

Silt calculations for effluent of Intercostal Waterway into St. Joe Bay at 21 ft. River Reading

Ave width of ICW Canal 270 ft of which 20 ft on either side is gradient conservative width 230 ft.

Ave depth of canal in this location is 18 ft

1 ft width of column

$230 \times 18 \times 1 = 4140 \text{ cu ft}$

Ave speed of current right now on Jan 1st 2019 at high tide is 2.5 mph according to my GPS

$5280 \text{ ft} \times 2.5 = 13200 \text{ ft per hour}$

1 hr = 3600 sec

$13200/3600 = 3.66$

Current speed is 3.66 ft/sec

So every second (4140cu ft x3.66 ft/sec) deposits 15,152 cu ft of water

Every hour deposits 15,152 cu ft x 3600 sec = 54,547,200.0 cu ft of water into the Bays

There are 7.48 gallons of water in one cubic foot of water.

Each hour diverts 408,013,056.0 gallons of freshwater OUT of Apalachicola Bay

Each 24 hour period is diverting almost TEN BILLION GALLONS of precious freshwater away from Apalachicola Bay and into St Andrews Bay and St. Joe Bay at a 21 ft river reading.

This water carries with it MILLIONS of TONS of silt and sediment that are vital to Apalachicola Bay but Do NOT belong in St. Joe Bay and St. Andrews Bay.