

## **BREEF - EARTHCARE- reEarth - Save the Bays - Waterkeepers Bahamas**

May 2, 2019

Elissa Margolis  
Senior Vice President  
Enterprise Social Responsibility  
The Walt Disney Company  
500 South Buena Vista Street  
Burbank, California 91521

Dear Ms. Margolis:

### EIA on Proposed Disney Cruise Line port at Lighthouse Point, Eleuthera

We are writing on behalf of the Bahamas Reef Environment Educational Foundation, EARTHCARE, reEarth, Save the Bays, and Waterkeepers® Bahamas, to express our concerns regarding the Environmental Impact Assessment that Disney Cruise Lines (DCL) is undertaking for a proposed cruise ship port at Lighthouse Point on the island of Eleuthera in The Bahamas.

We note that with the release of the Heads of Agreement (“HOA”) last month, DCL has committed to prepare an Environmental Impact Assessment on the project before any construction begins. In a public statement in response, we called upon Disney to *“prepare a world-class, environmental impact assessment (EIA), including consideration of alternatives and economic analyses open to public review and consultation.”* We concluded that: *“The HOA makes clear the significance of this decision on the future of Lighthouse Point. The people of the Bahamas deserve no less than a fully-informed meaningful public process to determine whether to proceed with such a massive project at such a special place.”*

First, we want to recognize the Walt Disney Company’s stated commitment to environmental stewardship. Disney’s Environmental Policy states *“the Walt Disney Company seeks to establish and sustain a positive environmental legacy for Disney and for future generations. In doing so, the company is committed to minimizing its overall impact on the environment while encouraging and activating environmentally responsible behavior on the part of cast members and employees, guests and business associates throughout the world.”*<sup>1</sup>

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<sup>1</sup> *The Walt Disney Company Environmental Policy.* The Walt Disney Company. [Link](#)

Disney has identified ecosystem conservation as one of their primary environmental focus areas.<sup>2</sup> The Disney Conservation Fund has funded numerous coastal and marine conservation projects in The Bahamas. These contributions have not gone unnoticed, and we appreciate the Disney Conservation Fund's admirable efforts to advance conservation initiatives in The Bahamas and across the globe.

Second, we hope that Disney will demonstrate with its environmental review of the Lighthouse Point project, its appreciation of the critical importance of this coastal and marine area for The Bahamas and the world. As stated in a 2005 Millennium Ecosystem Assessment, "coastal and island ecosystems are among the most valuable and productive, yet, are highly threatened worldwide."<sup>3</sup> Coupled with the ever-increasing threat of ocean warming and acidification, marine and coastal ecosystems face the threat of irreparable, but avoidable, damage from anthropogenic activity such as shoreline development associated with the tourism industry. The added weight of human-induced pressures makes mitigation efforts a complex and likely impossible task. Human activity, cruise ship noise, traffic, and shoreline development imperil the regenerative capacity of marine environments as a consequence of long-term damage caused by pollution, habitat degradation, nutrient and waste run off, sedimentation, boat collisions with marine organisms and habitats, and other disruptive impacts.

Even more concerning, The Bahamas, a nation whose economy heavily depends on the health of its natural resources, has been identified as an area that is particularly vulnerable to biodiversity loss and productivity changes as a result of high levels of adaptive specialisation and endemism due to the physical separation of the islands.<sup>4</sup> Potential damage includes but is certainly not limited to the following causes: invasive species introduction, habitat loss, behavioral changes as species become conditioned to cruise ship activity, pollution from sewage dumping and runoff, coral smothering and clouding from turbidity and sedimentation, mortality from collisions, and physical destruction of reefs from human-habitat interactions.<sup>5</sup>

Finally in this regard, the marine area around Lighthouse Point is so biologically rich that it has been proposed as a Marine Protected Area last September in the Marine Protection Plan prepared

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<sup>2</sup> *The Walt Disney Company Environmental Policy*. The Walt Disney Company. [Link](#)

<sup>3</sup> Millennium Ecosystem Assessment (2005) *Ecosystems and human well-being: synthesis*. Island Press, Washington, DC.

<sup>4</sup> Holdschlag, A., & Ratter, B. M. (2013). Multiscale system dynamics of humans and nature in The Bahamas: perturbation, knowledge, panarchy and resilience. *Sustainability Science*, 8(3), 407-421. [Link](#)

<sup>5</sup> Moscovici, D. (2017). Environmental Impacts of Cruise Ships on Island Nations. *Peace Review*, 29(3), 366-373. [Link](#);

Carić, H., & Mackelworth, P. (2014). Cruise tourism environmental impacts—The perspective from the Adriatic Sea. *Ocean & Coastal Management*, 102, 350-363. [Link](#);

Erfemeijer, P. L., Riegl, B., Hoeksema, B. W., & Todd, P. A. (2012). Environmental impacts of dredging and other sediment disturbances on corals: a review. *Marine pollution bulletin*, 64(9), 1737-1765. [Link](#).

by The Bahamas National Trust in partnership with The Nature Conservancy, BREEF and the government of The Bahamas. The 18,000 acres of ocean surrounding the point include a *“diversity of marine habitats, including seagrass beds, reef crest habitats and deeper reef areas.”* The White Paper notes that while *“the reef has suffered from a reduction in live coral cover, healthy colonies of endangered staghorn coral and other species remain and can help repopulate the area.”* There is a natural underground bridge off the point that with a high concentration of sharks that is evidence of the abundance of fish life in the area.. Link: <http://bahamasprotected.com/>

Third, we appreciate Disney’s commitment in its Environmental Policy to seek *“to identify, measure and understand the direct and indirect impact of its operations and develop innovative and realistic solutions for mitigating those impacts”* and to *“comply with, and in some cases exceeds environmental laws and regulations.”* We would thus expect that Disney would follow the same high standards here as it would with any of its major development projects in the United States and worldwide.

In 2016, DCL undertook an Environmental Impact Assessment of its plans for a cruise ship port on Egg Island off the north coast of Eleuthera. Based on the review, Disney decided not to go forward with this project. While it is unfortunate that this review was never made public, Disney demonstrated a recognition of the value of coastal and marine ecosystems such as those at Egg Island and now at Lighthouse Point that are at risk in large scale development.

We urge Disney to conduct a comprehensive EIA on the proposal for Lighthouse Point. Consistent with U.S. and international practice, the EIA should include consideration of alternatives - including a “no-build” alternative and location of the proposed cruise port at another site.

The EIA also should provide detailed data on the economic benefit of the proposed project for The Bahamas and South Eleuthera. The economic benefits must be measured against the economic impacts of ecological damage from the proposed cruise port, and compared with economic impacts of alternative scenarios.

It is our understanding that Disney has retained a small consulting firm located in Nassau to conduct its EIA. Disney has stated in their Environmental Stewardship Goals and Targets a committed to a “new era of transparency”, but there has been no public information about the scope of the assessment of the proposed project. We have seen little or no effort to seek input from our organizations and others with environmental expertise and experience at Lighthouse

Point, nor any forum or mechanism for public input or consultation on the scope of the EIA - standard practice and a critical first step of a meaningful comprehensive assessment..

The reality is that the Bahamas, a tiny nation of only 395,000 citizens, lacks a robust capacity to analyse and oversee the environmental impacts of major projects. Disney should not attempt to exploit these shortcomings. Indeed, we expect that Disney, a corporation with annual earnings many times greater than many nations, raise the standard in these islands in regard to environmental protection, as well as economic opportunity.

A truly meaningful review of the proposed Lighthouse Point project requires a thorough understanding of the dynamic marine and coastal habitats found in the development areas, as well as in adjacent areas with the potential to suffer corollary impacts. This must encompass examination of marine and terrestrial ecology, shoreline dynamics, physical properties, coastal processes and relevant habitats. We strongly advise and request that Disney's EIA includes, but is not limited to, the following studies:

#### **Geological and Sediment Surveys:**

- Baseline surveys of the geology of the marine environment as well as the types and distribution of sediment in the area of construction and surrounding areas that will be disturbed by cruise ship channel, pier, marina and shoreline construction.
- Analysis and quantification of bottom habitat that would be removed by channel widening pier and marina construction and development. Turbidity changes induced by construction and cruise ship traffic can increase the amount of suspended sediment and have negative impacts on water quality and the photosynthetic capacity of corals and other marine flora. Additionally, disruption or removal of hard-bottom habitats could irreversibly damage or remove critical habitat and substrate.
- Meta-analysis of similar development projects to determine the radius of the area that can be expected to experience negative impacts from hard-bottom habitat alteration and sediment suspension.
- Analysis of the impact on water quality and the clouding/smothering effect of the suspension of present sediment types.
- Analysis of potential impacts of dredging and channeling, pier and marina construction to the present shoreline and coastal processes.
- Analysis of cumulative impacts of cruise ship ports in the area- Half Moon Cay and Princess Cays.

#### **Coral Surveys:**

As stated, coral reefs face immense threats in the face of cruise ship port construction and operation. A single study by Erftemeijer et al. documents over 30 sites across the globe where dredging and sedimentation have caused significant mortality, with many sites experiencing between 30-80% loss of coral cover.<sup>6</sup> Further, mitigation plans including coral relocation have been found to be unsuccessful, yielding an unacceptable fraction of the pre-development living coral cover.<sup>7</sup> An effective environmental impact assessment must include:

- Baseline surveys of present coral species as well as coral density and distribution within the development area as well as adjacent areas.
  - Studies must encompass coral communities far beyond the development area because sediment accumulation and the associated biological responses (mainly coral mortality) can be found up to 700 meters (nearly half a mile) from the actual channel according to monitoring reports at the Port of Miami.<sup>8</sup> A meta-analysis including environmental impacts at other, similar development sites is required to determine the appropriate radius of the coral survey area.
- Quantification and qualification of coral that would be removed during channel construction and widening, noting that coral relocation is an ineffective mitigation method and removal can be characterized as permanent habitat and biodiversity loss.
- Analysis of photosynthetic capacity and ambient light requirements of all present coral species in conjunction with analysis of potential impacts of sediment suspension and clouding on all present corals.
- Analysis of the potential damage to corals caused by increased human traffic. This should include analysis of possible nutrient runoff, sunscreen, perfumes, medicines, pesticides, petroleum products, solvents cleaners etc and associated impacts to corals and meta-analysis of potential physical damage from human interaction with reef habitats.
- Analysis and plotting of various depths of reef habitats to characterize collision risk and potential physical damage from cruise ship traffic, including tenders, and motorized sports vessels.
- Impacts of proposed cruise port on the resilience of the reefs, to a changing climate and ocean,

### **Essential Fish Habitat Surveys:**

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<sup>6</sup> Erftemeijer, P. L., Riegl, B., Hoeksema, B. W., & Todd, P. A. (2012). Environmental impacts of dredging and other sediment disturbances on corals: a review. *Marine pollution bulletin*, 64(9), 1737-1765. [Link](#)

<sup>7</sup> Falmouth Cruise Ship Port, Jamaica, Environmental Impact Assessment ([Link](#))

<sup>8</sup> Miller, M. W., Karazsia, J., Groves, C. E., Griffin, S., Moore, T., Wilber, P., & Gregg, K. (2016). Detecting sedimentation impacts to coral reefs resulting from dredging the Port of Miami, Florida USA. *PeerJ*, 4, e2711.

- Baseline surveys, including quantification and qualification, of all present fish species as well as preferred habitat types and fish distribution in development area and surrounding environments that will suffer impacts.
- Baseline surveys of juvenile fish and larvae distribution and concentration in channel development area as well as surrounding environments that will suffer impacts.
- Analysis of the impacts associated with development (i.e. dredging, run-off, sediment suspension, collisions, turbidity changes, physical destruction, pollution etc.) on fish populations and present fish larvae/juveniles.

#### **Sea Turtle Surveys:**

- Baseline surveys, including quantification and qualification, of all present sea turtle species as well as preferred nesting beaches and other habitat types and distribution in development area and surrounding environments that will suffer impacts.
- Analysis of the impacts of development and the attendant habitat changes and loss on present and relevant sea turtle populations.

#### **Marine Mammal/Sharks and other Elasmobranch Species Surveys:**

- Baseline surveys, including quantification and qualification, of all present whales and other marine mammals, sharks and other elasmobranch species as well as preferred habitat types and distribution in development area and surrounding environments that may suffer impacts.
- Analysis of the impacts of development and the attendant habitat changes and loss on relevant marine mammals and shark populations.

It is important to note that marine mammals, turtles, and sharks are protected under Bahamian law. The EIA should take into account the movement patterns of organisms potentially impacted by port construction. Some afflicted organisms may be present in the impacted area only at certain times given their large geographic ranges and migration patterns. However, the habitat may still serve a critical function, for example as a breeding or feeding ground, for those populations. Thus, long-term studies - at least one year long - must be put in place to account for all species and populations and the ways in which they utilize the habitats within the development area and adjacent impacted habitats. Longer term studies are not necessary exclusively for marine mammals and sharks and other elasmobranchs, but must be conducted for all species passing through the area impacted by development.

### **Seagrass Surveys:**

- Baseline surveys of seagrass species, density, and distribution must be conducted to ascertain the quantity and quality of seagrass habitat that would be removed in the process of port development and channel construction or widening.
- Analysis of the consequences of development and associated harmful processes on seagrass habitats. Further, qualification of potential seagrass habitat loss as well as resulting impacts and biodiversity loss or displacement is necessary

### **Ocean Noise Pollution:**

- Quantification and qualification of noise pollution associated with development efforts, including blasting, dredging, pile driving and other methods.
- Quantification and qualification of noise pollution associated with ongoing operations from ship, tenders, water sports.
- Survey of organisms that will suffer behavioral impacts or disruption from noise pollution associated with development.
  - For example, whales have long been understood to be among those organisms most heavily impacted by the quantity and quality of noise, seeing as they rely predominantly on audible communication that can be masked or misinterpreted due to human noise pollution. Further, pressure and noise from unconfined blasting has been found to damage sensory abilities and physiological functions in sea turtles.<sup>9</sup>

It must be noted that noise pollution can negatively impact marine organism communication within a radius of hundreds of miles, meaning that impact surveys must extend many miles beyond the development area.

### **Water Conditions Analysis:**

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<sup>9</sup> Keevin, T.M., and G.L. Hempen. 1997. The environmental effects of underwater explosions with methods to mitigate impacts. U.S. Army Corps of Engineers St. Louis District, St. Louis, Missouri.

- Baseline evaluation of the present water conditions.
  - Quantification of the pre-development chemical properties of coastal waters in the area and surrounding areas.
  - Characterization of pre-development turbidity levels, water clarity and current patterns.
- Analysis of the impacts of paving, freshwater and nutrient runoff, pollution, sediment loading, chemical use etc. on coastal and surrounding water chemistry.
- Meta-analysis to determine the possible radius of the area that will potentially experience chemical or physical changes induced by the various sources previously listed, so as to determine the locations that need to be included in biological impact analyses.
- Analysis of the impacts of concomitant water property (chemical and physical) changes on all surveyed organisms in the development area and adjacent impacted habitats.

#### **Phytoplankton/Zooplankton Survey:**

- Baseline survey, including quantification and qualification, of phytoplankton and zooplankton species found in the development area and adjacent impacted habitats.
- Analysis of the potential impacts of dredging, channel widening, and habitat changes or losses on plankton populations, including their physiological functions and spatial migratory patterns.
  - Channel and pier and marina development and its impact on water chemistry, turbidity, bathymetry and current patterns will disrupt favorable conditions for local plankton community composition.

#### **Pollution Risk:**

- Overview of the risk of pollution from grey and black waste water, other sewage water, bilge water and ballast water and solid waste. This includes analysis of all chemicals and potential pollutants used on Disney cruise ships and at its on-land facilities, vehicles, and the projected biological responses of coastal and freshwater contamination.
- Quantification and qualification of the harmful emissions produced by cruise ships and on-shore facilities. This would require projections of greenhouse gas contributions and other pollutants to the atmosphere and associated environmental consequences from cruise ships relevant to the proposed port.



### **Avian Surveys:**

- Baseline surveys of the bird species in the habitats found within the construction area as well as surrounding impacted area.
- Analysis of the impacts of species displacement associated with any potential habitat removal, in addition to the analysis of behavioral changes associated with habitat alteration.
- Analysis of the radius of areas experiencing noise and air-borne pollution, in addition to analysis of how bird behavior, distribution, movement and communication may be impacted by these stressors for all documented species.
- Quantification and qualification of the risk of negative impacts caused by increased human traffic and eventuating increases in interactions between humans and birds in the area proposed to be accessible to tourists.

There are an estimated 200 species of birds on Lighthouse Point, each of which may suffer from varying forms and severities of impacts from development and associated consequences.

### **Terrestrial Surveys:**

- Baseline surveys of the development site geography, topography, geology, climate and surface water.
- Baseline surveys of the various species and habitat types found within the proposed area, as well as habitats that may experience residual impacts. Analysis of the quality and quantity of shoreline and inland habitat that would be removed by the construction of roads, pathways, visitor centers and other buildings.
- Baseline surveys of the organisms living in the habitats found within the construction area as well as surrounding impacted area.
- Analysis of the impacts of species displacement associated with habitat removal, in addition to the analysis of behavioral changes associated with habitat alteration.
- Analysis of the radius of areas experiencing noise and air-borne pollution, as well as documentation of the presence of organisms that may be impacted by these stressors. This must include further studies to quantify how terrestrial organisms will be impacted.

- Quantification and qualification of the risk of negative impacts caused by increased human traffic and eventuating increases in interactions between humans and wild organisms in the area proposed to be accessible to tourists.
- An archaeological survey for the presence of Lucayan and other artifacts on Lighthouse Point.

**Socioeconomic/Cultural Surveys:**

- Surveys of adjacent communities and their economic and cultural practices, particularly fishing, as well as their connection with the proposed development area. This must include assessment of current land uses and cultural value, as well as analysis of resident perceptions of development plans. Further, analysis must incorporate existing infrastructure, transportation practices, opportunities for employment, cultural resources and public services.
- Meta-analysis of the negative cultural impacts of increased tourism paired with local surveys to characterize resident opinions on land development and the implementation of a cruise ship port in their own backyard.

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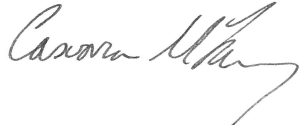
In closing, Lighthouse Point is a unique place and special to many in The Bahamas, in the United States, and worldwide. We trust that DCL will not put at risk Disney's environmental record by attempting to ram through approvals with inadequate studies and a truncated review and public consultation. We expect that DCL will live up to the environmental values and standards of The Walt Disney Corporation and will assure the public has an opportunity to review and comment upon an EIA while still a draft and to participate in meaningful consultations before a final decision.

We stand ready to work with Disney in any way we can to assure that this comprehensive EIA process is beneficial to both Disney and the people of the Bahamas by providing the information and analyses needed to make an informed decision on the future of Lighthouse Point.

Elissa Margolis, The Walt Disney Company  
May 2, 2019

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Sincerely yours,



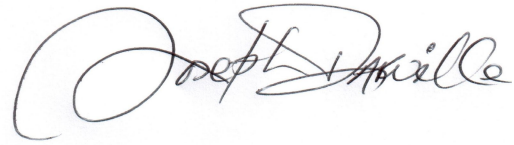
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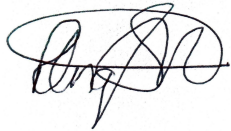
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