

# 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 730-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.

**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.

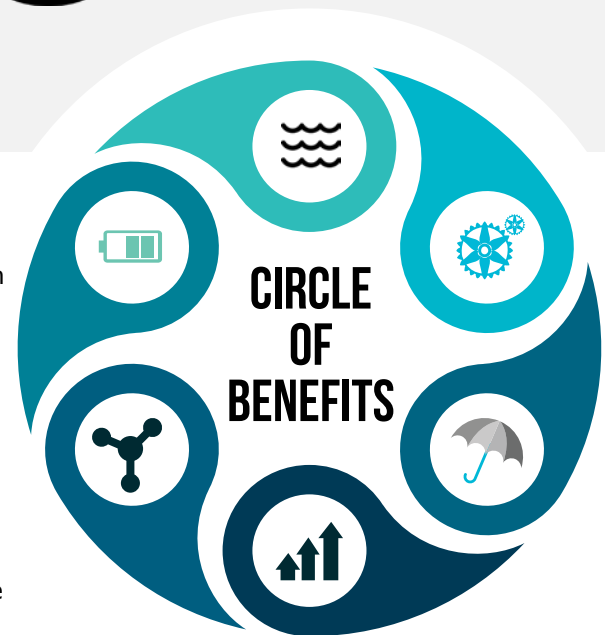
**2.554 BILLION**  
gallons of rainfall and excess water during annual wet season stored annually.

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



## FUNDING

- \$2.691 Million Total for Areas 4-7
- \$180K Annual Operating Cost



## 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 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:** March 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

**Area Size:** 280 acres  
**Estimated Cost:** \$2,559,879  
**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 March 2020.
- \$680,356 from FDEP Section 319(h)
- \$500,000 State Water Quality Restoration Grant
- \$448,700 SFWMD AWS

## 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:

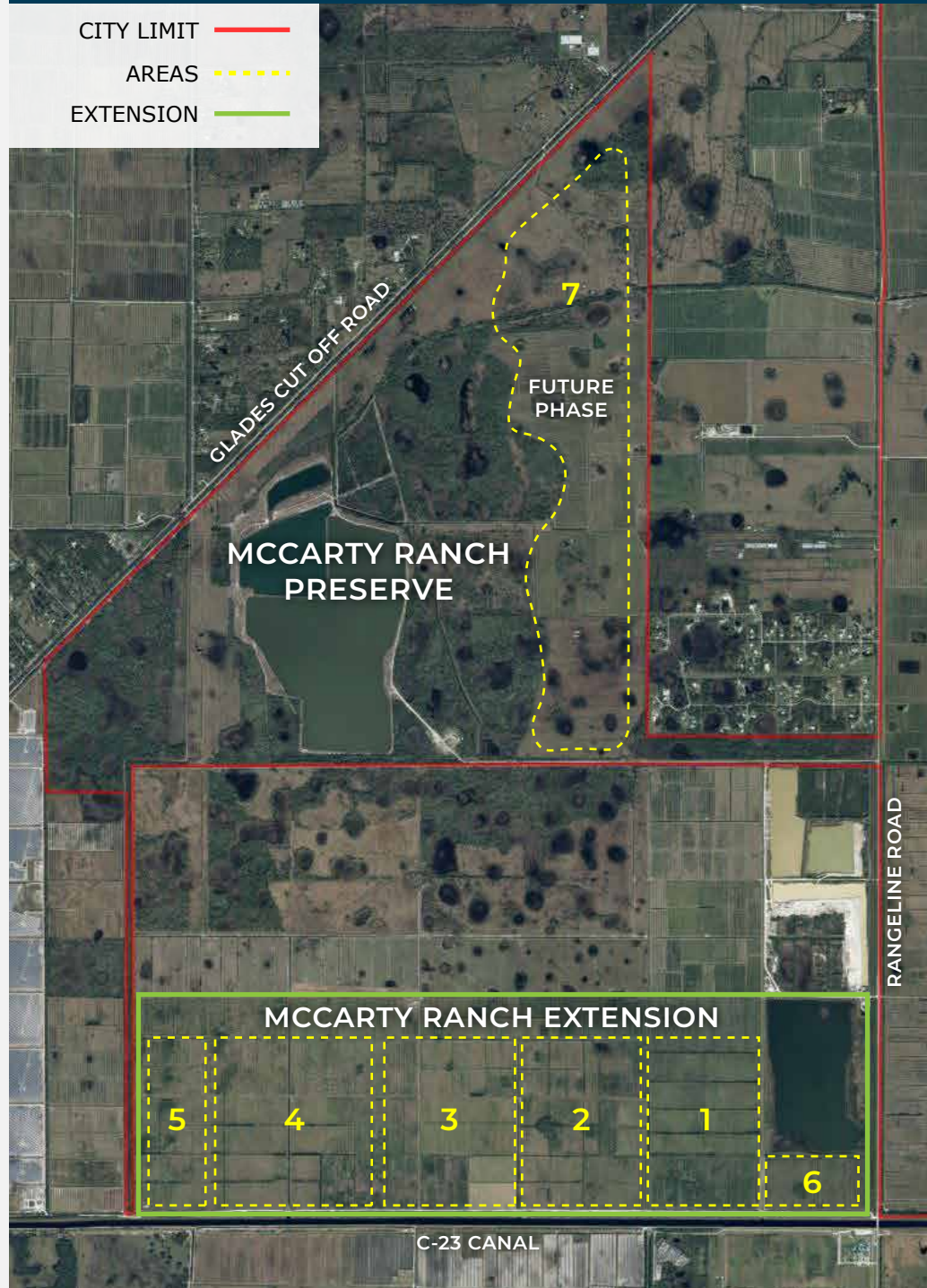
- \$487,200 SFWMD AWS

### Grants Pending:

- Legislative grant for \$1,320,600 for construction submitted Nov. 2019.
- FDEP Section 319(h) grant for \$1,442,146 is pending approval.

# AREA MAP

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



## 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:** Legislative grant of \$76,900 for design submitted Nov. 2019.

## 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:

- Legislative grant for \$43,100 for design submitted Nov. 2019.

## AREA 7

**Area Size:** 730 acres  
**Estimated Cost:** \$1,476,111

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