

COUNCIL OF THE COUNTY OF MAUI
PUBLIC WORKS AND TRANSPORTATION COMMITTEE
SUBCOMMITTEE ON
OUTDOOR LIGHTING STANDARDS

February 4, 2003

Committee
Report No. _____

Honorable Chair and Members of the
Public Works and Transportation Committee
County of Maui
Wailuku, Maui, Hawaii

Chair and Members:

Your Subcommittee on Outdoor Lighting Standards having met on January 17, 2002, January 24, 2002, February 6, 2002, February 20, 2002, March 7, 2002, March 21, 2002, July 10, 2002, August 21, 2002, September 25, 2002, and October 23, 2002, makes reference to a Miscellaneous Communication dated December 13, 2001, from the Chair of your Public Works and Transportation Committee, reporting that at its meeting of December 5, 2001, your Public Works and Transportation Committee established your Subcommittee on Outdoor Lighting Standards.

Your Subcommittee notes that it is charged with the responsibility to provide recommendations on how a draft bill, prepared by an Ad Hoc Committee for Outdoor Lighting Standards, entitled "AN ORDINANCE OF THE COUNTY OF MAUI, HAWAII, TO BE KNOWN AS THE 'OUTDOOR LIGHTING STANDARDS' ESTABLISHING REGULATIONS AND GUIDELINES FOR EXTERIOR LIGHTING; PROVIDING FOR GENERAL PROVISIONS, DEFINITIONS, CRITERIA, NOTIFICATION, THE COUNTY'S ROLE, AND VIOLATIONS, LEGAL ACTIONS AND PENALTIES; PROVIDING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING A REPEALER CLAUSE; AND, PROVIDING AN EFFECTIVE DATE", should be revised to conform to the desired lighting standards for Maui County. The purpose of the draft bill is to limit degradation of the night visual environment by minimizing light glare, pollution or trespass through regulation of form and use of outdoor lighting. The lighting standards should reflect considerations in the areas of science, environment, national defense and energy conservation.

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Your Subcommittee is comprised of the following members:

1. Councilmember Michael J. Molina, Chair
2. Councilmember Charmaine Tavares, Vice-Chair
3. Lee Altenberg
4. Hannah Bernard
5. Richard Chong
6. Mike Maberry
7. Warren McCord

Your Subcommittee's term was set to expire on April 2, 2002.

By correspondence dated January 14, 2002, your Subcommittee Chair provided an overview of the discussion items for the first Subcommittee meeting and a proposed meeting schedule.

By correspondence dated January 15, 17, 22, 25, 26, 29, February 5, 8, 22, July 9, October 4, 10, and 22, 2002, your Subcommittee received correspondence from various individuals commenting on the draft bill.

By correspondence dated January 16, 2002, your Subcommittee Chair transmitted a copy of Chapter 12.17, Street Lighting Committee, Maui County Code, and Chapter 901, Rules for the Department of Public Works and Waste Management entitled, "Street Lighting Standards."

By correspondence dated January 16, 2002, the Department of the Corporation Counsel transmitted a draft bill entitled "A BILL FOR AN ORDINANCE AMENDING TITLE _____, MAUI COUNTY CODE, RELATING TO OUTDOOR LIGHTING STANDARDS". The purpose of the draft bill is to limit degradation of the night visual environment by minimizing light glare, pollution or trespass through regulation of form and use of outdoor lighting. The lighting standards should reflect considerations in the areas of science, environment, national defense and energy conservation.

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At its meeting of January 17, 2002, your Subcommittee met with the Assistant Chief of Police; a Civil Engineer V, an Assistant Engineering Program Manager, and an Electrical Inspection Supervisor from the Department of Public Works and Waste Management; a Staff Planner III from the Department of Planning; the County Energy Specialist; and a Deputy Corporation Counsel.

Your Subcommittee received public testimony from four individuals in support of the draft bill, and from one individual who raised concerns about certain provisions of the draft bill as they relate to business security and liability.

Your Subcommittee received written testimony dated January 17, 2002, from Dr. Fern P. Duvall, II, supporting the recommendations of the draft bill, but opposing the use of certain lighting fixtures.

Dr. Lee Altenberg, member of the Ad Hoc Committee for Outdoor Lighting Standards provided your Subcommittee with an overview of the draft bill. He stated that the draft bill would regulate light glare, trespass, fixtures, lamps, and preserve the night sky for astrological studies and protect such wildlife as nesting sea turtles and night flying birds. He further stated that the draft bill addresses specifically outdoor lighting and was drafted utilizing existing ordinances in other communities throughout the country.

Your Subcommittee noted that provisions of the draft bill may conflict with the existing Maui County Code (MCC). Your Subcommittee expressed a desire to delete sections of the draft bill that may conflict or duplicate certain provisions of the MCC, if passed. Your Subcommittee requested that the definition of "glare" be expanded to be more specific. Your Subcommittee felt that glare, as defined, is too subjective and cannot be regulated. Your Subcommittee also noted concerns about Section .050, General exemptions, relating to the use of certain types of lighting on the beaches. Your Subcommittee raised concerns about the potential impacts certain lighting may have on nesting sea turtles and other wildlife. Your Subcommittee felt that this section should be modified to restrict the use of certain lights on the beach and set a time limit curfew for when such lighting should be extinguished.

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Your Subcommittee requested a copy of the County of Hawaii's ordinance relating to outdoor lighting, and that the Department of the Corporation Counsel provide: (1) recommendations for addressing variances and appeals from sections of the draft bill; and (2) language for Section .060, Outdoor lighting standards committee, relating to the creation of the committee, definition of its purpose, duties and selection of members.

Your Subcommittee deferred the matter pending further discussion.

By correspondence dated January 19, 2002, Bill George requested additional information regarding the draft bill and its origin.

By correspondence dated January 22, 2002, your Subcommittee Chair provided an outline of the items to be discussed at its meeting of January 24, 2002.

By correspondence dated January 22, 2002, the Director of Public Works and Waste Management transmitted comments from a Subdivision Engineering Standards Committee member relating to the draft bill.

By correspondence dated January 22, 2002, your Subcommittee Chair transmitted the County of Hawaii Ordinance entitled "AN ORDINANCE AMENDING CHAPTER 14, ARTICLE 9, OF THE HAWAII COUNTY CODE 1983, RELATING TO OUTDOOR LIGHTING".

By correspondence dated January 23, 2002, your Subcommittee Chair transmitted various diagrams for lighting fixtures, standards and light shielding devices.

By correspondence dated January 23, 2002, Randy Nakama, Electrical Supervisor, Maui Electric Company, Ltd., transmitted cost estimates for replacing high-pressure sodium lighting with low-pressure sodium lamps and fixtures.

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At its meeting of January 24, 2002, your Subcommittee met with the Planning Development Chief, Department of Parks and Recreation; a Civil Engineer V, an Assistant Engineering Program Manager, and an Electrical Inspection Supervisor from the Department of Public Works and Waste Management; a Staff Planner III from the Department of Planning; the County Energy Specialist; three Captains from the Department of Police; a Deputy Corporation Counsel; the Executive Director from the Maui Chamber of Commerce; the Executive Director from the Maui Hotel Association; the President, Safe Community of Maui Inc.; a representative from Piltz Electrical; a representative from Dowling and Company; and an Engineering representative from the Maui Hotel Association.

Your Subcommittee received public testimony from three individuals supporting the draft bill and requesting the elimination of floodlights for parks and beaches.

Two testifiers from the hospitality industry expressed concerns about the potential impacts that the proposed lighting requirements within the draft bill may have on safety, security and liability for hotels and resorts.

Your Subcommittee received the following items at its meeting:

1. Written testimony dated January 24, 2002, from Paul Mullin providing general comments on the draft bill; and
2. A copy of Appendix A Volusia County (Florida) Land Development Code, Article XII, relating to regulating lighting standards for the protection of sea turtles.

The Deputy Corporation Counsel provided your Subcommittee with an overview of Section .070, Lamp standards, of the draft bill. He stated that this section does not include a grandfather clause for existing lighting fixtures, and there is no reference to possible exceptions to the provisions of the draft bill.

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In response to an inquiry from your Subcommittee, a Captain from the Department of Police stated that the Department is unable to support the draft bill because of the required use of low-pressure sodium (LPS) lamps. He stated that LPS lighting creates very poor color retention, therefore, making it difficult for surveillance and identifying potential crime suspects.

Your Subcommittee noted that color retention of the LPS can present a problem for certain businesses and felt exceptions should be defined in the draft bill. Your Subcommittee further noted that review of the draft bill is very technical and recommended that a “working group”, consisting of Subcommittee members, be established. The objective of the “working group” would be to provide technical review of provisions within the draft bill and recommend revisions.

In response to an inquiry from your Subcommittee, the Civil Engineer V stated that the maximum wattage required for street lighting will not be adequate, and that the County would be required to double the number of street lamps to produce the same amount of lumens produced by high pressure sodium (HPS) fixtures.

Your Subcommittee requested that:

1. the Department of the Corporation Counsel provide an opinion on the applicability of the draft bill to State Department of Transportation roads and highways;
2. information be obtained from Musco Lighting, Inc., relating to guidelines for lighting public parks and sports fields;
3. various County of Hawaii Departments be contacted to determine their experiences with the use of LPS lamps and review the feasibility of conducting a site visit on the island of Hawaii; and
4. the creation of a “working group” be coordinated to help advise your Subcommittee on technical elements of the draft bill.

Your Subcommittee deferred the matter pending further discussion.

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By correspondence dated January 25, 2002, your Subcommittee Chair transmitted an outline of a verbal opinion provided by the Department of Corporation Counsel indicating that the creation of a "working group" would be considered another subcommittee. Establishing another subcommittee would require approval by your Public Works and Transportation Committee, and compliance with public notice requirements.

By correspondence dated January 31, 2002, your Subcommittee Chair transmitted parks and sports facility lighting recommendations from Musco Lighting, Inc.

By correspondence dated February 6, 2002, your Subcommittee Chair provided an overview of discussions held with representatives from County of Hawaii Departments of Parks and Recreation, Public Works and Building and Safety, regarding their experiences with the conversion to LPS lighting.

At its meeting of February 6, 2002, your Subcommittee met with the Planning Development Chief from the Department of Parks and Recreation; the Engineering Division Chief, a Civil Engineer V, and an Electrical Inspection Supervisor from the Department of Public Works and Waste Management; a Staff Planner III from the Department of Planning; the County Energy Specialist; a Captain from the Department of Police; a Deputy Corporation Counsel; the Executive Director from the Maui Hotel Association; the President from Safe Community of Maui, Inc.; the owner of Piltz Electrical; a representative from Maui Electric Company, Ltd.; an Astronomer from the Institute for Astronomy, University of Hawaii; representative from Dowling and Company; and an engineering representative from the Maui Hotel Association.

Your Subcommittee received testimony from three individuals expressing support for the passage of the draft bill, and from two individuals expressing concerns about the draft bill and offering certain revisions. One of the testifiers displayed an LPS lamp.

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Your Subcommittee received the following items at the meeting:

1. An article entitled, "Why astronomers favor low pressure sodium lights near observatories", by Richard J. Wainscoat, University of Hawaii, Institute for Astronomy;
2. A brochure entitled, "A Guide to 'Turtle Friendly' Coastal Lighting", submitted by a Subcommittee member;
3. Correspondence dated February 4, 2002, from Barbara Luke offering support for the draft bill;
4. Correspondence dated February 5, 2002, from Carol Thuro, regarding light pollution of the night sky and offering support of the draft bill; and
5. Correspondence dated February 5, 2002, from a Subcommittee member, transmitting correspondence dated March 7, 1997, from Robert L. Horcajo, former Chair of the Subdivision Engineering Standards Committee, relating to a review of street lighting standards for the County of Maui

Your Subcommittee discussed prioritizing sections of the draft bill for the purpose of expediting review. Your Subcommittee selected sections that would focus attention on the provisions of the document that may have the greatest impact on lighting standards within the County of Maui. Your Subcommittee felt that by addressing the prioritized sections first, recommendations could be sent to your Committee for immediate consideration.

Your Subcommittee prioritized the sections in the following order:

1. Section .070, Lamp standards;
2. Section .080, Luminaire standards;
3. Section .130, Existing lighting fixtures;
4. Section .100, Street light installation, illumination, removal and alteration guidelines;
5. Section .090, Luminaire mount standards; and
6. Section .050, General exemptions.

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Your Subcommittee also expressed a desire to explore the shielding of lights for all applications in lieu of or in addition to LPS.

Your Subcommittee noted during its review of Section .070, Lamp standards, that certain provisions of this section must be clarified. These included the types of businesses and activities that are exempted from this section, the amount of lumens permitted for lamps exempted from this section, and an explanation of various exemptions to this chapter.

The Engineering Division Chief advised your Subcommittee that converting to LPS for street lighting purposes would require additional light poles because the lumens produced by LPS is not as strong as the HPS currently being utilized for lighting roadways.

Your Subcommittee further noted that time limitations should be established for business operations in Section .070.A.1.

Your Subcommittee noted concerns about exemptions included in Section .070, relating to harbors, temporary lighting needs for special events, and lighting directed toward the beaches.

A Civil Engineer V, advised your Subcommittee that Section .070.A.1, should be revised to read: "Provisions of this section shall not be applicable where color retention is needed as noted below." Your Subcommittee asked that the members review this suggestion further and provide recommendations at the next meeting.

Your Subcommittee requested that:

1. certain members review these items and provide recommendations at the next meeting;
2. representatives from the County of Hawaii attend a meeting as resource personnel;

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3. a demonstration comparing LPS to HPS, mercury vapor (MV) and metal halide (MH) lighting be conducted;
4. the resource personnel check with various businesses to determine an adequate time to extinguish exempted lighting;
5. its members review certain recommendations submitted by a Civil Engineer V as it relates to Section .070.A.1; and
6. a site visit be conducted in the County of Hawaii to observe the use of LPS lighting.

Your Subcommittee deferred the item pending further discussion.

By correspondence dated February 8, 2002, the Council Chair provided a response to a request from your Subcommittee Chair, for funding a site visit to the island of Hawaii. The Council Chair stated that the Council has not made it a practice to fund additional expenses, such as travel, for Subcommittees.

By correspondence dated February 12, 2002, your Subcommittee Chair transmitted a document from Musco Lighting, Inc., entitled, "Sports Lighting Fixtures, Pole Heights/Spill Light & Glare Control".

By correspondence dated February 14, 2002, your Subcommittee Chair requested that Dexter Kumano, Hawaii District Director, Philips Lighting, attend its meeting of February 20, 2002.

By correspondence dated February 18, 2002, the Department of the Corporation Counsel transmitted a matrix providing the following:

1. Sections of the draft bill that may create a duplication of existing ordinances;
2. Ordinances that should be repealed if the draft bill is passed; and
3. Language setting procedures for variances or appeals for items not in compliance with the draft bill.

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By correspondence dated February 19, 2002, the Department of the Corporation Counsel transmitted proposed language establishing an Outdoor Lighting Standards Committee.

By correspondence dated February 19, 2002, the Department of the Corporation Counsel transmitted a copy of Attorney General Opinion No. 86-3, relating to the possible application of the draft bill to State roadways.

At its meeting of February 20, 2002, your Subcommittee met with the Planning Development Chief from the Department of Parks and Recreation; a Civil Engineer V, the Engineering Division Chief, and an Electrical Inspection Supervisor from the Department of Public Works and Waste Management; a Staff Planner III from the Department of Planning; the County Energy Specialist; a Deputy Corporation Counsel; the Executive Director from the Maui Chamber of Commerce; the Executive Director from the Maui Hotel Association; a representative from Dowling and Company; a representative from Maui Electric Company, Ltd.; an Astronomer from the Institute for Astronomy, University of Hawaii; and Dexter Kumano, Hawaii District Director, Philips Lighting.

Your Subcommittee received public testimony from three individuals expressing support for the passage of the draft bill, and one individual offering revisions to the draft bill.

Your Subcommittee received the following items at the meeting:

1. Correspondence transmitting the following items from Dr. Richard J. Wainscoat, University of Hawaii, Institute for Astronomy:
 - a. Written testimony relating to light pollution and levels of brightness within the County of Maui;
 - b. "Report and Recommendations of Commission 50, (Identification & Protection of Existing & Potential Observing Sites)"; and

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- c. An article entitled "Why Astronomy Needs Low-Pressure Sodium Lighting", by Christian B. Luginbuhl, United States Naval Observatory.
2. Various product brochures and information relating to LPS lighting from Dexter Kumano, Philips Lighting.
3. Lamp and fixture costs for LPS lighting, from Rob Billingsley, Dimensions Electrical.
4. Revisions to Section .070, of the draft bill submitted by certain Subcommittee members.
5. Summary of lighting recommendations for turtle nesting areas submitted by a Subcommittee member.

Mr. Kumano provided your Subcommittee with a demonstration comparing LPS lamps to HPS and MH lamps. Mr. Kumano shared with your Subcommittee an exhibit that displayed the color retention of the various light types. He indicated that the color-rendering index has a rating from 1 to 100, with a rating of 100 being the best for identifying colors. He stated that LPS has a color-rendering index rating of zero, HPS has a rating of 21, and MH has a rating of 92. However, he stated that LPS has the best efficiency rating of all lighting sources and is the least disruptive to sea turtles.

Your Subcommittee noted concerns about the special handling and disposal of LPS lamps.

Your Subcommittee also noted the value of the lighting demonstration by Mr. Kumano; however, it expressed a desire to coordinate a site visit to the County of Hawaii to view the practical application of LPS lighting. Your Subcommittee further noted correspondence dated February 8, 2002, from the Council Chair, indicating that it is not normal practice of the Council to fund additional expenses, such as travel for Subcommittees. As a result, your Subcommittee agreed that they would pay for a County of Hawaii site inspection with their own individual funds.

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Your Subcommittee discussed the value of viewing a street lighting demonstration project within the County of Maui that would include the installation of shields for HPS lamps and the conversion of certain HPS lamps to LPS lamps. Your Subcommittee recommended that such a demonstration occur on Kula Highway near King Kekaulike High School. Your Subcommittee noted that Kula Highway is a State right-of-way; therefore, permission must be granted to perform such a demonstration. Your Subcommittee selected this location because of the recent installation of the HPS lighting along the highway, the adaptability of the new light fixtures to shielding materials, and the proximity to the observatories on Haleakala.

Two Subcommittee members provided an overview of recommendations for Section .070, Lamp standards, of the draft bill. The recommendations included various language changes, the inclusion of additional exemptions of certain activities and businesses to Section .070.A.1., the correction of wattage requirements, and a reference to State and Federal requirements for illumination.

The Engineering Division Chief stated that certain public works construction and repair projects are required to take place in the evening; therefore, he recommended that the use of lighting for night construction and repair projects be exempted within the draft bill.

Your Subcommittee also expressed concerns about the continued use and sale of MV lighting. Your Subcommittee noted that consideration should be given to restricting the sale and prohibiting the use of MV lamps.

Your Subcommittee also expressed a desire to determine the usage of MV lights by various State and Federal agencies.

Your Subcommittee further noted concerns regarding the protection of beaches for the purposes of nesting sea turtles. Your Subcommittee also recognized the concerns expressed by hotels, resorts and certain commercial activities along the beach that provide lighting of beaches and surrounding

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properties for the purposes of providing safety, security, and general enjoyment of such properties.

Your Subcommittee requested that:

1. The State and the County of Hawaii detail requirements for the proper disposal of LPS lamps and fixtures.
2. The State Department of Transportation, Maui Electric Company Ltd., and the County Department of Public Works and Waste Management be contacted to determine the feasibility of a street lighting demonstration project.
3. The Department of the Corporation Counsel:
 - a. Incorporate language into Section .050, General exemptions that would exempt lighting restrictions for emergency repairs and public works projects that take place in the evening.
 - b. Provide an opinion relating to the indemnification of individuals or businesses that light areas adjacent to their property for public safety purposes.
4. Certain Subcommittee members review Section .070.B. and provide recommendations at the next meeting.
5. State and Federal agencies be contacted to determine if they use MV lighting for various facilities and public rights-of-way.

Your Subcommittee deferred the matter pending further discussion.

Your Subcommittee received the following correspondence from State and Federal agencies, indicating that they no longer use MV lighting:

1. Jason K. Koga, District Land Agent, Land Division, State Department of Land and Natural Resources, dated March 1, 2002;
2. Philip Ohta, Maui Parks District Superintendent, Parks Division, State Department of Land and Natural Resources, dated March 8, 2002;

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3. Carol She, Acting Maui District Manager, Small Boat Harbors Division, State Department of Land and Natural Resources, dated March 14, 2002, who indicated that only Hana Harbor utilizes two MH lights; and
4. Donald W. Reeser, Superintendent, Haleakala National Park, National Parks Service, United States Department of the Interior, dated March 18, 2002.

By correspondence dated March 4, 2002, your Subcommittee Chair provided a summary of items discussed at its meeting of February 20, 2002.

By correspondence dated March 4, 2002, your Subcommittee Chair requested that the Department of the Corporation Counsel review language for the creation of an Outdoor Lighting Standards Committee.

By correspondence dated March 6, 2002, the Director of Public Works and Waste Management requested that your Subcommittee recommend County roadways as potential locations to be utilized for a street lighting demonstration project.

At its meeting of March 7, 2002, your Subcommittee met with a Civil Engineer V, the Engineering Division Chief, and an Electrical Inspection Supervisor from the Department of Public Works and Waste Management; a Planning Development Supervisor from the Department of Parks and Recreation; a Staff Planner III from the Department of Planning; the County Energy Specialist; a Deputy Corporation Counsel; the Executive Director from the Maui Chamber of Commerce; the Executive Director from the Maui Hotel Association; a representative from Dowling and Company; a representative from Maui Electric Company, Ltd.; an Astronomer from the Institute for Astronomy, University of Hawaii; and Eric Miyasato, P.E., Pacific Electrical Sales Agency, Inc.

Your Subcommittee received public testimony from two individuals offering support of the draft bill.

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One testifier stated that certain Hawaiian traditions and ceremonies take place during the pokane (the darkest part of the evening). As a result, he noted that the ceremonies may be impacted by light pollution and trespass.

Another testifier suggested that conversion to LPS will be costly and create a hardship on smaller businesses.

Your Subcommittee received the following items at the meeting:

1. A report from Eric Miyasato, P.E., Pacific Electrical Sales Agency, Inc. that included:
 - a. A matrix reviewing the costs of converting the existing HPS lights to LPS;
 - b. Wattage comparison of HPS to LPS lighting and energy cost recovery estimates;
 - c. Calculations for lighting levels and distribution; and
 - d. Specification sheets for various HPS and LPS lights.
2. Correspondence dated March 6, 2002, from the Department of the Corporation Counsel providing the following:
 - a. Recommended language for Section .050, General exemptions, exempting lighting restrictions for emergency repairs and public works projects; and
 - b. An opinion relating to the indemnification of individuals or businesses that light areas adjacent to their property for public safety purposes.
3. Correspondence dated March 7, 2002, from a Subcommittee member transmitting information about turtle nesting areas in Maui.
4. Correspondence dated March 7, 2002, from a Subcommittee member providing proposed revisions to Section .070.B of the draft bill.
5. Newspaper articles submitted by Skippy Hau, State Department of Land and Natural Resources, reviewing "turtle friendly" lighting ordinances from various communities.

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6. A brochure entitled "Turtle Friendly Luminaires for Coastal Nesting Areas", submitted by a Subcommittee member.
7. Written testimony dated March 7, 2002, from Cheryl King offering support of the draft bill for the purpose of protecting turtle nesting areas.
8. Correspondence dated March 7, 2002, from Casey Jarman and George H. Balazs providing comments on the draft bill.

Mr. Miyasato provided a review of the following areas for your Subcommittee: an assessment of costs for converting HPS to LPS, cost recovery calculations, outline of various HPS and LPS luminaires and fixtures, and lighting distribution estimates. Mr. Miyasato suggested that the length of time it would take to recover energy costs for converting HPS to LPS, along with the price for fixtures and luminaires, do not appear to justify the expense. Mr. Miyasato recommended utilization of shields and full cutoff HPS lights.

In response to an inquiry from your Subcommittee, Mr. Miyasato recommended that amber-colored HPS luminaire lenses be utilized to assist in lighting beaches for the purposes of maintaining safety and security for resorts, while protecting nesting sea turtles and night-flying birds.

Your Subcommittee noted that because of the complexity and technical elements of the bill, discussions and review have been very time consuming. Furthermore, your Subcommittee noted its initial meetings involved a tremendous amount of research and fact-finding; therefore, review of the draft bill was very slow. However, despite the investigative and exploratory period, some progress has been achieved. Consequently, your Subcommittee believes that the comprehensive evaluation of specific sections can now commence. Your Subcommittee expressed concerns about constraints for meeting informally or in small groups to conduct a more technical review of specific sections of the bill. Your Subcommittee noted that provisions within Hawaii Revised Statutes, Chapter 92, commonly known as the Sunshine Law, governs the operation of the Council, its committees and subcommittees. Your Subcommittee articulated concerns regarding restrictions the Sunshine Law places on the members' ability

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to meet on a less formal basis. Your Subcommittee discussed the applicability of the Sunshine Law to the formation of a “working group”, to the suspension of your Subcommittee activities, and to the expiration of its term. Your Subcommittee desired more information on the relevance of the Sunshine Law on the aforementioned situations.

Your Subcommittee discussed seeking an extension of its term. Your Subcommittee reviewed various suggestions, and voted to recommend a 60-day extension.

Your Subcommittee requested that the:

1. Public Works and Transportation Committee consider extending the term of your Subcommittee by 60 days to June 1, 2002; and
2. Department of the Corporation Counsel provide a legal opinion on the following:
 - a. The applicability of the Sunshine Law to a “working group” of your Subcommittee;
 - b. The provisions of the Sunshine Law that regulate the members’ participation in meetings during a suspension of your Subcommittee’s operations;
 - c. The Sunshine Law’s restrictions on Subcommittee members should its term lapse; and
 - d. The ability of your Subcommittee members to meet with citizen groups, individuals or County departments to discuss lighting standards after the expiration of its term.

Your Subcommittee deferred the matter pending further discussion.

By correspondence dated March 12, 2002, Ferdinand Cajigal, Engineering Program Manager, State Department of Transportation, agreed to cooperate with the County and Maui Electric Company, Ltd., for a street lighting demonstration project on Kula Highway in Pukalani.

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By correspondence dated March 12, 2002, Steven Y. K. Chang, P.E., Chief, Solid and Hazardous Waste Branch, State Department of Health, stated that no rules exist regulating the disposal of LPS lamps and fixtures.

By correspondence dated March 14, 2002, your Subcommittee Chair requested that the Department of Fire Control provide the following information:

1. Determination of the hazardous material in LPS lamps and fixtures;
2. Proper disposal of LPS lamps and fixtures; and
3. Identification of the County's hazardous waste generator status.

By correspondence dated March 15, 2002, your Public Works and Transportation Committee Chair notified your Subcommittee that its term had been extended 90 days to October 31, 2002.

By correspondence dated March 15, 2002, Robert Hobdy, Forestry and Wildlife Manager, Division of Forestry and Wildlife, State Department of Land and Natural Resources, identified the use of MV lighting at various locations.

By correspondence dated March 19, 2002, the Fire Chief, Department of Fire Control, stated that the County HazMat Division provides emergency response for hazardous waste spills and clean up. The Fire Chief suggested submitting the LPS disposal inquiry to the Department of Public Works and Waste Management.

By correspondence dated March 20, 2002, the Department of the Corporation Counsel provided a legal opinion on the applicability of the Sunshine Law to the operation of your Subcommittee and the formation of a "working group".

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By correspondence dated March 20, 2002, your Subcommittee Chair requested that the Department of Public Works and Waste Management provide the following information:

1. Determination of the hazardous material in LPS lamps and fixtures;
2. Proper disposal of LPS lamps and fixtures; and
3. Identification of the County's hazardous waste generator status.

At its meeting of March 21, 2002, your Subcommittee met with a Highway Engineer from the State Department of Transportation; a Civil Engineer V, the Engineering Division Chief, and an Electrical Inspection Supervisor from the Department of Public Works and Waste Management; a Staff Planner III from the Department of Planning; the County HazMat Officer from the Department of Fire Control; the County Energy Specialist; a Deputy Corporation Counsel; the Executive Director from the Maui Chamber of Commerce; the Executive Director from the Maui Hotel Association; a representative from Dowling and Company; a representative from Maui Electric Company, Ltd.; and an Astronomer from the Institute for Astronomy, University of Hawaii.

Your Subcommittee received testimony from four individuals.

One of the testifiers indicated that Kihei, Wailea and Pukalani are producing about 73 percent of the light pollution in the County of Maui.

Two other testifiers spoke in favor of the draft bill.

Another testifier discussed lighting distribution levels of shielded and full cut-off HPS compared to LPS. He further stated that the cost for conversion to LPS would create a hardship on businesses; however, he recommended that your Subcommittee consider a five- to ten-year period for converting to ease the financial burden on businesses. He further suggested that certain areas be permitted to remain HPS with full cut-off fixtures or shields for safety and security reasons, while areas along the slopes of Haleakala and along beaches be converted to LPS.

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Your Subcommittee received the following items at the meeting:

1. Written testimony from Dr. Richard J. Wainscoat, University of Hawaii, Institute for Astronomy, relating to light pollution levels at various locations throughout the County of Maui and a summary of the International Light Pollution Conference in Chile;
2. Document outlining guidelines for the disposal of LPS lights, provided by the County HazMat Officer, Department of Fire Control; and
3. A report entitled "Light Pollution", reviewing light glare, trespass, over lighting and energy waste, provided by Lance Weisel, Managing Director, Sterling Development Services.

The Deputy Corporation Counsel provided your Subcommittee with an overview of a legal opinion on the applicability of the Sunshine Law to the operation and function of your Subcommittee. He stated that because your Subcommittee is a subdivision of the Council, it is governed by rules set forth within the Sunshine Law; therefore, its provisions would apply to your Subcommittee and its members. He further stated that a "working group" established by your Subcommittee would be required to adhere to regulations within the Sunshine Law. He indicated that should your Subcommittee suspend operations, it is still considered a subdivision of the Council, and therefore, must follow Sunshine Law guidelines. Furthermore, he stated that should your Subcommittee disband or allow its term to expire, the provisions of the Sunshine Law would not affect the ability of its former members to meet to discuss outdoor lighting standards.

In response to an inquiry by your Subcommittee, the Deputy Corporation Counsel stated that no more than two members can meet to discuss outdoor lighting standards. He further stated that communication through electronic mail is also restricted to no more than two members of your Subcommittee.

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Your Subcommittee reiterated concerns regarding the exhaustive review of the draft bill and noted the technical nature of the subject matter. Your Subcommittee expressed optimism for achieving consensus and further noted agreement is near on various sections of the draft bill. Your Subcommittee indicated a desire to continue with the comprehensive examination of the bill to accomplish the objective of submitting a recommendation to your Public Works and Transportation Committee by the end of the term. Your Subcommittee felt that the ability to compromise on certain elements of the bill will be the key to achieving true consensus.

Your Subcommittee voted to continue its mission and pursue the objectives established by your Public Works and Transportation Committee. Your Subcommittee noted one dissenting vote.

Your Subcommittee received a presentation on the feasibility of conducting a street lighting demonstration project that would convert certain HPS lights to LPS. Your Subcommittee noted that the State Department of Transportation has agreed to allow the demonstration to occur on Kula Highway in Pukalani. Your Subcommittee further noted that fixtures will be donated by Dimensions Electric on Oahu for use during the demonstration. Your Subcommittee recommended contacting Dexter Kumano with Philips Lighting for securing LPS lamps for the demonstration. Your Subcommittee stated that the duration of the demonstration project should be through the term of your Subcommittee. Your Subcommittee voted to recommend conducting a street lighting demonstration project through October 31, 2002.

Your Subcommittee requested the following:

1. That the State Department of Transportation consider permitting the duration of the street lighting demonstration project through October 31, 2002;
2. That the street lighting demonstration project include LPS luminaires, HPS cutoff fixtures, HPS shielded and unshielded lights;

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3. That the State Department of Health provide a status on the creation of guidelines for disposal of LPS lights and fixtures;
4. That the County of Hawaii provide information relative to the procedures for neutralizing and disposing of LPS luminaires and fixtures;
5. That the Department of Public Works and Waste Management:
 - a. Determine the ability to retrofit LPS lamps and fixtures on existing street light poles;
 - b. Provide a lighting analysis assessing existing street lighting levels and distribution; and
 - c. Conduct a street light replacement analysis that should examine the ability to convert HPS to LPS or HPS full cutoff luminaries;
6. That Dexter Kumano, Philips Lighting, determine the availability of LPS luminaires for the street lighting demonstration project;
7. That Eric Miyasato, Pacific Electrical Sales Agency, confirm the availability of shields for HPS lights; and
8. That the Council be requested to fund the street lighting demonstration project.

Your Subcommittee received an oral report from Dr. Wainscoat, relating to the International Light Pollution Conference held in La Serena, Chile. Dr. Wainscoat stated that Chile has developed various regions of light that must be shielded. Dr. Wainscoat stated that a world atlas of light pollution has been developed, through satellite imaging, to help identify various problem areas. These maps can be made available for all locations, including Hawaii. Dr. Wainscoat further stated that the International Dark Sky Association submitted a list of recommendations to lessen the impacts of lighting on wildlife and public health. He further indicated that United Nations Educational, Scientific and Cultural Organization (UNESCO) is developing educational programs to help create a greater awareness of the problem. Dr. Wainscoat also highlighted ordinances, equipment, design standards and installation techniques to help address the issue surrounding the challenge of light pollution.

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Your Subcommittee also received a report from Leslie Kuloloio regarding Hawaiian traditions that occur in the evening and the impacts of lighting while performing these ceremonies. Mr. Kuloloio stated that pokane, the darkest portion of the evening, is typically when traditional Hawaiian ceremonies occur. Mr. Kuloloio further stated that bright lights would impact the locations where these ceremonies may take place. Mr. Kuloloio added that pokane is also the time of the evening when turtles are nesting and pueo (owl) or night flying birds are feeding.

Your Subcommittee deferred the matter pending further discussion.

By correspondence dated April 4, 2002, Director of Public Works and Waste Management provided information relating to the disposal of spent LPS lamps and the status of the County's hazardous waste designation.

By correspondence dated April 15, 2002, Dennis K. W. Lee, Director, Department of Public Works, County of Hawaii, outlined the procedures they developed for the disposal of LPS lamps and fixtures.

By correspondence dated April 16, 2002, your Subcommittee Chair outlined information relative to the use of existing street light poles and spacing for the installation of LPS lamps.

By correspondence dated April 25, 2002, your Subcommittee Chair transmitted a correspondence dated April 24, 2002, from D. Rodney Chamberlain, D.Ed., Headmaster, Kamehameha Schools, Maui Campus, supporting the recommendation for shielding lights and placing them on timers at the Kamehameha Schools, Maui Campus.

By correspondence dated May 15, 2002, the Director of Public Works and Waste Management, submitted information regarding the roadway lighting standards for the County of Maui.

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By correspondence dated June 24, 2002, your Subcommittee's Vice Chair transmitted an article entitled, "Some Light Reading", by Stacy St. Clair, from *Recreation Management*, relating to glass control and light trespass for recreational facilities.

By correspondence dated July 2, 2002, a Subcommittee member transmitted a correspondence commenting on revisions to the draft bill.

By correspondence dated July 9, 2002, your Subcommittee Chair transmitted a correspondence outlining the revisions as submitted by Subcommittee member Altenberg.

At its meeting of July 10, 2002, your Subcommittee met with the Assistant Chief of Police; a Civil Engineer V and an Electrical Inspection Supervisor from the Department of Public Works and Waste Management; a Staff Planner III from the Department of Planning; the County Energy Specialist; a Deputy Corporation Counsel; the Executive Director from the Maui Chamber of Commerce; a representative from Dowling and Company; and a representative from Maui Electric Company, Ltd.

Your Subcommittee received testimony from one individual. The testifier indicated that after many meetings, it is time for your Subcommittee to focus on determining a consensus to develop a draft bill that works for the environment and the general public. He also indicated that good lighting must be encouraged over poor lighting and use of shielding and visors should be encouraged.

Your Subcommittee received comments from the Assistant Chief of Police regarding the draft bill. He stated that the Department is against the use of LPS lighting and that "it's bad for the County". He also stated that if the use of LPS were removed from the text of the draft bill, the Department would reconsider its position. He further indicated that the lighting patterns at intersections should remain the same; it is not practical to use LPS throughout the entire County because it will not help with law enforcement. He also added that the County of Hawaii's Department of Police does not like the use of LPS lamps.

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Your Subcommittee noted concerns about the use of LPS for all purposes throughout the County. Your Subcommittee felt that LPS should be utilized for certain areas, such as turtle nesting areas, rural zones, and the Haleakala Observatory area. Your Subcommittee expressed a desire to seek a compromise on the use of LPS and HPS lamps for various purposes. Your Subcommittee also felt that full cut-off fixtures and shielding should be utilized for all lighting, except for sports fields. However, a member of your Subcommittee expressed the view that sports field lighting should be required to utilize full cut-off fixtures and shielding to reduce impacts to adjacent properties. The member noted that sports field lighting contributes to a considerable amount of light trespass and glare throughout the County.

Your Subcommittee requested that:

1. Section .070, Lamp standards, be revised to include the use of a "mix" of lighting while encouraging the use of LPS;
2. Section .110, Specific uses, as it relates to sports fields and public parks, be redrafted to encourage the use of innovative shielding and visors to prevent glare and light trespass;
3. Language be developed that would address lumens per acre and shielding of lights in agriculture zones; and
4. The Department of the Corporation Counsel:
 - a. Review the Appendix A, Volusia County (Florida) Land Development Code, Article XII, Sea Turtle Protection to revise the Article to ensure legal compliance as to form and legality using a Ramseyer methodology; and make appropriate revisions to the Article so that its provisions are more applicable to the County of Maui, while maintaining the original intent of the document; and
 - b. Provide language that creates an Outdoor Lighting Standards Committee and includes recourse for residents that are impacted by light trespass.

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Your Subcommittee voted to accept the following revisions to the draft bill:

1. Section .070.A.1.a, Add the language: "hours of operation", after the word "during".
2. Section .070.A.1.b, Add the language: "industrial or mechanical", before "assembly or repair areas,"
3. Section .070.A.1.c, Add the language: "sports, or public assembly" prior to "facilities and other similar applications."
4. Section .070.A.1.e, Add new subsection "e" to read: "architectural accent lighting".
5. Section .070.C, Wattage requirements for street lighting in rural and agricultural areas shall read: ". . .90 watt LPS for internal roads and intersections with major or minor collector roads."
6. Sections .070.C and D, Add the language: "unless IESNA, Federal and State standards require greater illumination for this usage." at the end of each Section.
7. Section .070.D, Wattage requirements for street lighting in urban areas shall now be: "90 watt LPS for internal roads" and "135 watt LPS for intersections with major or minor collector roads".
8. Section .080.A.3, Add the word: "Motion" at the beginning of the paragraph and add the language: "illumination and or" after the term "prevent direct..." Section .090.A, Amend to read: "...measured from ground level directly below the luminaire to the bottom of the lap itself, shall be twenty feet, in residentially zoned areas."

Your Subcommittee deferred the matter pending further discussion.

By correspondence dated July 18, 2002, your Subcommittee Chair requested that the Managing Director provide GIS mapping of buffer zones around the Haleakala Observatories for the purposes of setting light standards.

By correspondence dated July 31, 2002, the Department of the Corporation Counsel provided comments relative to the Volusia County (Florida)

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Land Development Code, Article XII, Sea Turtle Protection, and requested clarification on certain matters.

By correspondence dated August 19, 2002, the Managing Director submitted GIS buffer zone maps.

At its meeting of August 21, 2002, your Subcommittee met with the Development Planning Chief from the Department of Parks and Recreation; a Civil Engineer V and an Electrical Inspection Supervisor from the Department of Public Works and Waste Management; a Staff Planner III from the Department of Planning; the County Energy Specialist; a Deputy Corporation Counsel; the Executive Director from the Maui Chamber of Commerce; a representative from the Maui Hotel Association; and a representative from Maui Electric Company, Ltd.

Your Subcommittee received testimony from one individual. The testifier noted concerns about comments received at the last meeting from the Department of Police regarding the draft bill and encouraged that a compromise be reached regarding their concerns.

Your Subcommittee received the following items at the meeting:

1. Copy of "DO LPS LIGHTS HELP OR HINDER LAW ENFORCEMENT?" from Steve Sutrov;
2. A matrix entitled "Subcommittee on Outdoor Lighting Standards Table of Suggestions and Comments", providing revisions to the draft bill;
3. Proposed revisions to Section .070, Lamp standards, identified as Option 1;
4. Proposed revisions to Section .070, Lighting Categories/Radius, identified as Option 2;
5. Proposed revisions to Section .070, Lumen Output, identified as Option 3;

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6. Copy of proposed language for Section .110, Specific Uses, subsection D, Outdoor Sports or Recreation Field or Performance Areas;
7. Correspondence dated August 20, 2002, from Subcommittee Member Chong, providing comments regarding revisions to Section .070 of the draft bill;
8. A chart entitled "Initial Rated Light Output of Various Lamps" which provide the lumen out put of various lamps;
9. A chart entitled "Table 3, Mounting Height Recommendations Per Lamp Type", comparing the lumen out put of LPS, HPS and MH lighting; and
10. Correspondence dated August 12, 2002, from Subcommittee Vice-Chair Charmaine Tavares, providing comments for revisions to specific sections of the draft bill.

Your Subcommittee recommended the following revisions to the draft bill:

1. Section .050, General exemptions: require that fossil fuel lighting be extinguished by 11:00 p.m. and include a subsection that addresses water feature lighting.
2. Section .030.A, Construction: include the wording "after the effective date of this ordinance" after "County of Maui".
3. Section .130, Existing light fixtures: delete the entire section.
4. Section .150.B, The County's role: delete the subsection.

Your Subcommittee requested that:

1. Subcommittee member Hannah Bernard review the Volusia County Code to address questions from the Department of the Corporation Counsel;
2. The Director of Finance provide information relating to relevant procurement procedures of the County of Maui;

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3. The Director of Parks and Recreation review the Cotton Wood Arizona lighting ordinance as it relates to recreational and sports fields and submit comments and recommendations; and
4. An appropriate lumen measurement to establish a maximum foot-candle reading for light trespass violations be determined.

Your Subcommittee noted a desire to focus the draft bill on future development that includes lighting design. Your Subcommittee indicated that lighting standards for existing luminaires should be addressed in a separate ordinance. Your Subcommittee felt that addressing future lighting would enable them to provide recommendations to your Committee prior to the expiration of its term. Your Subcommittee voted to recommend that your Public Works and Transportation Committee commence drafting a proposed bill that addresses existing outdoor lighting standards once the draft bill establishing outdoor lighting standards has been adopted.

Your Subcommittee deferred the matter pending further discussion.

By correspondence dated September 19, 2002, your Committee Chair transmitted a correspondence dated September 16, 2002 from the Development and Planning Chief, Department of Parks and Recreation, stating that the provisions of the Cotton Wood Arizona lighting ordinance are too restrictive to allow for a level of collegiate sporting events to take place at County ball fields.

By correspondence dated September 25, 2002, the Director of Finance outlined the procurement procedures for the County.

At its meeting of September 25, 2002, your Subcommittee met with the Assistant Engineering Program Manager and an Electrical Inspection Supervisor from the Department of Public Works and Waste Management; the Development and Planning Chief from the Department of Parks and Recreation; the County Energy Specialist; a Deputy Corporation Counsel; the Executive Director from the Maui Chamber of Commerce; a representative from the Maui Hotel

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Association; a representative from Dowling and Company; and a representative from Maui Electric Company, Ltd.

Your Subcommittee received testimony from three individuals.

The first testifier recommended certain revisions to Section .050, General Exemptions; Section .070, Lamps standards; and Section .080, Luminaire standards.

The second testifier recommended that the proposed Outdoor Lighting Standards Committee consist of nine members, including three representatives from the business sector, three engineers, and three environmentalists.

The last testifier raised concerns about light trespass from neighboring properties and suggested that the draft bill should consist of a restriction to prevent such problems from occurring.

Your Subcommittee discussed the creation of an Outdoor Lighting Standards Committee (Lighting Committee). The purpose of the Lighting Committee is to review nonconforming lighting requests and to assist the Department of Public Works and Waste Management with reviewing lighting matters. Your Subcommittee recommended that the Lighting Committee be established in the following manner:

1. That it operate as an advisory committee to the Department of Public Works and Waste Management;
2. That members serve three-year staggered terms;
3. That membership consist of five voting members and two ex-officio members from the Departments of Police and Public Works and Waste Management; and
4. That the Mayor and Council show preference in appointing its members within the following disciplines:
 - a. Illuminating engineer or lighting designer;
 - b. Hawaiian culturalist or historian;

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- c. Wildlife biologist;
- d. Astronomer or space surveillance specialist; and
- e. The general public.

During its discussion on Section .070, Lamp standards, your Subcommittee recommended that its members provide suggestions for revisions to Subsection .070.A.1 that address exemptions for required use of LPS lighting.

Your Subcommittee reviewed Section .080, Luminaire mount standards, and recommended that the following language be included in the draft bill:

1. Subsection .080.A, delete “with a fifteen degree cutoff”. Your Subcommittee felt that this provision may be too restrictive.
2. Subsections .080.A.1 and 2, add the word “bare” after “incandescent” in both sections. Your Subcommittee felt this would help to clarify the type of light output from a specific lamp as identified in these subsections.

Your Subcommittee recommended that Subsection .090.A be deleted from the draft bill. Your Subcommittee suggested that the lighting pole heights should be determined by use to better serve the purpose for which it is designed.

Your Subcommittee recommended the following revisions to Section .110, Specific uses:

1. Subsections .110.C.1 and 2 be deleted from the draft bill. Your Subcommittee determined use of lighting to attract business for canopy lighting is sufficiently addressed in other provisions of this subsection.
2. Subsection .110.D.1 be deleted and replaced with the following language:

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“All recreational lighting shall utilize full cutoff luminaires that are installed in a fashion that maintains the full cutoff characteristics unless determined by the Outdoor Lighting Standards Committee, that such shielding is impractical. Every such lighting system design shall be certified by a registered engineer as conforming to all applicable restrictions of this ordinance. Where full cutoff fixtures are not utilized, acceptable luminaires shall include those which:

1. Are provided with internal and/or external glare control louvers and installed so as to limit direct up light to less than 5 percent of the total lumens exiting from the installed fixtures and minimize offsite light trespass, and;
2. Are installed with minimum aiming angles of 25 degrees downward from the horizontal. Said aiming angle shall be measured from the axis of the luminaire maximum beam candlepower as certified by independent testing agency.”

Your Subcommittee voted to transmit the draft bill to the Department of Corporation Counsel for review, comment and approval as to form and legality. Your Subcommittee requested that the draft bill be returned to your Subcommittee prior to its next meeting.

Your Subcommittee deferred the matter pending further discussion.

By correspondence dated October 15, 2002, the Department of the Corporation Counsel transmitted a revised draft bill entitled “A BILL FOR AN ORDINANCE AMENDING TITLES 2, 12, AND 20, MAUI COUNTY CODE, RELATING TO OUTDOOR LIGHTING STANDARDS”, and a draft bill dated October 15, 2002 Draft with Comments entitled “A BILL FOR AN ORDINANCE AMENDING TITLES 2, 12, AND 20, MAUI COUNTY CODE, RELATING TO OUTDOOR LIGHTING STANDARDS”.

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By correspondence dated October 22, 2002, your Subcommittee Chair transmitted correspondence outlining nonsubstantive, substantive, and clarification changes to the draft bill.

At its meeting of October 23, 2002, your Subcommittee met with the Development Planning Chief from the Department of Parks and Recreation; a Civil Engineer V and an Electrical Inspection Supervisor from the Department of Public Works and Waste Management; a Staff Planner III from the Department of Planning; the County Energy Specialist; a Deputy Corporation Counsel; the Executive Director from the Maui Chamber of Commerce; a representative from the Maui Hotel Association; a representative from Dowling and Company; and a representative from Maui Electric Company, Ltd.

Your Subcommittee received testimony from seven individuals.

One testifier indicated that the Aquatic Division of the State Department of Land and Natural Resources has conducted an analysis on turtle nesting. He noted that there were eight turtle nests this year, seven in Lahaina and one in Waihee. He indicated that lights on the land have confused the hatchlings, many of which have been found in garages and areas away from the ocean. He stated that hatchling turtles typically move toward the light, thinking that it might be the reflection of the moon off the ocean. He indicated his support for the draft bill to help lessen the lighting impacts on nesting turtles and their hatchlings.

One testifier noted the following concerns:

1. That the restriction on lighting within 100 meters of the ocean or shoreline may impact a number of businesses along Front Street in Lahaina;
2. That a compromise should be achieved with the Department of Police on provisions in the draft bill; and
3. That the cost for converting the existing lighting to LPS be determined.

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Another testifier spoke in favor of the draft bill.

One testifier stated that all matters not resolved by your Subcommittee should be forwarded to your Public Works and Transportation Committee for further review and comment. He also indicated that your Committee should review new and alternative forms of technology for the reduction of light glare and trespass.

One testifier read from testimony submitted by William Gilmartin, Director of Research, Hawaii Wildlife Fund. She stated that shielding lights that may shine onto beaches is critical, and cumulative effects of light from multiple sources should be considered. She urged your Subcommittee to please move forward on the draft bill as soon as possible.

One testifier noted concerns about permitting temporary lights or searchlights for movie premiers or special events. He indicated that since the lights are not permanent and are on only a few hours during an event, the impacts of the lights should be minimal. He stated that the draft bill should include provisions that permit the operation of temporary lighting.

The final testifier indicated that the lighting restrictions in the draft bill are essential to nesting turtles and their hatchlings. She noted that volunteers have been helping the hatchlings to make it to the ocean; however, this can sometimes be problematic because hatchlings may appear any time of the evening or morning. She spoke in favor of the draft bill.

Your Subcommittee received the following items at the meeting:

1. Photographs of lighting and surrounding turtle nesting areas, submitted by Skippy Hau, Aquatic Biologist, State Department of Land and Natural Resources;
2. City of San Diego, Manager's Report No. 82-492, dated November 18, 1982, submitted by Steve Sutrov;

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3. Written testimony dated October 23, 2002, from William G. Gilmartin, Director of Research, Hawaii Wildlife Fund, submitted and read into the record by Cheryl King; and
4. Written testimony dated October 22, 2002, from Frank Rizzo, Rizzo Pacific Staging.

Your Subcommittee reviewed the draft bill that consisted of comments by the Department of the Corporation Counsel. Your Subcommittee reviewed each section of the draft bill by discussing items that have been identified as nonsubstantive, substantive, and matters for clarification. Your Subcommittee voted to approve nonsubstantive changes and matters requiring clarification. Your Subcommittee voted to recommend certain substantive changes; however, it was unable to completely review all sections. Therefore, your Subcommittee recommended that your Public Works and Transportation Committee conduct further review on the following sections that were not adequately addressed:

1. 20.35.060, Maui County outdoor lighting standards committee, Subsection C.
2. 20.35.070, Lamp standards, Subsection C.
3. 20.35.080, Luminaire standards, Subsection B and C.
4. 20.35.120, Development permits, Subsection A.
5. 20.35.130, Notification, Subsection B.
6. 20.35.140, The County's role, Subsection A.

Your Subcommittee was either unable to reach consensus or could not address the above-referenced sections and subsections prior to the expiration of its term.

Your Subcommittee also voted to recommend that your Public Works and Transportation Committee review the prohibition of sale of luminaires that would be in violation of provisions of the draft ordinance. Your Subcommittee felt that this matter needed further discussion.

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Your Subcommittee voted to request the Department of the Corporation Counsel to revise the draft bill as recommended, approve it as to form and legality, and refer the revised draft bill to your Public Works and Transportation Committee.

By correspondence dated January 13, 2003, the Department of the Corporation Counsel transmitted the following:

1. A revised draft bill, entitled "A BILL FOR AN ORDINANCE AMENDING TITLES 2, 12, and 20, MAUI COUNTY CODE, RELATING TO OUTDOOR LIGHTING STANDARDS". The revised draft bill incorporates your Subcommittee's revisions.
2. A document entitled "Attachment "A"", which identifies revisions proposed by the Administration and Department of the Corporation Counsel. Attachment "A" is hereby incorporated as part of this report for consideration.

Your Subcommittee on Outdoor Lighting Standards RECOMMENDS the following:

1. That the draft bill, attached hereto, entitled "A BILL FOR AN ORDINANCE AMENDING TITLES 2, 12, and 20, MAUI COUNTY CODE, RELATING TO OUTDOOR LIGHTING STANDARDS", be REFERRED to the Public Works and Transportation Committee;
2. That the Public Works and Transportation Committee CONSIDER the following during its review of the above-referenced draft bill:
 - a. drafting a proposed bill that addresses outdoor lighting for existing luminaires; and
 - b. drafting a proposed bill that would prohibit the sale of luminaires that are prohibited for usage in the draft bill; and

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3. That the Public Works and Transportation Committee CONDUCT further review of the following sections of the above-referenced draft bill:
 - a. Section 20.35.060, Maui County outdoor lighting standards committee, Subsection C;
 - b. Section 20.35.070, Lamp standards, Subsection C;
 - c. Section 20.35.080, Luminaire standards, Subsection B and C;
 - d. Section 20.35.120, Development permits, Subsection A;
 - e. Section 20.35.130, Notification, Subsection B; and
 - f. Section 20.35.140, The County's role, Subsection A.

Adoption of this report is respectfully requested.

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MICHAEL J. MOLINA **Chair**

RICHARD CHONG **Member**

CHARMAINE TAVARES **Vice-Chair**

MIKE MABERRY **Member**

LEE ALTENBERG **Member**

WARREN McCORD **Member**

HANNAH BERNARD **Member**