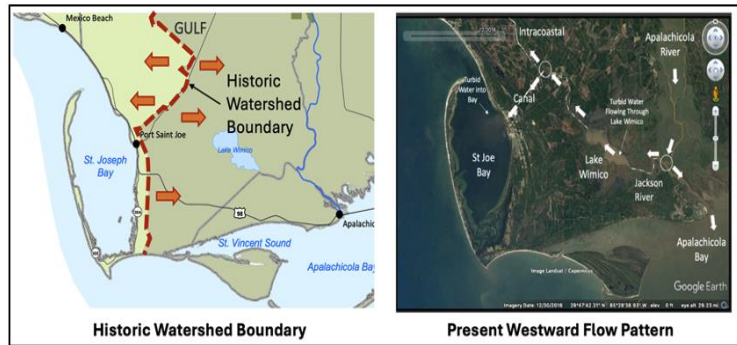


Five Years of Monitoring: Where the Water Goes

Freshwater redistribution through the Gulf Intracoastal Waterway and Gulf County Canal

Before the Gulf Intracoastal Waterway (GIWW) and Gulf County Canal (GCC) were built, Lake Wimico drained east through the Jackson River to the Apalachicola River and Apalachicola Bay. St. Joseph Bay and East Bay received no water from the Apalachicola River or Lake Wimico. The canals changed that. Five years of continuous monitoring by the Northwest Florida Water Management District, USGS, and the St. Joseph Bay Aquatic Preserve show, with detailed measurements, that a large and steady volume of Apalachicola-system water flows west through the GIWW, with most of it turning south into St. Joseph Bay.



Left: the historic watershed divide. Right: the present westward flow path from the Apalachicola system through Lake Wimico and the canal into St. Joseph Bay.

99%

of the time, net GIWW flow is westward under normal-flow conditions

~2,900 cfs

moving west under normal flow conditions (~1.9 billion gallons a day)

~12%

of Sumatra-measured flow redirected west

~2,025 cfs

average net GCC flow into St. Joseph Bay (~1.3 billion gallons a day)

3×

GIWW inflow to East Bay relative to Wetappo & Sandy Creeks (~600 million gallons a day)

WHAT THE MONITORING SHOWS

- **The flow is constant, not occasional.** Since September 2020, net flow in the GIWW east of the GCC junction has run westward on more than 99% of monitored days.
- **Flow scales with the river level but never reverses.** In 2024, a near-normal river year, westward flow averaged ~2,900 CFS (1.9 BGPD); in low-flow 2025, it fell to ~1,750 CFS (1.1 BGPD) but remained westward.
- **Most of it goes to St. Joseph Bay.** At the GIWW/GCC junction, about 2/3 of the flow turns south through the GCC; about 1/3 continues west toward East Bay.
- **Freshwater in a saltwater bay.** At a data recorder 1.5 miles into St. Joseph Bay, salinity dropped well below normal marine conditions for hundreds of hours in 2024 and the first half of 2025, including multi-day periods when the water became nearly fresh.

WHAT WE STILL DON'T KNOW

The monitoring settles whether the flow diversion is real. It does not answer what the reduced freshwater delivery means for Apalachicola Bay, how far the freshwater plume travels in St. Joseph Bay, what it does to seagrass and scallops, what is happening inside East Bay, or how sediment moves through the system. Those answers require more receiving-water sensor measurements and extensive modeling.

WHAT IT MEANS FOR EACH WATER BODY

Apalachicola Bay: About 12% of the flow measured at Sumatra is redirected west through the GIWW rather than continuing downstream to Apalachicola Bay. The diversion continues during droughts, when freshwater supply is already reduced.

Lake Wimico: Now sits inside a west-flowing corridor instead of draining east. Carries sediment, and saltwater pulses during storm surge and low river flow conditions.

St. Joseph Bay: A normally salty bay now receives steady freshwater inflow; with ecologically harmful multi-day salinity drops and turbidity spikes recorded 1.5 miles into the bay.

East Bay: Receives roughly 600 MGD or three times the combined flow of Sandy and Wetappo Creeks from the GIWW. Its salinity and turbidity have not yet been measured.

THE PATH FORWARD

The Corps of Engineers' November 2023 Section 216 Initial Appraisal already found potential federal interest in modifying the GIWW and GCC to correct hydrologic flows and reduce environmental impacts while keeping the waterway navigable. The Section 22 Planning Assistance to States study with Gulf County will fill remaining knowledge gaps and identify ecological issues.