

**BY ORDER OF THE COMMANDER  
45TH SPACE WING**

**45TH SPACE WING INSTRUCTION 32-7001**

**6 NOVEMBER 2012**

**Civil Engineering**



**EXTERIOR LIGHTING MANAGEMENT**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

---

**ACCESSIBILITY:** Publications and forms are available on the e-Publishing website at [www.e-publishing.af.mil](http://www.e-publishing.af.mil) for downloading or ordering.

**RELEASABILITY:** There are no releasability restrictions on this publication.

---

OPR: 45 CES/CEA

Certified by: 45 CES/CD  
(Robert J. Van Vonderen, P.E.)

Supersedes: 45SWI32-7001,  
25 January 2008

Pages: 4

---

This instruction implements the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. § 1531 et seq), Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*, Air Force Instruction (AFI) 32-7064, *Integrated Natural Resources Management*, and the United States Fish and Wildlife Service (USFWS) Biological Opinion issued 9 April 1991, updated 2 May 2000, 23 August 2006 and 18 November 2008. The instruction also explains management responsibilities, exterior lighting restrictions and reporting requirements necessary for the 45th Space Wing (45 SW) to remain in compliance with Federal, State, and local standards. Military personnel who violate Section 3 of this instruction are subject to punitive action under Article 92, Uniform Code of Military Justice. Violations of Section 3 by civilian employees may result in administrative or other disciplinary action under AFI36-704, *Discipline and Adverse Action*. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, Recommendation for Change of Publication; route AF Form 847s from the field through Major Command (MAJCOM) publications/forms managers. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management Systems (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.myaf.mil/afrims/afrims/afrims/rims.cfm>.

## *SUMMARY OF CHANGES*

This document has been substantially revised and must be completely reviewed. Major changes include identification of programmable timers and motion sensors that are encouraged for area lighting if essential to personnel safety, and a change to the annual notification requirements.

**1. Background.** In 1998, the 45 SW and USFWS agreed to develop Light Management Plans (LMPs) in an effort to reduce the amount of exterior lighting visible from the beach. This action was required to reduce sea turtle hatchling mortality caused by disorientation. Disorientation occurs when sea turtles crawl toward inland light sources rather than the ocean. The LMPs identified exterior lights that could be replaced with low-pressure sodium (LPS) lamps, unnecessary lights that could be eliminated, and operational constraints for all exterior lights. The USFWS has approved additional types of fixtures that may be used when shielded.

**2. Concept.** This instruction establishes responsibilities and provides guidance for the protection of threatened and endangered sea turtles in accordance with the Endangered Species Act and the Biological Opinion issued by the USFWS. This instruction applies to all exterior lighting systems/fixtures located within Air Force property boundaries of the 45 SW that may affect sea turtles.

### **3. Responsibilities.**

3.1. Organizations, tenants, and residents are responsible for minimizing exterior lighting during the sea turtle nesting season, 1 May through 31 October, between the hours of 2100 and 0600. Exterior lighting that is not mission-, safety-, or security-essential will be extinguished during this time frame. All exterior lights will be controlled by either individual or cluster light-specific switches, or an Energy Management Control System (EMCS).

3.1.1. Mission-essential operations that require artificial lighting will be accomplished with fixtures using well-shielded, downward-directed LPS, full cutoff amber/yellow compact fluorescent, full cutoff amber (bug light) incandescent, or full cutoff amber Light Emitting Diode (LED). Where color rendition or explosion-proof fixtures are required, well-shielded, high-pressure sodium (HPS) lights may be used; however, a letter of justification must be submitted to the 45 SW Civil Engineering Asset Management Flight (45 CES/CEA) with the request for this variance. Further, any lighting other than HPS that is required for color-rendition purposes will require a letter of justification. Lighting directly visible on the beach must be shielded to prevent incidental illumination of the beach.

3.1.2. Interior lighting that creates an incidental glow visible outside the facility must be extinguished or shielded to prevent the light from being visible external to the facility. Mission operations that require unshielded lighting or "uplighting" will require a letter of justification and approval through 45 CES/CEA and the USFWS. If interior lighting is required for safety or security reasons and is visible outside the facility, the facility manager must work with the 45 CES/CEA to identify alternative light types and shielding options.

3.1.3. Use of photo cells is not permitted unless lighting is a security or safety requirement. Requests to 45 CES/CEA for the installation of photo cells must be

accompanied by written justification. Programmable timers and motion sensors are highly encouraged for area lighting, if essential for personnel safety.

3.1.4. Light Management Plans may be required for new facility construction/operation and/or any operations requiring exterior lighting. The need for a LMP will be determined by the 45 CES/CEA; however, it will be the responsibility of the requester/user to complete and submit the LMP to 45 CES/CEA, who will then submit to the USFWS for approval.

3.2. The 45 CES/CEA office will be responsible for monitoring and enforcement of light use restrictions for sea turtle protection on 45 SW installations.

#### **4. Notification and Reporting.**

4.1. The 45 CES/CEA office will issue annual notices to all personnel prior to the sea turtle nesting season to remind organizations, tenants and residents of light use constraints and responsibilities.

4.2. Incidents of inappropriate light operation will be reported to the accountable facility managers and appropriate commanders.

4.3. Questions regarding the requirements of this Space Wing Instruction or concerns related to sea turtles and lighting should be directed to 45 CES/CEA at 494-7288 or 853-0964.

ANTHONY J. COTTON, Brigadier General, USAF  
Commander

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

Endangered Species Act (ESA) of 1973, as amended 6 U.S.C. § 1531 et seq)

Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*, 20 July 1994

Air Force Instruction (AFI) 32-7064, *Integrated Natural Resources Management*, 12 September 2004

AFI36-704, *Discipline and Adverse Action*, 22 July 1994

AFMAN) 33-363, *Management of Records*, 1 March 2008

United States Fish and Wildlife Service (USFWS) Biological Opinion issued 9 April 1991, updated 2 May 2000, 23 August 2006 and 18 November 2008

***Adopted Forms***

AF Form 847, *Recommendation for Change of Publication*, 22 September 2009

***Abbreviations and Acronyms***

**AFI**—Air Force Instruction

**AFMAN**—Air Force Manual

**AFPD**—Air Force Publishing Directive

**AFRC**—Air Force Reserve Command

**AFRIMS**—Air Force Records Information Management System

**EMCS**—Energy Management Control System

**HPS**—High-Pressure Sodium

**LED**—Light Emitting Diode

**LMPs**—Light Management Plans

**PAFB**—Patrick Air Force Base

**OPR**—Office of Primary Responsibility

**RDS**—Records Disposition Schedule