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Study Highlights Impact of Hurricane Harvey Flooding on Galveston Bay Dolphins

Houston, TX – June 18, 2020 – Following the historic flooding from Hurricane Harvey, researchers observed a 73 percent drop in bottlenose dolphin encounter rates in the upper Galveston Bay and freshwater skin lesions were found on 96 percent of the observed dolphins, according to a study by the Galveston Bay Dolphin Research Program (GDRP), recently published in the journal *Estuaries and Coasts*.

GDRP, a partnership of the [Galveston Bay Foundation](#) and the [Environmental Institute of Houston at the University of Houston–Clear Lake](#), has been studying and bringing awareness to the vulnerable bottlenose dolphin population in Galveston Bay through monthly boat-based surveys since 2014.

Thanks to grants from the Gulf of Mexico Alliance, the SeaWorld Busch Gardens Conservation Fund, the SeaWorld Busch Gardens Emergency Fund, Restore America’s Estuaries and the Trull Foundation, GDRP was able to research the effects of Hurricane Harvey on the dolphin population after it inundated the Galveston Bay estuary with record-breaking rainfall and flooding in 2017. The estuary was almost completely flushed out with freshwater, sediment, debris and pollutants, and the salinity levels in the Bay declined rapidly from an average of 14 to less than 1 ppt, altering aquatic habitat in the weeks following the storm and did not recover for about two months.

Researchers compared dolphin encounter rates for the months preceding and following Harvey to a year with no hurricane, examined shifts in habitat-based encounter rates, and evaluated the prevalence and extent of dolphin skin lesions. Freshwater skin lesions are characterized by degradation and ulceration of the surface layer of the skin and are often accompanied by secondary infections. Encounter rates decreased from 1.09 dolphins per linear kilometer (d/km) in August 2017 before Harvey to 0.29 d/km in September 2017. Study authors, Kristi Fazioli and Dr. Vanessa Mintzer, also report that many remaining dolphins changed habitats from shallow open bay to deep channels where salinity increased with depth.

96 percent of dolphins observed in upper Galveston Bay following the hurricane had freshwater skin lesions. 65 percent of those had moderate to highly extensive lesions. After salinity levels increased, dolphins returned to upper Galveston Bay and the amount of skin lesions on individuals decreased, but many dolphins still had lesions for at least four months after Hurricane Harvey.

The complete study can be read in *Estuaries and Coasts*, the official journal of the Coastal and Estuarine Research Federation at <https://rdcu.be/b4mY7>

Research on the effects of freshwater flooding events and how and when dolphins utilize areas in the Galveston Bay is essential to manage and maintain healthy coastal dolphin populations. Currently, GDRP

has seen and cataloged more than 700 dolphins with unique markings in the busy waters of Galveston Bay. These include both dolphins that made the Bay their permanent home and dolphins temporarily occupying the Bay. If new man-made structures affect the salinity of Galveston Bay, dolphins will need access to areas of saltwater refuge.

The GDRP continues to conduct research on the ecology and health of Galveston Bay dolphins, with a particular focus on the upper Galveston Bay dolphin population, including the effects of freshwater exposure on dolphins during flooding events as well as human-dolphin interactions in Galveston Bay and their impacts on both dolphins and people.

Houstonians can support this vital research by virtually adopting or naming one of the special bottlenose dolphins that call the upper Galveston Bay home. The \$200 adoption fee comes with an adoption kit that includes a photograph of your dolphin, a map of where it has been sighted, quarterly updates on future sightings and a one-year Dolphin Society membership. A \$500 adoption fee includes these benefits plus a quarterly conference call with Research Scientist Dr. Vanessa Mintzer to learn about Galveston Bay dolphins. Currently three dolphins are available for adoption, giving Houstonians a meaningful and unique way to celebrate the upcoming Father's Day or another occasion.

Two dolphins are also available for naming rights for \$2,500. Naming rights include the opportunity to name the dolphin for life, recognition on the GDRP and Foundation's website and an adoption certificate, as well as all the benefits of the year-long adoption.

For more information on the dolphin adoption, visit <https://galvbay.org/dolphin-research/>. For more information on the Galveston Bay Dolphin Research Program, visit <https://galvestonbaydolphin.org/>.

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About the Galveston Bay Foundation

Established in 1987, the Galveston Bay Foundation is a 501(c)(3) non-profit organization. Its mission is to preserve and enhance Galveston Bay as a healthy and productive place for generations to come. It implements diverse programs in land preservation, habitat restoration, water quality and quantity, youth education, and advocacy. For further information, contact the Foundation at (281) 332-3381, visit www.galvbay.org, like us on Facebook, or follow us on twitter @GBayFoundation

About the Environmental Institute of Houston

The University of Houston-Clear Lake established the Environmental Institute of Houston (EIH) in 1991 to address regional issues of environmental concern. Its mission is to advance understanding of the environment through interdisciplinary research, education, and outreach. For further information, contact EIH at (281) 283-3950, email eih@uhcl.edu, visit www.uhcl.edu/environmental-institute or follow us on social media.