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Beaches on Perdido Key

The beaches on Perdido Key are among the most beautiful in the world. With glistening white quartz sand, protective dunes and vegetation, plentiful birds and other wildlife, abundant fishing opportunities, and wonderful state and national parks, Perdido Key and its beaches have received national and international recognition. While offering wildlife habitat and recreational opportunities for residents and visitors, the beaches also provide storm protection for the island. But like many beaches in Florida and elsewhere, human activity has altered the natural rhythm of sand depletion and replenishment; for Perdido Key, the deep Pensacola Pass (the Pensacola Harbor Channel) has disrupted the island's main source of sand. Major tropical storms have also taken a toll, leaving Perdido Key beaches in a precarious state. Loss of sand is a particular concern for some beachfront property owners – such as at the Indigo Condominium – where Gulf waters can reach dune crossovers during certain seasonal tides.

Noting that “impacts from Hurricane Ivan [2004], and the subsequent effect of storms Arlene, Dennis, and Katrina (all in 2005)” had led to the Critically Eroded Shoreline designation, in July 2011 Escambia County submitted Local Government Funding Request (LGFR) 2012-2013 for funds to renourish Perdido Key beaches from the Alabama border to Gulf Islands National Seashore. In August 2014 the County submitted LGFR 2015-2016, a document similar to the earlier request but for beach nourishment and dune restoration only on the 3 mile stretch of beaches between Perdido Key State Park and Gulf Islands National Seashore. The more limited scope of the request was likely because, as cited in the document, the western portion of Perdido Key had revealed “a trend of relative stability of shoreline position...”

On February 27, 2009, the Florida Department of Environmental Protection approved Escambia County's request for Perdido Key Beach Restoration and issued Permit No. 0273340-001-JC “to construct the initial beach and dune restoration project along the westernmost 6.5 miles of shoreline at Perdido Key.” With the permit set to expire on February 27, 2014, the County requested and received an extension on the project (Permit Modification No. 0273349-003-JN) until February 27, 2019. The extended permit contained a number of changes, some due to the 2010 Deepwater Horizon oil spill but primarily modifying requirements for protection of wildlife habitat.

Echoing earlier documents, the August 2016 report “Critically Eroded Beaches in Florida” by the Division of Water Resource Management under the Florida Department of Environmental Protection stated:

The Westernmost 6.5 miles of Perdido Key in Florida was critically eroded (R1-R34) threatening development and recreational interests. A beach and dune restoration project is planned for this area. The eastern 5.9 miles (R34-R65) of Perdido Key are non-critically eroded along the Gulf Islands National Seashore.

The same document, citing the Department's rule 62B-36.002(5), defined “Critically Eroded Shoreline” as:

... a segment of the shoreline where natural processes or human activity have caused or contributed to erosion and recession of the beach or dune system to such a degree that upland development, recreational interests, wildlife habitat, or important cultural resources are threatened or lost. Critically eroded areas may also include peripheral segments or gaps between identified critically eroded areas which, although they may be stable or slightly erosional now, their inclusion is necessary for continuity of management of the coastal system or for the design integrity of adjacent beach management projects.

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Perdido Key beach renourishment, however, is in a “holding pattern” – a term used by Escambia County Senior Manager for Natural Resource Management Timothy Day and Escambia County District 2 Commissioner Douglas Underhill in the Escambia County October 21, 2016 video “The Underhill Update: Perdido Key” (available at <https://www.youtube.com/watch?v=GLunuQEcaqs&index=2&list=PLYP6oPuWyBadkPfVnARMnOPXKIddsJRfy>). Commissioner Underhill explained that when he took office [in 2015] about 35% to 40% of Perdido Key beachfront property owners had not completed the “right of entry” agreements needed for beach renourishment to proceed and that, in his discussions with them, he was impressed with their “fears” about property rights. While most Perdido Key property owners favored beach renourishment in the 2015 Survey conducted by PKA, opinion was divided on easements and using eminent domain to achieve it. A particular concern of beachfront owners has been that new beach created by renourishment, with perhaps 100 to 300 feet of added sand between previous beachfront and Gulf waters, would belong to the State of Florida. Because of such concerns and his personal opposition to eminent domain, Commissioner Underhill intends to support only “incremental” projects to address beach erosion. These include a dune replanting initiative and making use of Pensacola Pass dredge material to help replenish Perdido Key beaches.

The Perdido Key Dune Restoration Project has been approved and is in progress. With 87% of beachfront property owners agreeing with the initiative as of February 2018, Escambia County has moved forward to use \$500,000 of BP restitution money for planting sea oats and other appropriate vegetation on Perdido Key dunes. The plants are currently being grown at nurseries and will be replanted on Perdido Key dunes in spring 2018. (See November 22, 2016 *Pensacola News Journal* article titled “Project would shore up beaches” at <http://www.pnj.com/story/news/local/perdido-gulf-shores/2016/11/21/project-shore-up-perdido-beaches/93956284/> and the Escambia County web entry at <https://myescambia.com/our-services/natural-resources-management/water-quality-land-management/perdido-key-habitat-conservation-plan/perdido-key-dune-restoration-project>).

The natural migration of sand on the northwest Gulf coast is generally from east to west, so the Pensacola Pass just east of Perdido Key disrupts and traps sand that would otherwise renourish Perdido Key beaches. By depositing the sand dredged from the channel onto Perdido Key Area of the Gulf Islands National Seashore beaches where beach owner permission is not required, the “natural” renourishment of the rest of Perdido Key beaches to the west of the National Seashore could begin again. The sand dredged by the US Army Corps of Engineers from Pensacola Harbor channel is currently dumped offshore. While switching the dump site to the National Seashore seems to make a great deal of sense, its implementation is surprisingly complex. It involve coordination among numerous government and private stakeholders and, crucially, the allocation of sufficient funds to plan and execute the dredging on a “schedule and methodology” most beneficial to the beaches concerned. Accordingly, the “Pensacola Pass Inlet Management Plan” was discussed at the February 1, 2018 meeting of the Escambia County Board of County Commissioners with the goal “to create the fund to help maintain the pass and protect both Pensacola Beach and Perdido Key by placing dredged sands along the shoreline to minimize erosion.” The project will cost about \$415,000, with the state paying just over \$311,000 and local government \$103,000. For more on this issue, see the February 8, 2018 *Pensacola News Journal* article by Melissa Nelson Gabriel “New plan would ‘naturally replenish’ erosion on Perdido Key beaches” at <http://www.pnj.com/story/news/local/pensacola/beaches/2018/02/08/perdido-key-erosion-plan-naturally-replenish/308582002/>.

Dune replanting and Pensacola Pass sand should help improve Perdido Key beaches, but it is not clear that these actions alone can restore the beaches to health and remove them from Critically

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Eroded status. Perdido Key beaches are the only ones in the immediate Gulf Coast vicinity that have not been renourished: Navarre Beach was renourished in June 2016 and Pensacola Beach in August 2016, while Orange Beach and Gulf Shores were renourished in 2013. These beaches will likely require periodic renourishment because they front developed areas where storms, jetties and dredging disturb natural sand replenishment processes, though the relatively mild Gulf beach action should extend the period. In February 2018, Commissioner Underhill pointed out that Pensacola Beach witnessed substantial loss of sand as a result of the glancing blow from Category 1 Hurricane Nate while Perdido Key beaches – which have not been artificially renourished – saw little loss of sand.

With the lack of political support and funding, it is virtually impossible for beach renourishment to be implemented prior to the February 27, 2019 expiration of the Florida DEP permit to do so. The issue for Perdido Key beachfront property owners, other Perdido Key owners and residents, and the rest of Escambia County is whether having Perdido Key beaches designated as Critically Eroded Shoreline should be an urgent call for action or can remain a condition they are prepared to accept for the foreseeable future.

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