VILLAGE OF KEY BISCAYNE

Office of the Village Manager

Village Council
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Village Manager
Genaro "Chip" Iglesias

DATE: January 8, 2008

TO: Honorable Mayor and Members of the Village Council

FROM: Genaro "Chip" Iglesias, Village Manager

RE: Lighting Ordinance

RECOMMENDATION
It is recommended that the Village Council amends the Village Code to create regulations in order to protect nesting turtles and their offspring.

The purpose of the attached ordinance is to reduce the impacts of artificial lighting on threatened and endangered sea turtles that nest on our beach. It will enable the Village to create a permit process for lighting of properties adjacent to our beach, activities and special events involving direct illumination to portions of the beach.

BACKGROUND
On December 7th, 2007, we received notification from the Florida Department of Environmental Protection that the lighting ordinance was required as a result of the ongoing permit process for the Village's Dune Restoration Project and future Beach Renourishment Project.

We committed to having the final adoption of the attached ordinance by March of 2008.

cc: Randy White, Village Finance Director
David M. Wolpin, Esq., Village Attorney

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MISSION STATEMENT: "TO PROVIDE A SAFE, QUALITY COMMUNITY ENVIRONMENT FOR ALL ISLANDERS THROUGH RESPONSIBLE GOVERNMENT."
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ORDINANCE NO. 2008-

AN ORDINANCE OF THE VILLAGE OF KEY BISCAYNE, FLORIDA; AMENDING THE VILLAGE CODE BY CREATING ARTICLE VI, "TURTLE NESTING PROTECTION" OF CHAPTER 8 "ENVIRONMENT" BY CREATING REGULATIONS RELATED TO THE PROTECTION OF NESTING TURTLES AND FOR THE ENFORCEMENT OF SUCH REGULATIONS; PROVIDING FOR SEVERABILITY; PROVIDING FOR INCLUSION IN THE CODE; PROVIDING FOR EFFECTIVE DATE.

WHEREAS, the Village Council desires to amend the Village Code to create regulations to protect nesting turtles and their offspring; and

WHEREAS, the Village Council has reviewed this ordinance in its capacity as the Local Planning Agency, and has found this ordinance to be consistent with the Comprehensive Plan.

NOW, THEREFORE, IT IS HEREBY ORDAINED BY THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, AS FOLLOWS:

Section 1. Recitals Adopted. That the above stated recitals are hereby adopted and confirmed.

Section 2. Village Code Amended. That the Village Code of the Village of Key Biscayne, Florida is hereby amended by creating Article VI "Turtle Nesting Protection" of Chapter 8 "Environment" to read as follows:

ARTICLE VI. TURTLE NESTING PROTECTION

Sec. 8-401. Purpose and intent.

The purpose of this article is to reduce the impacts of artificial coastal lighting on threatened and endangered sea turtles that nest on the beaches of Key Biscayne by restricting artificial lighting and other activities that disorient turtle hatchlings, causing them to crawl toward land rather than

toward the ocean. This article is intended to provide overall improvements in nesting habitat degraded by light pollution, and increase successful nesting activity and production of hatchlings. The restrictions and constraints of this article shall be effective within the incorporated areas of Key Biscayne and apply to any coastal lighting or other activity that has potential to adversely impact sea turtles within Village limits.

Sec. 8-402. Definitions.

Definitions provided in this article are intended for use in this article only and shall not be construed to amend any existing definition in the Land Development Regulations. The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Artificial light means any point source of light emanating from a device made by humans, including but not limited to incandescent mercury vapor, metal halide, sodium lamps, fluorescent, flashlights, spotlights, streetlights, vehicular lights, construction lights, security lights, bonfires, or any light emanating from any reflective surface of the device.

Beach means that area of unconsolidated material that extends landward from the mean low-water line of the Atlantic Ocean, to the place where there is a marked change in material or physiographic form, or to the line of permanent vegetation.

Bug type bulb means any yellow or other colored light bulb that is marketed as being specifically treated in such a way so as to reduce the attraction of bugs to the light.

Coastal construction activities means any work or activity that is likely to have a material physical effect on existing coastal conditions or natural shore and inlet processes.

Coastal Construction Control Line (CCCL) means the line established by the State of Florida pursuant to F.S. § 161.053, and filed in the public records of the county, which defines that portion of the beach dune system subject to severe fluctuations based on a 100-year storm surge, storm waves or other predictable weather conditions.

County means Miami-Dade County.

Cumulatively illuminated means illuminated by numerous artificial light sources that as a group illuminate any portion of the beach.

Directly illuminated means illuminated as a result of glowing elements, lamps, globes, or reflectors of an artificial light source that is visible to an observer on the beach.

Dune means a mound or ridge of loose sediments, usually sand-sized, lying landward of the beach and deposited by any natural or artificial mechanism.

Filmed glass means window glass that has been covered with a film such that the material has a shading coefficient of 45 percent or less, adhesive as an integral part, and has performance claims that are supported by approved testing procedures and documentation.

Floodlight means a reflector-type light fixture that may be attached directly to a building, other structure, or freestanding, and is unshielded.

Frontal dune means the first natural or artificial mound or bluff of sand that is located landward of the beach and that has sufficient vegetation, height, continuity and configuration to offer protective value.

Ground-level barrier means any vegetation, natural feature or artificial structure rising from the ground that prevents beachfront lighting from shining directly onto the beach-dune system.

Hatchling means any species of marine turtle, within or outside of a nest, which has recently hatched from an egg.

Indirectly illuminated means illuminated as a result of glowing elements, lamps, globes, or reflectors of an artificial light source that is not visible to an observer on the beach.

Low-profile luminaire means a light fixture set on a base that raises the source of light no higher than 48 inches off the ground, and designed in such a way that light is directed downward from a hooded light source.

Marine turtle means any marine-dwelling reptile of the families Cheloniidae or Dermochelyidae found in Florida waters or using the beach as a nesting habitat, including the species: Caretta caretta (loggerhead), Chelonia mydas (green), Dermochelys coriacea (leatherback), Eretmochelys imbricata (hawksbill), and Lepidochelys kempi (Kemp's ridley). For purposes of this section, marine turtle is synonymous with sea turtle.

Nest means an area where marine turtle eggs have been naturally deposited or subsequently relocated.

Nesting season means the period from April 1 through October 31 of each year.

New development means new construction and remodeling of existing structures when such remodeling includes alteration of exterior lighting.

Nighttime means the time period between sunset and sunrise within the Village limits of Key Biscayne.

Person means individuals, firms, associations, joint ventures, partnerships, estates, trusts, syndicates, fiduciaries, corporations, and all other groups or combinations.

Pole lighting means a light fixture set on a base or pole that raises the source of the light higher than 48 inches off the ground.

Solar screens means screens that are fixed installations and permanently project shade over the entire glass area of the window. The screens must be installed on the outside of the glass and must have a shading coefficient of 45 percent or less and have performance claims supported by approved testing procedures and documentation.

Tinted glass means any glass treated to achieve an industry-approved inside-to-outside light transmittal value of 45 percent or less. Such transmittance is limited to the visible spectrum (400 to 700 nanometers) and is measured as the percentage of light that is transmitted through the glass.

Sec. 8-403. Prohibited activities disruptive to marine turtles.

(a) *Prohibited generally.* The following activities involving direct illumination of portions of the beach are prohibited on the beach at nighttime during the nesting season for the protection of nesting marine turtle females, nests and hatchlings:

(1) The operation of all motorized vehicles, except emergency and law enforcement, or beach maintenance vehicles or those permitted on the beach for marine turtles conservation and/or research.

(2) The building of campfires or bonfires.

(3) Fireworks displays, except those that have Village special event permits and, if applicable, a Florida Department of Environmental Protection ("DEP") permit. Nothing in this article shall prohibit the Village's annual July 4th fireworks display.

(b) *Special events.* Special events taking place on the beach during nesting season that may have lighting needs shall require a permit from the Florida Department of Environmental

Protection.

(c) *Lighting standards for new development.* It is the policy of the Village of Key Biscayne that no artificial light shall illuminate any area of the beach. The following applies to lighting located east of the Coastal Construction Control Line (CCCL) or lighting that directly illuminates the beach and interferes with turtle nesting. To meet this intent, all public and private properties and uses involving new construction, or renovations exceeding 50 percent of the value of the structure as determined by the building official, located east of the CCCL shall comply with the following:

(1) Exterior artificial light fixtures shall be designed and positioned so that the point source of light or any reflective surface of the light fixture is not directly visible from the beach; areas seaward of the dune are not directly or indirectly illuminated.

(2) Exterior artificial light fixtures within direct line-of-sight of the beach shall be completely shielded downlight only fixtures, or recessed fixtures having low wattage (i.e., "bug" type bulbs of 50 watts or less) and nonreflective interior surfaces. Other fixtures that have appropriate shields, louvers or cut-off features may also be used if in compliance with the requirements of subsection (1) of this section.

(3) All fixtures shall be mounted as low in elevation as possible through use of low-mounted wall fixtures, wall fixtures fitted with hoods, low bollards and ground-level fixtures, so that no light is directly visible from the beach or illuminates the beach.

(4) Floodlights, upward-oriented lights, spotlights or search lights for decorative and accent purposes, or used as security lights, are prohibited if they would be directly visible from the beach, or would indirectly or cumulatively illuminate the beach.

(5) Exterior lights used expressly for safety or security purposes shall be limited to the minimum number and configuration required to achieve the safety and security. Motion detectors should be employed to keep lights off except when approached, and such motion detectors should switch lights on for the minimum duration possible.

(6) Pole lights, if used, shall be shielded in such a manner that light will be contained primarily within the area that is landward of the pole, and light shall not be directly visible from the beach.

(7) Lights on balconies and catwalks facing the ocean shall be limited to: low profile luminaries positioned so that no light illuminates or is visible from the beach; wall mounted fixtures fitted with hoods with nonreflective interiors so that no light illuminates the beach or overhead lighting containing bug-type bulbs or other bulbs with 50 watts or less and nonreflective interior surfaces.

(8) Tinted glass shall be installed on all windows and glass doors of single and multistory structures facing or within line-of-sight of the beach. Shade screens can be substituted for this requirement.

(9) Parking areas and structures shall be designed and located to prevent vehicular headlights from directly or indirectly illuminating the beach. Parking area and parking structure lighting shall be shielded from the beach through the use of shields that direct light away from the beach, and ground-level barriers. Such ground-level barriers shall not interfere with marine turtle nesting or hatchling emergence and shall not cause short or long-term damage to the beach/dune system. Entrances and exits to parking structures shall not face the ocean. Surfaces of parking areas shall not contain ground glass or other reflective material.

(10) Lighting provided for any outdoor recreational feature on or abutting the beach (such as tennis court, swimming pool, etc.) shall be shielded to prevent light from directly or indirectly illuminating the beach.

(11) Dune crosswalks, if lighted, shall utilize low profile shielded luminaries.

(12) No roof top advertising sign that is illuminated in any fashion shall be permitted.

(13) Temporary security lights at construction sites shall not be mounted more than 15 feet above the ground. Illumination from the lights shall be the minimum necessary to assure security, shall not spread beyond the boundary of the property being developed, and in no case shall such lights illuminate the beach.

(d) *Lighting standards for new development that has already been permitted.* The provisions of subsection (c) of this section shall not apply to any structure for which the Village of Key Biscayne Building Department has issued a building permit prior to the effective date of this division. Such structures shall be governed by the provisions of subsection (e) of this section.

(e) *Lighting standards for existing development.* It is the policy of the Village of Key Biscayne that no artificial light shall illuminate any area of the beach. To meet this intent, lighting of existing structures, located east of the CCCL and that can be seen from the beach, shall be in compliance with the following:

(1) Within six months of the effective date of this article, existing artificial light fixtures shall be repositioned, modified, or removed so that:

a. The point source of light or any reflective surface of the light fixture is not directly visible from the beach;

b. Areas seaward of the frontal dune are not directly or indirectly illuminated;

and

c. Areas seaward of the frontal dune are not cumulatively illuminated.

(2) Within one year of the effective date of this article, the following measures shall be taken to reduce or eliminate the negative effects of existing exterior artificial lighting:

a. Reposition fixtures so that the point source of light or any reflective surface of the light fixture is no longer visible from the beach;

b. Replace fixtures having an exposed light source with fixtures containing recessed light sources or shields;

c. Replace traditional light bulbs with bug type bulbs not exceeding 50 watts;

d. Replace nondirectional fixtures with directional fixtures that point down and away from the beach;

e. Replace fixtures having transparent or translucent coverings with fixtures having opaque shields covering an arc of at least 180 degrees and extending an appropriate distance below the bottom edge of the fixture on the seaward side so that the light source or any reflective surface of the light fixture is not visible from the beach;

f. Replace pole lamps with low-profile, low-level luminaries so that the light source or any reflective surface of the light fixture is not visible from the beach;

g. Replace incandescent, fluorescent, and high intensity lighting with the lowest wattage low pressure sodium vapor lighting possible for the specific

application;

h. Plan or improve vegetation buffers between the light source and the beach to screen light from the beach;

i. Construct a ground level barrier to shield light sources from the beach. Ground-level barriers must not interfere with marine turtle nesting or hatchling emergence, or cause short- or long-term damage to the beach-dune system;

j. Permanently remove or permanently disable any fixture that cannot be brought into compliance with the provisions of these standards.

(3) Commercial signage facing the ocean or in the line-of-sight of the beach, except building identification signs, shall not be illuminated during the hours of 9:00 p.m. to 7:00 a.m. of nesting season within 18 months of the effective date of this ordinance.

(f) *Publicly-owned lighting.* Streetlights, existing lighting at parks, publicly owned parking facilities and publicly owned walkways shall be subject to the following:

(1) *Streetlights.* Streetlights installed after the effective date of this ordinance shall either be located so that the bulk of illumination will travel away from the beach, and shielding is used to prevent light from illuminating the beach, or shall be low profile luminaries. Streetlights existing prior to the effective date of this ordinance shall be equipped with shields that minimize backlighting, shall not illuminate the beach and shall reduce visibility from the beach.

(2) *Lighting at parks, publicly owned parking facilities and publicly owned walkways* shall be shielded or shaded during nighttime hours of nesting season so that such lighting does not illuminate the beach and visibility is reduced from the beach. Such

shielding or shading shall not create a safety hazard for pedestrians.

Sec. 8-404. Enforcement and penalties.

The provisions of this article shall be enforced pursuant to Section 1-14 and Article III of Chapter 2 of this Code and by any other means permitted by law. In addition, the enforcing agency may notify the property owner or other person responsible for lighting or management of the property, in writing, that an external lighting source causing a violation may be removed by the Village within ten days. The Village shall recover from the property owner the costs of removal of external lighting sources causing violations, which shall constitute a lien against the property and shall be reimbursed to the Village at time of sale of the property or upon any lien foreclosure action. Said lien shall have the same priority as a lien for real estate taxes.

Section 3. Severability. That the provisions of this Ordinance are declared to be severable, and if any section, sentence, clause or phrase of this Ordinance shall for any reason be held to be invalid or unconstitutional, such decision shall not affect the validity of the remaining sections, sentences, clauses, and phrases of this Ordinance but they shall remain in effect, it being the legislative intent that this Ordinance shall stand notwithstanding the invalidity of any part.

Section 4. Inclusion in the Code. That it is the intention of the Village Council, and it is hereby ordained that the provisions of this Ordinance shall become and be made a part of the Code of the Village of Key Biscayne; that the sections of this Ordinance may be renumbered or relettered to accomplish such intentions; and that the word "Ordinance" shall be changed to "Section" or other appropriate word.

Section 5. Effective Date. That this Ordinance shall be effective immediately upon adoption on second reading.

PASSED on first reading this _____ day of _____, 2008.

PASSED AND ADOPTED on second reading this _____ day of _____, 2008.

_____
MAYOR ROBERT L. VERNON

ATTEST:

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CONCHITA H. ALVAREZ, CMC, VILLAGE CLERK

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

_____
VILLAGE ATTORNEY

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