

## Supporting Statement

Advisory Circular (AC): Outdoor Laser Operations  
Federal Regulation part 91

### **Justification:**

#### ***1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection***

Title 49, United States Code, section 40103 specifically empowers the Secretary of Transportation to develop plans and policy for the use of navigable airspace. This request covers the burden imposed on proponents seeking to conduct outdoor laser operations to notify the Federal Aviation Administration (FAA) of their intent.

Federal Regulations Part 91, General Operating and Flight Rules prescribes the minimum standards and requirements for aircraft operations in the navigable airspace. In addition, however, they establish procedures governing prohibition against interference with crewmembers in the performance of their assigned duties. Laser operations are a major safety concern to the FAA because laser emissions that encounter and or enter the eye have the potential of incapacitating the pilot or crewmember. In addition, laser light operations have been found to create glare, flashblindness, and after image effects, all of which may interrupt pilot or crew member activities. Glare as it encounters the windshield of an aircraft (similar to high beams at night on a cars windshield). Flashblindness as it may take away the visual acuity of the instrument panel and or effect night vision. Afterimage side effects like a shadow image after looking at a bright light.

In addition, the collection of this information supports the Department of Transportation strategic goal regarding safety. The FAA by evaluating each request from the information collected provides an added degree of safety to users of the National Airspace System (NAS). Our recent research has validated the criteria guidelines applied in evaluating the potential effect of outdoor laser operations, which in turn implemented change to standards used in regard to these operations. These new standards mitigate the potential adverse effect of a laser operation on users of the NAS. Additionally, we educate the public via the nationwide Notices to Airmen system.

#### ***2. Indicate how, by whom, how frequently, and for what purpose the information is to be used.***

The information submitted on the “Notice of Proposal to Conduct Outdoor Laser Operations” (Notice Form) and the “Laser Configuration” (Configuration Form) forms is

provided by the proponent for **each** intended operation, and is submitted to the appropriate regional air traffic division responsible for the airspace affected.

The regional air traffic specialist uses this information along with the conclusions found during the aeronautical study to determine the potential effect on aircraft operations in the vicinity of the laser operation. If the presented is insufficient, the Federal Aviation Administration (FAA) would be unable to make an appropriate determination in regard to the activity.

**3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or technological collection techniques or other forms of information technology, e.g permitting electronic submission of responses, and the basis for the decision for adopting this means of collection.**

Two methods will be available for applicants to submit the data required by the FAA. The forms will be posted on the FAA ATA-100 web site for electronic downloading, and in a manual version. At the present time FAA resources are not in place to accomplish processing of the data through an electronic upload. In response to the Government Paperwork Elimination Act, respondents may submit this information electronically via email or other means, but as responses are submitted to different local offices, this capability depends on the facilities of each of those individual offices. As a result, we are unable to calculate an accurate percentage of the submissions that will be submitable electronically.

**4. Describe efforts to identify duplication.**

We know of no other agency collecting this information from proponents involved in outdoor laser operations. This information is requested under Title 49 U.S.C., Subtitle VII, Aviation Programs, Part A Air Commerce and Safety.

**5. If the collection of information impacts small business or other small entities (item 5 of OMB Form 83-1), describe any methods used to minimize burden.**

The FAA requires a minimum of data relative to the planned activity. The non-collection of the information could jeopardize safety of flight issues due to the potential hazardous effects laser emissions can produce.

**6. Describe the consequences to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.**

The frequency of information is based completely on the proponent. This is to say, that the relative number of the how often a proponent would conduct a laser activity that could affect aviation is how often the information is required by the FAA.

**7. Explain any special circumstance that would cause an information collection to be conducted in a manner inconsistent with guidelines.**

The submission of the information by the proponent is collected in a manner consistent with the guidelines in 5 CFR 1320.5 (d) (2) (i)(viii).

**8. Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and record keeping, disclosure, or reporting format (if any) and the data elements to be recorded, disclosed, or reported.**

Over the past several years the FAA (e.g. air traffic, flight standards, and others), has worked in partnership with the Society of Automotive Engineers, Laser Hazards subcommittee. This group was tasked to develop recommendations to address outdoor laser operations that have the potential to affect aviation. One of the outcomes of this has been the recommendation of this AC, and request for information.

Coordination on this AC has gone through the FAA regional offices and the comments are included in the AC. We are coordinating the AC with other interested parties including the public. All comments will be considered before making a final determination regarding publication of the AC. A notice soliciting public comment was published in the Federal Register on April 17, 2003, page 19066. No comments were received. A copy of the notice is attached for your convenience.

**9. Describe any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.**

The FAA does not provide payment for this activity.

**10. Describe any assurances of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.**

The nature of the information does not require confidentiality.

**11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.**

The information requested by the FAA is of a technical nature in regard to electronic equipment and does not require personal information of sensitive nature.

**12. Provide estimates of the hour burden of the collection of information. The statement should: Indicate the number of respondents, frequency of response, annual hour burden and an explanation of how the burden was estimated, If this request is for approval covers more than one form, provide separate hour burden estimates for each form.**

***Provide estimates of annualized cost to respondents for the hour burdens for collection of information, identifying and using appropriate wage rate categories.***

Each respondent (proponent) is required to provide the necessary information required by submission of the forms to the FAA with each separately planned activity. In general, the “Notice Form” is self-explanatory and requires very little technical application. In review of past request it is difficult to determine the frequency of how often “a” proponent submits the data. With some business it can be as little as once a year as with others one a month. For example in 1997, there were approximately 378 requests, 1998 275, and in 1999 less than 100. (It is believed the drop in applications has come about because of the necessary imposed restrictions placed on some of these activities, in the interest of aviation safety). This averages to approximately 250 requests per year

The FAA has nine regional offices, the “majority” of the requests involve only five of them.  $250/5=50$ . These 50 request are submitted by seven independent proponents  $50/7=7.14$ , approximating 7 request per year, per proponent. As the numbers have shown a decrease since 1997 we do not estimate an increase in the number of requests. However, for this purpose 250 is used as a base line.

**a.** The Notice Form is divided into five segments: addresses, general information, brief description, on site information, attachments, and certification blocks (signatory). In general it is estimated that it would take less than 1 hour to complete the required entries. This determination is based on the fact that the information necessary is of a non-technical nature, is readily at hand by the proponent, and or has been supplied by the purchaser of the activity.

The cost is determined by estimating the time required for applicants to complete and submit requests to conduct outdoor laser operations. We do not anticipate any significant change in the amount of time required to complete the form. We estimated that approximately 200 requests are submitted for determination by the FAA, at an average preparation time of 1 hour each at \$30 per hour per requester. (This value was supplied by a leading laser institute). The estimated annual cost to proponents for the hour burdens resulting from the submission of data is \$6,000.00 ( $200 \times 30 = 6,000$ ).

**b.** The Configuration form is divided into six segments: Name of event, Description of Configuration, Beam Characteristics/Calculations, Beam Direction, Distance Calculated, and Calculation Method. It is estimated for the “**first time**” submitters it will take approximately **10** hours for completion of this form. This determination is based on the technical aspects required for compilation of the required data. Subsequent submission by the same applicant would only require transfer of the original data and the estimated time would be approximately 20 minutes and takes into consideration minor adjustments for potential beam adjustments. Should the proponent utilize a **different** laser system the first time analysis must be accomplished, therefore the more time consuming burden. The estimated annual cost to proponents for the hour burdens resulting from the submission of information is \$15,000.00 ( $50 \times \$30 \times 10 = \$15,000$ ).

c. The estimated hourly burden cost to proponents is \$21,000.

**13. Provide an estimate of the total amount of annualized cost burden to respondents or record keeping resulting from the collection of information.**

No additional startup cost associated with this collection not already included in item number 12.

**14. Provide estimates of annualized cost to the Federal Government. Also provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses and any other expense that would not have been incurred without the collection of information.**

This cost is determined by estimating the time required for the FAA personnel to review and process original outdoor laser request. We estimate that 250 forms are submitted for an FAA determination regarding the request to conduct outdoor laser operations at an average file processing time by an airspace specialist are: 3 hours each for outdoor laser demonstrations (shows), 8 hours each for scientific or research laser activities. The cost per hour of FAA resources is \$40 per hour. The estimated annual cost to the Federal Government for the hour burdens resulting from the collection of information must be broken into two categories due to the nature of the activity, laser light shows and laser research/scientific operations. The estimate for laser light shows is \$30,120 ( $200 \times 3 \times 40 = 24,000$ ) where as the estimate for research/scientific is \$16,000 ( $50 \times 8 \times 40 = 16,000$ ) or an approximate total cost of \$40,000.

**15. Explain the reason for any program changes or adjustments reported in items 13 or 14 of the OMB Form 83-1.**

There are no changes from the previous submission.

**16. For collections of information whose results will be published, outline plans for tabulation, and publication.**

There are no plans to publish this information for statistical or other purposes.

**17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.**

In the past we have found it burdensome and costly to the government to reprint a form solely on the basis of a dated form. In addition, the forms in general will be printed and available as a stock. Additionally, the form will be available via the internet where such minor changes can be readily adapted without the workload associated with the generation of a edited format.

**18. Explain each exception to the certification identified in item “Certification for Paperwork Reduction Act Submissions,” of OMB Form 83.1.**

There are no exceptions to the statement.

Attachments:

1. Supporting Statement
2. 30 Day Notice
3. 60 Day Notice
4. 49 USC 40103
5. 14 CFR Part 91