

Port Everglades Entrance, located in southern Broward County, is a complete barrier to littoral drift along the southern Broward County shoreline (also referred to as Segment III). Most sand naturally transported to the inlet from the north is either deposited along the shoreline north of the rubble spoil shoal, lost to the inlet channel, and/or transported offshore. As a result, the shoreline to the south of the inlet is chronically eroded. Moreover, sand shoaling of the Federal navigation channel is approaching problematic levels compared to historical experience at that location. The only means of transferring sand across the inlet is artificial sand bypassing.

Sand bypassing at Port Everglades Inlet would have both physical and economic benefits to sand management at the inlet. The primary purpose of the project would be the reestablishment of north to south sand transport across the inlet. This would reduce the need for remote sand sources during future Segment III nourishment requirements, provide a reliable and economical beach compatible sand supply to the Segment III beaches, reduce and/or eliminate sand shoaling of the Port Everglades Federal navigation channel. The bypassing of excess sand delivered to the north shoreline would also reduce the continued accretion of that shoreline. The ongoing accretion phenomenon currently contributes to wind blown sand problems and makes ocean access across the beach difficult where berm widths are widest.

The need for artificial sand bypassing at Port Everglades has been evaluated by numerous investigations completed by both the Corps of Engineers and Broward County (USACE, 1963; CPE, 1985; Coastal Tech, 1988; Coastal Tech, 1994; CSI, 1997; FDEP, 1999; Olsen Associates, Inc., 2004; Olsen Associates, Inc., 2007). Essentially all of these investigations have recognized that the Port Everglades Entrance constitutes a complete barrier to littoral drift along the southern Broward County shorelines and artificial sand bypassing is the only method of physically transferring sand across the inlet. Not until recently, however, has sand bypassing at the inlet been demonstrated to be economically feasible compared to other sources of beach compatible sediments. Also, it is now well documented that offshore sediment sources suitable for beach restoration in Broward County are almost depleted and the location and economics of alternate sources for future sand nourishment requirements are uncertain. Therefore, sand bypassing at Port Everglades is needed to address the adverse effects of the inlet upon the Segment III shoreline and regional sand sharing system.