

# ST. LUCIE RIVER / C-23 WATER QUALITY PROJECT



## ABOUT THE PROJECT

The water quality restoration/storage project located at McCarty Ranch Extension and Preserve will keep nearly 9 billion gallons of water from entering the North Fork of the St. Lucie River annually. This will result in a 21% reduction in excess freshwater discharge from the C-23 Canal into the river.

## KEY FACTS

This water quality/storage treatment project will take approximately 1,871 acres of fallow citrus grove at McCarty Ranch Extension and a 315-acre water impoundment, located at McCarty Ranch Preserve, and convert them into a shallow water storage facility consisting of seven reservoirs capable of receiving water diverted from the C-23 Canal. It also will capture an annual average of 53 inches of rain fall on the property reducing the need to discharge.



## FUNDING NEEDED

- \$4,367,357 Million Total for Areas 4-7
- \$180K Annual Operating Cost

### 21%

Reduction in excess freshwater discharge from the C-23 Canal into the North Fork of the St. Lucie River.

### RECHARGE

the local water table.

### 71,797 LBS. & 17,210 LBS. NITROGEN & PHOSPHORUS

Removed from the water entering the North Fork of the St. Lucie River.

### 6.330 BILLION

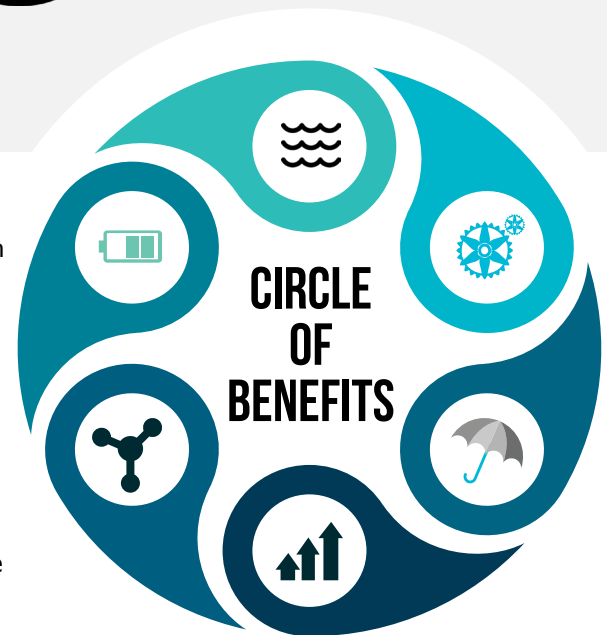
gallons of water diverted from the C-23 Canal annually.

### 2.554 BILLION

gallons of rainfall and excess water during annual wet season stored annually.

### 8.884 BILLION

gallons total will be kept from entering the North Fork of the St. Lucie River annually.



## ALTERNATE WATER SOURCE

The Water Quality Storage/Treatment Project is the precursor to the City's future alternative water supply. A proposed future cyclic surface water treatment plant will be built to treat the water being pumped from the C-23 Canal to drinking water standards. A certain amount of this treated water will be distributed for public consumption and the rest will be stored in on-site deep aquifer storage and recovery wells (ASRs). The stored water will then be recovered and distributed for consumption ensuring that Port St. Lucie is able to meet growing water needs for generations to come.

# AREA MAP

\*ALL AREAS WILL BE COMPLETE WITHIN TWO YEARS OF RECEIVING FUNDING.

## AREA 1

**Completion Date:** July 2019  
**Area Size:** 210 acres  
**Actual Cost:** \$2,029,379  
**Gallons of water pumped from C-23 Canal:** 692,108,434

**ANNUAL REDUCTION OF NUTRIENTS**  
**Total Phosphorus:** 1,882 LBS.  
**Total Nitrogen:** 7,850 LBS.  
**Total Suspended Solids:** 43,291 LBS.

**Funding Received:**

- \$200,000 from South Florida Water Management District (SFWMD) Cooperative Funding Program for construction-related costs.
- \$752,103 from Florida Department of Environmental Protection (FDEP) FY17 Section 319(h) Grant to be used for construction-related costs.

## AREA 2

**Completion Date:** August 2020  
**Area Size:** 275 acres  
**Actual Cost:** \$2,577,525  
**Gallons of water pumped from C-23 Canal:** 938,135,651

**ANNUAL REDUCTION OF NUTRIENTS**  
**Total Phosphorus:** 2,551 LBS.  
**Total Nitrogen:** 10,641 LBS.  
**Total Suspended Solids:** 58,680 LBS.

**Funding Received:**  
**\$2,024,020 Grants Awarded**

- Legislative grant for \$1,080,000 (\$180,000 for design and \$900,000 for construction)
- Indian River Lagoon National Estuary Program funding received for \$300,000.
- Florida Department of Environmental Protection (FDEP) for FY18 Section 319(h) Grant \$644,020 (for construction-related costs).

## AREA 3

**Completion Date:** January 2021  
**Area Size:** 280 acres  
**Estimated Cost:** \$2,605,109  
**Gallons of water pumped from C-23 Canal:** 932,714,685

**ANNUAL REDUCTION OF NUTRIENTS**  
**Total Phosphorus:** 2,536 LBS.  
**Total Nitrogen:** 10,579 LBS.  
**Total Suspended Solids:** 58,341 LBS.

**Funding Received:**

- Legislative grant for \$180,000 for design. Construction expected to begin January 2021.
- \$680,356 FDEP Section 319(h)
- \$500,000 State Water Quality Restoration Grant
- \$448,700 SFWMD AWS

**Grants Pending:**

- \$796,053 SFWMD (AWS) (CAPTEC)
- \$170,671 IRL Water Quality Improvement Projects
- \$795,954 FDEP Water Protection Funds

## AREA 4

**Area Size:** 304 acres  
**Estimated Cost:** \$2,762,154  
**Gallons of water pumped from C-23 Canal:** 1,012,661,658

**ANNUAL REDUCTION OF NUTRIENTS**  
**Total Phosphorus:** 2,753 LBS.  
**Total Nitrogen:** 11,486 LBS.  
**Total Suspended Solids:** 63,342 LBS.

**Funding Received:**

- \$487,200 SFWMD AWS
- \$718,950 FDEP Section 319(h) grant

**Grants Pending:**

- \$1,381,077 SFWMD (AWS) (CAPTEC)
- \$434,402 IRL Water Quality Improvement Projects
- \$1,380,000 FDEP Water Protection Funds

## AREA 5

**Area Size:** 77 acres  
**Estimated Cost:** \$748,967  
**Gallons of water pumped from C-23 Canal:** 256,496,538

**ANNUAL REDUCTION OF NUTRIENTS**  
**Total Phosphorus:** 697 LBS.  
**Total Nitrogen:** 2,909 LBS.  
**Total Suspended Solids:** 16,044 LBS.

**Grants Pending:**

- \$450,228 FDEP Section 319(h) grant
- \$374,484 SFWMD (AWS) (CAPTEC)
- \$324,483 IRL Water Quality Improvement Projects
- \$544,000 FDEP Water Protection Funds

## AREA 6

**Area Size:** 40 acres  
**Estimated Cost:** \$417,126  
**Gallons of water pumped from C-23 Canal:** 133,244,955

**ANNUAL REDUCTION OF NUTRIENTS**  
**Total Phosphorus:** 362 LBS.  
**Total Nitrogen:** 1,511 LBS.  
**Total Suspended Solids:** 8,334 LBS.

**Funding Received:**

- \$64,100 SFWMD AWS

**Grants Pending:**

- \$231,936 FDEP Section 319(h) grant
- \$208,563 SFWMD (AWS) (CAPTEC)
- \$104,463 IRL Water Quality Improvement Projects
- \$353,000 FDEP Water Protection Funds

## AREA 7

**Area Size:** 315 acres  
**Estimated Cost:** \$4,831,198

**Description:** Area 7, located on adjacent McCarty Ranch Preserve, is a water impoundment area.

