



Monterey Institute for Research in Astronomy

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Carl Holm, Planning Manager
Monterey County Planning Department
168 W. Alisal St., 2nd Floor
Salinas, CA 93901

Dear Mr. Holm,

This letter, in response to the request for comments on the DEIR for the 2006 Monterey County General Plan, describes an effective but overlooked mitigation available to the County to reduce the overall light and glare (Impact AES-4) during the buildout of the 2006 General Plan.

Light pollution, including trespass and glare, has a significant impact on most fauna, including marine. The view of the night sky, once thought to be an undeniable human heritage, is so rare that a recent survey of CSUMB students revealed that 90 percent had never seen the Milky Way. The Santa Lucia Mountains of Monterey County provide one of the last high-quality dark sites in the United States for optical astronomical observations. These conditions drove the decision to locate the MIRA astronomical observatory in Monterey County in preference to any other location in the U.S. The quality of these conditions is now being reduced by the light pollution from the growth of the Monterey Peninsula, Salinas, and, especially, the Salinas Valley.

21-1

Light pollution can be greatly reduced simply through restricting lighting and views of the light sources to only those specific onsite areas requiring illumination (Land Use Element Policy LU-1.16). Unlike most forms of pollution where the reduction increases costs, the savings in energy use *reduces* operating costs.

21-2

Mitigation beyond the 2006 General Plan policies. Current light pollution levels can be substantially reduced by correcting current bad lighting practices during standard upgrades and maintenance. *In a ten year period, Tucson, while enjoying substantial population growth, reduced its light pollution to one-third its initial level through such techniques.*

21-3

As a specific example, 40 percent of urban light pollution is caused by early-design street lamps such as the 'drop-lens cobra' luminaires that populate much of the County.

21-3 Cont.

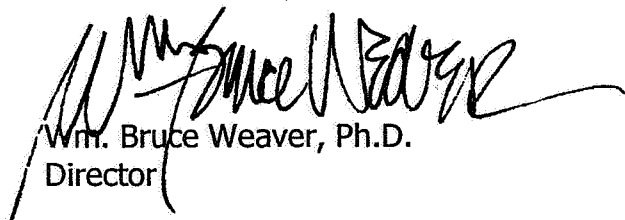
During replacement, they could be replaced with modern, full cut-off fixtures. *An effective and low cost technique is to attach a shield, a standard accessory for these street lights, during bulb replacement.* This technique is credited as one of the most successful in reducing the Tucson light pollution. These shields are now standardly installed when a consumer complains about light glare or trespass at a residence. A County policy would extend that remedy to the general public.

21-4

A comprehensive policy should address issues such as lighting types and levels, outdoor lighting after closing times, curfews for outdoor illuminated signs, etc. As possible detailed models, specific ordinances have been adopted in many cities and counties in the United States and abroad. In addition, astronomers at MIRA are available to work with the County to develop light pollution ordinances that would be tailored to Monterey's unique needs.

21-5

Sincerely yours,



Wm. Bruce Weaver, Ph.D.
Director