosahatchee Water Quality Treatment Area (C-43 reservoir site)	Project consists of a water quality facility in association with C-43 West Basin Storage Reservoir site to treat reservoir water to reduce nutrient concentrations from the CRE and nutrient pollutant loading downstream. Project is expected to provide multiple benefits including habitat enhancement, recreation and water quality improvements. The project is expected to have O&M costs associated with pumping operations.	Project was included in the Southwest Florida Comprehensive Watershed Plan; however there has not been any additional design or funding. 1,500 acres was retained in ownership by the SFWMD for potential future water quality treatment. Funding to initiate a conceptual design study is required.	Long-term	Regional TBD			
	Lake Hicpochee South Project	The purpose of this project is to enhance the hydrology of Lake Hicpochee South by redirecting storm water through upland and wetland areas rather than a canal. Project is expected to provide multiple benefits including flood control, habitat enhancement, and water quality improvements. The project is expected to have O&M costs associated with pumping operations.	In 2008 a conceptual design report was completed that had a high implementation cost for the project. In 2013 a conceptual re-evaluation report was completed in cooperation with the Flaghole Drainage District and Hendry Hilliard Water Control District to refine portions of the 2008 report in order to integrate existing infrastructure where possible to maximize the cost-effectiveness of the project. Project requires funding for design and construction. Land is in public ownership. Will require collaboration with local 298 Districts to implement.	Long-term	Regional TBD	$4,5000,000 (const.)		
		CONCEPTUAL REGIONAL PROJECTS NEEDING FURTHER DEVELOPMENT OR ADDITIONAL FEASIBILITY WORK						
	Charlotte Harbor Flatwoods Initiative	The Charlotte Harbor Flatwoods Initiative is a multi-phased regional hydrologic restoration effort with the overall goal to restore historic flows to Charlotte Harbor. The project involves the development of regional water storage and treatment facilities, establishment of conveyance systems and restoration of habitat to restore sheetflow across five watersheds encompassing approximately 90 square miles. It will establish linkages between Cecil Webb WMA and Yucca Pens WMA. Project is expected to provide multiple benefits including flood control, habitat enhancement, recreation opportunities, water quality improvements and water recharge. The project is expected to provide timed releases of water to enhance hydroperiods, have limited O&M costs and can be modified to meet future needs.	Potential land acquisition of 670 acres in conjunction with I-75 improvements is anticipated in 2014. Funding for final design and construction of storage facility is required Funding for conceptual design is expected to be provided by SWFWMD and FDOT and to begin in winter 2014. Construction funding will be required. Funding for the design and construction of conveyance systems will be required. Project is supported by over a dozen state, federal and local agencies.	Long-term	Regional Multiple	$4,000,000 (acq) $10,000,000 (des. & const.)		
CRE 128	East Caloosahatchee Storage Project	Project includes constructing distributed reservoirs on 7,500 acres of private properties, with the potential to create 100,000 ac-ft of above ground storage. Project could be designed to allow for dry season releases. It is expected to have O&M costs associated with pumping operations.	Further study required to develop project(s). Assumes the acquisition of approximately 7,500 acres.	Long-term	Regional TBD		69 mt/yr TN 5.2 mt/yr TP (CRWPP)	100,000
CRE 128a	Caloosahatchee Storage – Additional Project	Project creates 50,000 ac-ft of aboveground storage in Caloosahatchee River Watershed. Project could be designed to allow for dry season releases. It is expected to have O&M costs associated with pumping operations.	Further study required to develop project(s). Assumes the acquisition of approximately 3,500 acres.	Long-term	Regional TBD		58 mt/yr TN 4.3 mt/yr TP (CRWPP)	50,000
CRE 11	Caloosahatchee Ecoscape Water Quality Treatment Area Project	Project consists of a constructed wetland designed for optimal removal of TN from the CRE. Conceptual project developed to reduce nutrient pollutant loading downstream. Strategy of this effort was to formulate both structural and non-structural features.	Project was included in the Southwest Florida Comprehensive Watershed Plan (formerly Southwest Florida Feasibility Study), which is in the process of being completed; however, there has not been any additional design or funding work performed.	Long-term	Regional TBD		50.0 mt/yr TN 12.0 mt/yr TP (CRWPP)	

CRE-LO 41	C-43 Distributed Reservoirs Project	Project involves construction of multiple storage reservoirs to capture excess runoff for use to meet both environmental flows to the CRE and agricultural demands. Project could be designed to allow for dry season releases. It is expected to have O&M costs associated with pumping operations.	Further study required to develop project(s). Assumes the acquisition of approximately 6,600 acres.	Long-term	Regional TBD		39.4 mt/yr TN 2.6 mt/yr TP (CRWPP)	85,410
CRE 01 CRE 02	Recyclable Water Containment Areas Project	Project uses agricultural or other lands to provide temporary storage, remove nutrients, and treat agricultural stormwater runoff which will help reduce nutrient loading to the CRE. Involves the construction of earthen berms to retain up to two feet of water storage. Would remain operational approximately 5 years, then returned to agricultural production. Project is expected to provide multiple benefits including water reuse and water recharge. It is expected to have O&M costs.	Project was included in the Southwest Florida Comprehensive Watershed Plan (formerly Southwest Florida Feasibility Study), which is in the process of being completed. Funding for design and construction will be required. Additionally, partnerships will be required to implement.	Long-term	Regional TBD		67.5 mt/yr TN 14.3 mt/yr TP (CRWPP)	
	Lee-Charlotte County Border Area Hydrologic Improvement	This project involves reconnecting and improving the hydrology of the area through the construction of a series of filter marshes and weirs within and adjacent to the FPL transmission line. The project will create a conveyance system that during the rainy season will function to connect multiple watersheds within the corridor. It will allow excess water from one watershed to flow to the next watershed via a series of filter marshes providing water treatment and storage before entering the CRE. Project is expected to provide multiple benefits including flood control, habitat enhancement, water quality improvements and water recharge.	A conceptual design study is required. It is unknown at this point if land acquisition will be required. The project will require collaboration with FPL and multiple land owners. It is anticipated to take 15 years to fully implement, but could be constructed in phases.	Long-term	Regional Lee County	$400,000 (feas.) $2,000,000 (design) $5,000,000 (acq.) $12,600,000 (cons.)		
	ASR on Public Lands	Development of Aquifer Storage and Recovery arrays on public lands to capture surplus water flow in watershed. Potential locations include BOMA property and Babcock Ranch Preserve. It is expected to have O&M costs associated with pumping operations.	Further study required to develop project(s).	Long-term	Regional TBD			
	Carlos Waterway Conveyance	A conceptual project to use an existing waterway owned by East County Water Control District to convey water from C-43 West Basin Storage Reservoir into the Caloosahatchee. Project is expected to provide habitat enhancement, and water quality improvements.	A conceptual design study is required.	Long-term	Regional TBD			
		REGIONAL RESTORATION PROJECTS						
CRE 150	Tape Grass (*Vallisneria americana*) Plantings Upstream of S-79 Project	District study helps reestablish viable tape grass seed stock for future populations in the upper CRE. The goal is to create a viable tape grass seed stock in the upper CRE; test two genetic strains of South Florida tape grass for survival, growth, and flower and seed production for two years; and determine how long enclosures need to remain in place to ensure survival.	In 2011, cages were monitored weekly in June and bimonthly in July and August; to date, cages are holding up well. The Lake Trafford plants/cages are showing significantly more growth at both sites compared to those in Lake Kennedy. In August, spread outside of the cages and new growth in the cages was observed at Site 2 for Lake Kennedy treatments. Funding for additional planting and monitoring was appropriated for FY14-15.	Near-term	Regional SFWMD, Lee County			
	Oxbow Restoration	Project involves the restoration of remnant oxbows within the Caloosahatchee River. Project would involve limited dredging of the former river channel and restoration/preservation of adjacent littoral vegetation. Approximately 40 oxbows have been identified for restoration. Project is expected to provide multiple benefits including recreation, habitat enhancement, and water quality improvements.	Several oxbows are publicly owned. Could involve collaboration with multiple public and private entities. Project budget for Oxbow24 was $500,000. Estimated nutrient removal cost was $140/lbs TN, $3,500/lbs TP	Long-term	Regional TBD	$500,000 per oxbow		

	Tape Grass Plantings below S-79	Involves the restoration and enhancement of +/-1,200 acres of historic submerged aquatic vegetation (tape grass) in the oligohaline littoral zones of the Caloosahatchee River below S-79. The project will involve the planting and establishment of between 16-20 large “founder colonies” in the upper estuary and tributaries to restore fish and wildlife habitat and serve as a seed bank for recovery of historic distribution and density of tape grass.	There is no local sponsor for this project. Project was submitted for RESTORE funding.	Long-term	Regional TBD	$2,312,900		

Caloosahatchee River Watershed Projects
LOCAL PROJECTS

CRWPP ID	Project/Activity	Description	Project Status	Phase	Category/ Agency	Estimated Cost	Estimated Nutrient Removal (mt/yr)	Estimated Storage (ac-ft)
		LOCAL PRIORITIES FOR THE NEAR TERM						
CRE 142	Harns Marsh Improvements – Phase III (West Marsh) Project	Project involves an existing 578-acre ECWCD stormwater treatment facility. Phase III includes designing the West Marsh (additional 202+/- acres) to expand the marsh treatment facility. This will reduce freshwater discharges to the Caloosahatchee River (via the Orange River) and provide water quality treatment. Project is expected to provide multiple benefits including flood control, recreation, habitat enhancement, water quality improvements and water recharge.	All necessary lands have been acquired. Project design is currently underway. The project involves collaboration with multiple agencies including FDOT as a potential source for construction funding.	Near-Term	Local ECWCD	$6,000,000	0.91 mt/yr TN 0.24 mt/yr TP (agency)	400-800
CRE 147	Nalle Grade Stormwater Park Project	Lee County project proposes to restore/modify an existing degraded marsh system and design a stormwater retention facility to minimize flooding in the Bayshore Creek Watershed. Project is expected to provide multiple benefits including flood control, habitat enhancement, water quality improvements and water recharge.	Project is in design and permitting. $500,000 in Legislative funding was appropriated. Construction is scheduled to begin in 2016.	Near-term	Local Lee County	$3,300,000 (design & cons.)	0.54 mt/yr TN 0.14 mt/yr TP (CRWPP)	
CRE 139	Ford Canal Filter Marsh (Ford Street Preserve) Project	City of Fort Myers project creates a filter marsh to improve overall quality of storm water discharging into Billy Creek; marsh is intended to work collectively with other treatment areas along Billy Creek and its tributaries. Project creates a treatment marsh designed to divert and treat low flows from low-level rain events using a diversion weir.	Phase 1 complete, Phase 2 awarded with construction to begin in August 2014 and Phase 3 is being permitted.	Near-term	Local Ft. Myers	$2,000,000	0.54 mt/yr TN 0.21 mt/yr TP (CRWPP)	
CRE 140	Fichter's Creek Restoration Project	Project provides ecosystem restoration through hydrologic and water quality improvements in Fichter's Creek, and provides flood protection for neighboring areas; components include 3.2 acres of lakes, three dry detention areas (7.1 acres), culvert installation/ replacement, filter marsh creation, and berm work. Project is expected to provide multiple benefits including flood control, habitat enhancement and water recharge.	No land acquisition is required. Project has been permitted; construction is planned to begin in FY16.	Near-term	Local Lee County	$1,400,000 (const.)	0.09 mt/yr TN 0.02 mt/yr TP (CRWPP)	6
CRE 30	Aquifer Benefit and Storage for Orange River Basin (ABSORB) Project	Project involves increasing stormwater storage capacity and groundwater recharge in the Southwest area of Lehigh Acres by constructing 27 weirs. Project is expected to provide multiple benefits including flood control, water quality improvements and water recharge.	Project is designed and permitted. Scheduled to begin construction by the end of 2014. Partial funding is in place (FDEP $1.2m) and the rest is being worked on with an agreement from FDOT for the SR 82 widening project.	Near-term	Local ECWCD	$2,400,000 (const.)	3.72 mt/yr TN 0.37 mt/yr TP (agency)	800-1,200
CRE 135	Hickey Creek Canal Widening Project	Project includes the canal widening and construction of littoral zones along three miles of Hickey Creek Canal. Project is expected to provide multiple benefits including flood control, habitat enhancement, water quality improvements and water storage.	No land acquisition is required. Project is designed and permitted. Construction is waiting on funding and a project source to take the fill material removed.	Near-term	Local ECWCD		0.2 mt/yr TN 0.05 mt/yr TP (agency)	420
CRE 22	Hendry Extension Canal Widening Project	Project provides additional water quantity storage within existing canal right-of-way to help provide more stormwater storage in the 5.5 mile section of Hendry Extension Canal. Project is expected to provide multiple benefits including flood control and water recharge.	Project permitted and designed, construction projected in FY2015. FDOT providing funding through SR82 expansion.	Near-term	Local ECWCD	$6,000,000 (const.)	0.36 mt/yr TN 0.1 mt/yr TP (agency)	190

CRE 44	Hydrologic Restoration of Bob Janes Preserve	Project will serve to restore the natural sheet flow and possibly impound water within the abandoned farm fields to allow aquifer recharge, reduce high flows in a manmade ditch (Lighter Canal) during the wet season. Project is expected to provide multiple benefits including flood control, habitat enhancement, water quality improvements and water recharge.	Phase I involving the restoration of former agricultural fields was completed in 2014. The second phase is awaiting construction funds. No land acquisition is required.	Near-Term	Local Lee County	$600,000 (const.)		
	Hydrologic Restoration of Six Mile Cypress Slough Preserve - North	The historical site hydrology and ecosystem have been significantly altered. Water from potions of the preserve has been diverted north into the Orange River, rather than south into Six Mile Cypress Slough. Restoration of historic flows could benefit Six Mile Cypress Slough and reduce the amount of water flowing into the Orange River and ultimately the Caloosahatchee River. Project is expected to provide multiple benefits including flood control, recreation, habitat enhancement, water quality improvements and water recharge.	Phase I, the impoundment, is permitted and will undergo construction during 2014. Additional construction funds will be needed to complete the project phase. Phase II, the rehydration of the western cypress dome, is being permitted and will be constructed with financial help by the Florida Department of Transportation. Phase III, will require the design, permitting and construction of a flowway which will bring water to Phase 1 of the project.	Near-term	Local Lee County	$1,000,000		
CRE 53	Hydrologic Restoration of Caloosahatchee Creeks Preserve	The project area is a former marsh that was disturbed when covered with fill during the dredging of the Caloosahatchee River in the 1950s. The project will cut a meandering stream channel through the spoil in the location near a historic channel and rehydrate former wetlands. Project is expected to provide multiple benefits including habitat enhancement, water quality improvements and water recharge.	No land acquisition is required. The project has been designed and permitted.	Near-term	Local Lee County	$650,000 (cons.)		
	Hydrologic Restoration of Telegraph Creek Preserve	This project will help to restore the natural sheet flow from the 800-acre palmetto prairie and wet prairie/hydric flatwoods system into Telegraph Creek where ditches were installed by previous owners to help drain this portion of the preserve. Geowebbing and/or culverts will be installed along existing management trails that are eroding into the creek. The existing swale where the water formerly would have flowed to the creek will be graded and cleaned out. The washouts will be recontoured and plantings will be installed to reduce further soil erosion into the creek. Project is expected to provide multiple benefits including flood control, habitat enhancement, water quality improvements and water recharge.	No land acquisition is required. The project requires further design.	Near-term	Local Lee County	$500,000 (cons.)		
	Ft. Myers Central Sewer Expansion	Septic tank conversion to central sewer to reduce nutrient loading in the watershed and expand reclaimed water from 6 MGD to 11 MGD. The project area is located within the city limits east of I-75.	The project is tentatively scheduled for FY 2016-2017 based on funding availability	Near-Term	Local Ft. Myers	$11,000,000		
	Ranch Lakes Estates Central Sewer Project	Septic tank conversion to central sewer located at Ranch Lakes Estates in Moore Haven. Involves the construction of additional gravity sewer collection system in the Moore Haven downtown and Ranch Lakes Estates area adjacent to the Caloosahatchee River to homes now served by individual private old and failing septic systems. This project will reduce nutrient loading to the Caloosahatchee Basin.	The wastewater improvement project includes the preliminary engineering services, design, permitting and construction.	Near-term	Local Glades County	$350,000		
CRE 44	Jacks Branch/County Line Ditch	Project involves improvement of water flow within Jacks Branch watershed and modification of the County Line Ditch by widening the ditch and providing weirs for increased water storage and treatment. Project is expected to provide multiple benefits including flood control, water quality improvements and water recharge.	All necessary land has been acquired. The project has been designed and permitted. Requires construction funding. Could be constructed in conjunction with Babcock Ranch Preserve Project.	Near-Term	Local Hendry County	$3,600,000 (const.)		

CRE 121	City of LaBelle Stormwater Master Plan Implementation	Project includes stormwater conveyance and water quality storage improvements in the City of LaBelle.	The C-5 portion of the city's 2004 Master Stormwater Plan was completed in 2010. These stormwater management improvements included retrofitting stormwater catch basins and adding vegetative swale treatment. Funding required to continue design and construction of additional projects.	Near-Term	Local LaBelle		34.8 mt/yr TN 5.8 mt/yr TP (CRWPP)	
CRE 123	North Ten Mile Canal Stormwater Treatment System Project	Project provides stormwater storage and treatment for an urban and commercial area with the City of Ft. Myers. It is intended to minimize peak flows and enhance water quality within Manuel's Branch and Carrell Canal.	FDEP permit is being reviewed for a modification. Project scheduled to begin in next five years	Near-term	Local Ft. Myers	$4,500,000	0.82 mt/yr TN 0.33 mt/yr TP (CRWPP)	
	Sunniland/Nine Mile Run Drainage Improvements	Project involves the restoration of historical flows to Buckingham Trails Preserve. Consists of the rehydration of the preserve through the removal of manmade alterations to correct the natural sheetflow and hydrology. Project is expected to provide multiple benefits including flood control, habitat enhancement and water recharge.	Requires land acquisition. Project design scheduled during FY14/15 with construction in FY15/16.	Near-term	Local Lee County	$50,000 (acq.) $100,000 (des.) $300,000 (con.)		
CRE 64	Yellow Fever Creek/Gator Slough Transfer Facility Project	Project involves the hydrologic restoration of the historical flows to the headwaters of Yellow Fever Creek. Project includes the construction of an interconnection facility between Gator Slough Canal and Yellow Fever Creek to transfer surface waters during high flow. Flows are currently intercepted by Gator Slough Canal and redirected to Matlacha Pass.	Conceptual design is complete. Permitting to begin in FY15 pending further coordination between Lee County and City of Cape Coral.	Near-term	Local Lee County Cape Coral	$671,000 (design & cons.)	0	0
	Billy Creek Restoration Dredging	Removal of exotic vegetation and dredging of Billys Creek.	Project is permitted. Project to begin in FY2016.	Near-term	Local Ft. Myers	$680,000		
	Moore Haven Canal Dredging	Deepening and widening of Moore Haven Canal. Will provide sediment reduction, an increase in wetland habitat, and water quality benefits to the Caloosahatchee River	State and federal permits have been approved. Partially funded in FY13-14.	Near-term	Local Glades County	$12,000,000		
		LONG-TERM LOCAL PROJECTS						
CRE 143	Greenbriar Preserve Project	Project involves modifications within Greenbriar Swamp and to the connecting canal/swale system to increase surface water connectivity and storage within the swamp, thereby reducing freshwater discharge to the Caloosahatchee River via Hickey's Creek. Project is expected to provide multiple benefits including flood control, habitat enhancement and water recharge.	Project is included in the ECWCD FY2014-FY2018 Capital Improvement Plan. Project requires further design work.	Long-term	Local ECWCD Lee County		1.45 mt/yr TN 0.36 mt/yr TP (agency)	600
CRE 144	Section 10 Storage Project	Project includes modifying an existing mine pit to allow for additional surface water storage in the ECWCD Water Management System; also, includes improvements to the connecting canals, control structures, and a pump station.	Requires land acquisition. Project requires further design work.	Long-term	Local ECWCD	$6,500,000	1.63 mt/yr TN 0.41 mt/yr TP (agency)	1,200
CRE 21	Hendry County Storage Project	Project consists of the construction of shallow water storage facility to help reduce nutrient loading to the CRE. Project is expected to provide multiple benefits including flood control, habitat enhancement, water quality improvements and water recharge. The project is expected to have the capability of providing timed releases of water to the estuary. It will be expected to have O&M costs associated with pumping operations.	Project was included in the ECWCD FY2010-FY2014 Capital Improvement Plan. ECWCD has evaluated three sites for possible acquisition. Funding will be required for land acquisition, design and construction.	Long-term	Local ECWCD		2.72 mt/yr TN 0.68 mt/yr TP (agency)	

CRE 44	Spanish Creek Preserve Restoration	Project involves the acquisition of agricultural lands to create shallow water storage and wetland flow-way to rehydrate the Ruby Daniels Preserve at Spanish Creek. Project is expected to provide multiple benefits including flood control, habitat enhancement, water quality improvements and water recharge.	Phase 1 involving the rehydration of a portion of Ruby Daniels Preserve was completed in 2014. Design and acquisition of approximately 640 acres land is required to construct the storage and complete rehydration of Spanish Creek.	Long-Term	Local Lee County	$14,800,000 (acq. des. const.)		
	Lehigh Wetland Restoration	Undeveloped lots will be purchased to restore remnant wetlands through the construction of one weir. Project is approximately 710 acres located in the Greenbriar Swamp area. Project is expected to provide multiple benefits including flood control, habitat enhancement, water quality improvements and water recharge.	Funding needed to initiate the project.	Long-term	Local Multiple	$70,000,000 (acq. des. & const.)	0.34 mt/yr TN 0.10 mt/yr TP (agency)	1,500
CRE 122	Mirror Lakes Storage/Rehydration Project	Multi-phase project intended to rehydrate Mirror Lakes (aka Halfway Pond), reduce peak flow discharges to the Orange River, and restore flows to the headwaters of the Estero River. Project is expected to provide multiple benefits including flood control, habitat enhancement, water quality improvements and water recharge.	Phase I (rehydrate Mirror Lakes) completed October 2012 to include a pump station and approximately 1,000 acre-ft of storage. Phase II and III involves moving water south under SR 82, and is in the planning and preliminary design stage.	Long-term	Local ECWCD FDOT SFWMD	Phase II: $300,000 (const.) Phase III: TBD	Phase II & III: 0.24 mt/yr TN 0.03 mt/yr TP (agency)	100-500
CRE 77	Cape Coral Canal Stormwater Recovery by Aquifer Storage and Recover (ASR) Project	Project uses ASR wells in Cape Coral to overcome water shortfall in the dry season and provide flood attenuation in the wet season. Project is expected to provide multiple benefits including flood control, water quality improvements and water recharge.	Three ASR wells were constructed in 2007; however, cycle testing has not started and construction of pumping stations and associated connections is not anticipated until 2015 due to budgetary constraints.	Long-term	Local Cape Coral		4.13 mt/yr TN 0.82 mt/yr TP (CRWPP)	
	Stumper Jumper Ranch Land Acquisition	Project involves the acquisition and restoration of 149 acres of disturbed land located within the Spanish Creek watershed in northeast Lee County. Project is expected to provide multiple benefits including flood control, habitat enhancement, water quality improvements and water recharge	Project design and acquisition required. Former Lee County Conservation 20/20 nomination.	Long-term	Local Lee County	$1,482,250 (acq.)		
CRE 29	Lehigh Acres Wastewater Treatment and Stormwater Retrofit Project	Project involves installing stormwater treatment features in Lehigh Acres, updating current stormwater management system, and converting high-density septic tanks to centralized wastewater treatment. Includes the conversion of 12,666 septic tank systems to central sewer. Project is expected to provide multiple benefits including flood control and water quality improvements. The project is expected to have O&M costs associated with the central sewer system.	Nearly 100 single family homes in Lehigh Acres have been connected to the centralized wastewater treatment plant since 2009. Project requires funding to continue.	Long-term	Local Multiple	$197,238,350 (sewer component)	48.66- 87.59 mt/yr TN (agency)	
CRE 126	Fort Myers-Cape Coral Reclaimed Water Interconnect Project	Project includes installing a 20-inch diameter transmission line from Fort Myers Treatment Plant to Cape Coral Reclamation Treatment Plant. This is intended to help prevent discharging 9 mgd treated water into the CRE.	The feasibility study completed in 2010 found that constructing a disposal well was a less expensive near-term option; however, project is still desirable as a long-term option. Legislative funding for additional study was appropriated for FY14-15.	Long-term	Local Cape Coral Ft. Myers			
CRE 69	Cape Coral Wastewater Treatment and Stormwater Retrofit Project	City of Cape Coral utility expansion project to convert septic systems to gravity sewers and replace older stormwater inlets with newer inlets designed to assist stormwater management. Includes improvements to existing sewer system and incorporation of roadside swale into drainage system. Project is expected to provide multiple benefits including water quality improvements, water reuse and water recharge.	Project on-going. Next scheduled area is located in Northwest Sector outside of Caloosahatchee watershed.	Long-term	Local Cape Coral		27 mt/yr TN 5.4 mt/yr TP (CRWPP)	

CRE 125	Shoemaker-Zapato Canal Stormwater Treatment Project	Project includes installing weir/water control structures to increase channel storage and provide peak flow attenuation. It will enhance water quality and reduce erosion and siltation into Billy Creek.	Additional study required	Long-term	Local Ft. Myers		0.54 mt/yr TN 0.14 mt/yr TP (CRWPP)	
CRE 141	Winkler Canal Treatment Marsh Project	Project creates a treatment marsh designed to divert and treat low flows from low-level rain events using a diversion weir.	Project has been permitted but is on-hold pending funding for land acquisition.	Long-term	Local Ft. Myers		0.2 mt/yr TN 0.08 mt/yr TP (CRWPP)	

Caloosahatchee River Watershed Projects
ON-GOING PROGRAMS

CRWPP ID	Project/Activity	Description	Project Status	Phase	Category/ Agency	Estimated Cost	Estimated Nutrient Removal (mt/yr)	Estimated Storage (ac-ft)
CRE 149	Northern Everglades – Payment for Environmental Services (NE-PES) Program	NE-PES solicitation is an innovative approach that allows cattle ranchers to deliver environmental services for water and nutrient retention. The goal is to establish relationships via contracts with private landowners to obtain water management services of water and nutrient retention to reduce flows and nutrient loads to Lake Okeechobee and the St. Lucie and Caloosahatchee rivers.	First solicitation: 8 projects under contract, none within the Caloosahatchee Watershed. Second solicitation: 2 projects are within the Caloosahatchee Watershed. The Mudge Ranch project, located in Glades County north of the Caloosahatchee River, is operational. The Babcock Property Holdings project, located in Charlotte County, is being negotiated.	Ongoing	Regional Dispersed Water Mgmt. SFWMD	$2,000,000 Both Projects Combined		1,610
CRE 152	Dispersed Water Management Water Farming Assessment	Utilize fallow/out-of-production citrus lands to store water and attenuate nutrients. To determine the overall feasibility of the water farming concept, information with respect to environmental benefits gained compared to the cost estimates associated with on-site construction, infrastructure improvements, environmental assessments, and facility maintenance needs to be evaluated.	The District entered into a cooperative agreement with Gulf Citrus Growers Association to assess the feasibility of water farming. The feasibility study was completed in December 2013. Funding for further implementation is not available at this time.	Ongoing	Regional Dispersed Water Mgmt. SFWMD	TBD		
CRE 153	Dispersed Water Management Interim Sites	Parcels scheduled to become regional restoration projects present an opportunity to provide water retention through interim, low-cost alterations to the existing surface water management systems. These parcels would then provide an interim role of contributing to the watershed restoration effort while the final designs are completed and approved. If the public lands are being leased, then water management strategies will be jointly developed with the lessees to reduce discharges while not adversely affecting flood protection (including adjacent properties) and water quality.	Interim lands in the Caloosahatchee Watershed include BOMA and C-43 reservoir site.	Ongoing	Regional Dispersed Water Mgmt. SFWMD	$700,000		1,316
CRE-LO 03 CRE-LO 05 CRE-LO 63	Urban BMPs: Urban Fertilizer Rule [Lake Okeechobee Estuary and Recovery (LOER)] & Florida Yards and Neighborhoods Program	The Urban Fertilizer Rule is an FDACS rule that regulates the content of phosphorus and nitrogen in urban turf fertilizers to improve water quality. The Florida Yards and Neighbors Program provides education to citizens by promoting land use designs to minimize pesticides, fertilizers, and irrigation water.	Since 2009, the UF/IFAS Florida Yards and Neighborhood Program has expanded from a homeowner approach to cover a broader audience (e.g., builders, developers, architects).	Ongoing	Regional Source Control Multiple			

CRE-LO 01,02,49	Agricultural BMPs – Owner Implemented, Funded Cost-Share, and Cost-Share Future Funding	Implements agricultural BMPs and water quality improvement projects to reduce the discharge of nutrients from the watershed.	Total agricultural acreage in the Caloosahatchee Watershed is approximately 476,568 acres. Approximately 71 percent of this acreage is enrolled in owner implemented BMPs and have cost-share type BMPs in place. Goal is 100% coverage	Ongoing	Regional Source Control DACS			
CRE-LO 09	Coastal & Estuarine Land Conservation Program (CELCP)	Established in 2002 by NOAA, CELCP protects important coastal and estuarine areas that have significant conservation, recreation, ecological, historical, or aesthetic values, or that may be converted from their natural or recreational state to other uses (CELCP Final Guidelines, 2003). In Florida, CELCP is coordinated through FDEP's Coastal Management Program.	The primary purpose of the program is to acquire property in coastal and estuarine areas that have significant conservation, recreation, ecological, historical, or aesthetic values, or that are threatened by conversion from a natural or recreational state to other uses. The program provides up to $3 million dollars for each eligible project.	Ongoing	Regional DEP			
CRE-LO 91	Farm and Ranchland Partnerships	There are two USDA-NRCS farm and ranchland partnership programs: Farm and Ranchlands Protection Program, and Wetlands Reserve Program (WRP). Under these programs, landowners sell development rights to land and place it in a conservation easement that permanently maintains land as agriculture and open space.	The District executed a Memorandum of Understanding in October 2010 to assist USDA-NRCS by providing technical assistance in implementing their WRP projects.	Ongoing	Regional Dispersed Water Mgmt. SFWMD			
CRE-LO 63	Wastewater & Stormwater Master Plans	Master Plans outline implementing urban stormwater retrofit or wastewater projects to achieve additional nutrient reductions and water storage basin-wide by working with entities responsible for wastewater/stormwater programs in the service area.	See the CRWPP Construction Project for the implementation status of urban stormwater retrofits and wastewater projects.	Ongoing	Local Source Control			