



## City of Hallandale Beach City Commission Agenda Cover Memo

<b>Meeting Date:</b>	June 5, 2019		<b>Item Type:</b> <i>(Enter X in box)</i>	<b>Resolution</b>  X	<b>Ordinance</b>	<b>Other</b>	
<b>Fiscal Impact:</b> <i>(Enter X in box)</i>	<b>Yes</b>	<b>No</b>	<b>Ordinance Reading:</b> <i>(Enter X in box)</i>	<b>1<sup>st</sup> Reading</b>		<b>2<sup>nd</sup> Reading</b>	
		X	<b>Public Hearing:</b> <i>(Enter X in box)</i>	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>No</b>
				X			
<b>Funding Source:</b>	N/A		<b>Advertising Requirement:</b> <i>(Enter X in box)</i>	<b>Yes</b>		<b>No</b>	
						X	
<b>Account Balance:</b>	N/A		<b>Quasi-Judicial:</b> <i>(Enter X in box)</i>	<b>Yes</b>		<b>No</b>	
						X	
<b>Project Number :</b>	N/A		<b>RFP/RFQ/Bid Number:</b>	NA			
<b>Contract/P.O. Required:</b> <i>(Enter X in box)</i>	<b>Yes</b>	<b>No</b>	<b>Strategic Plan Priority Area:</b> <i>(Enter X in box)</i>				
		X	Safety <input type="checkbox"/>				
			Quality <input checked="" type="checkbox"/>				
			Vibrant Appeal <input checked="" type="checkbox"/>				
<b>Sponsor Name:</b>	Sabrina Javellana Vice Mayor		<b>Department:</b> Public Works	James Sylvain, P.E., Public Works Director			

### Short Title:

**A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF HALLANDALE BEACH, FLORIDA, ENCOURAGING THE USE OF CORAL REEF SAFE SUNSCREENS; AND PROVIDING FOR AN EFFECTIVE DATE.**

### Staff Summary:

#### Background:

Designated by State Legislature in 2018, the Florida [Coral] Reef Tract reaches from the St. Lucie Inlet in Martin County to the Dry Tortugas National Park. This 360-mile-long tract is managed by the Florida Department of Environmental Protection's Coral Reef Conservation Program, with

insight from the Southeast Florida Coral Reef Initiative. Florida coral reefs are approximately 10,000 years old and are composed of over 45 species of stony corals and 35 species of “Octo Corals” (sea fans, soft corals, etc.). Additionally, the Florida Reef Tract is home to a myriad of other marine life species including bottlenose dolphin, loggerhead sea turtles, spotted eagle rays, and countless tropical fishes.

Coral reefs provide many benefits to human well-being (“ecosystem services”) including but not limited to medicine, coastal protection, aesthetics, and food. Healthy coral reefs can reduce wave energy by up to 97%, thus protecting the coast in the event of storms or hurricanes. Additionally, coral reefs contribute to tourism. The National Oceanic and Atmospheric Administration estimates that coral reefs in southeast Florida have an economic asset value of \$8.5 billion.

Coral reefs are found approximately 500 feet from the shores of Hallandale Beach (Exhibit 2). A colony of Staghorn Coral (*Acropora cervicornis*) can be found less than a half-mile offshore the City. In the 1980’s, approximately 97% of the Staghorn coral population died from white band disease. This species (Staghorn) was listed in 2006 as a Critically Endangered Species. Existing threats to this coral include climate change, disease, and land-based sources of pollution.

The Florida Reef Tract is experiencing a widespread and multi-year outbreak of coral disease. As of 2018, over half of the Florida Reef Tract has been affected. This disease has been killing more than 20 species of coral, seemingly targeting species which build reefs. As of 2015, the disease has been observed throughout the entire coast of Broward County. The Florida Department of Environmental Protection (FDEP) has not yet identified what is causing the disease, nor how to cure it. To date, FDEP recommends reducing land-based sources of pollution as a way to reduce stress on the affected coral reefs. Additionally, the Southeast Florida Coastal Ocean Task Force released a Final Recommendations Report (Exhibit 3) in January 2017, which also highlighted reducing land-based sources of pollution. Lastly, the Southeast Florida Regional Climate Change Compact’s Regional Climate Action Plan 2.0 (RCAP 2.0) includes a recommendation to protect coral reefs via policies to reduce pollution and runoff, marine debris, and greenhouse gas emission reductions.

With global climate change, coral reefs face a dim future. The world’s ocean is getting warmer and more acidic, leading to coral bleaching events worldwide. Climate change related risks combined with coral disease means that humans have a limited amount of time to enjoy coral reefs. It is within human’s power to reduce the sources of land-based pollution and improve conditions so that the Florida Reef Tract may try to heal from its disease without extraneous stress. Given the City’s commitment to the environment, staff proposes that the City of Hallandale Beach pass this Resolution in support of the use of coral reef safe sunscreen, which aims to reduce stress on coral reef ecosystems.

**Current Situation:**

Over the past year, the State of Hawaii, the Nation of Palau<sup>1</sup>, and the City of Key West have banned the use and sale of personal care products containing oxybenzone and octinoxate within their geographic and marine boundaries. Prior to this, non-reef safe sunscreen had been banned at marine eco-parks in Mexico. Various studies throughout the world have shown that compounds—including but not limited to oxybenzone and octinoxate- from sunscreen are measurable in waters frequently used for recreation and tourism. A study done by Danovaro et al. (Exhibit 4) found that sunscreens caused coral bleaching via the promotion of viral infections in zooxanthellae<sup>2</sup>. The Danovaro study found that sunscreen caused 78% of the zooxanthellae in Staghorn coral to be released, causing bleaching as early as 18 hours after exposure. A separate study (Exhibit 5) by Downs et al. found that the oxybenzone concentration which results in killing 50% of the population for four South Florida coral species, including Staghorn coral, ranged from 9-340 micrograms per liter of seawater. For corals in general, the Downs et al. study found that toxicity occurs at a concentration of 62 parts per trillion, which is equivalent to one drop of water in 6.5 Olympic sized swimming pools. Two of the four coral species described in the Downs et al. study include coral species, which are currently affected by the recent Florida Reef Tract Coral Disease Outbreak (Exhibit 6). No studies have been done on the concentration of sunscreen chemicals offshore in Hallandale Beach, however, even low concentrations of sunscreen can cause distress and bleaching in corals.

**Fiscal Impact:**

This item is not expected to carry any fiscal impact.

**Why Action is Necessary:**

City Commission approval is needed in order to pass a Resolution encouraging the use of coral reef safe sunscreens throughout Hallandale Beach.

**Proposed Action:**

Staff recommends the approval of the attached Resolution as an expression of the City Commission's concern for local and global coral reef health and encouragement that City residents use coral reef safe sunscreens.

**Attachment(s):**

Exhibit 1 - Resolution

Exhibit 2 – Our Florida Reefs Map

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<sup>1</sup> The Nation of Palau actually banned 10 different chemicals found in personal care products: oxybenzone (BP-3), octinoxate, octocrylene, 4-methyl-benzylidene camphor, triclosan, methyl paraben, ethyl paraben, butyl paraben, benzyl paraben, and phenoxyethanol.

<sup>2</sup> Zooxanthellae are algae which photosynthesize and live symbiotically in corals. When zooxanthellae leave coral, the coral bleaches.

Exhibit 3 – Southeast Florida Coastal Ocean Task Force Final Recommendation Report

Exhibit 4 – Danovaro et al. Study

Exhibit 5 – Downs et al. Study

Exhibit 6 – Florida Reef Tract Coral Disease Outbreak FAQ