



**U.S. Department
of Transportation**
Federal Aviation
Administration

FAA Form 7140-1, Notice of Proposed Outdoor Laser Operation(s)

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The Federal Aviation Administration (FAA) requires all responses to this collection of information if the proponent wishes to obtain or retain benefits available per Title 21 Code of Federal Regulations Part 1010. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

Instructions to Complete

Use FAA Order JO 7400.2, Chapter 29 as a reference for additional background information. Consult FAA Advisory Circular (AC) 70-1 for detailed instructions to assist with completing, submitting, and the expected disposition of this form. FAA provides public access to these documents via https://www.faa.gov/regulations_policies.

Please print or type on this form and complete all sections prior to submission to the appropriate FAA service center. To enhance clarity, use plain language and numbers, e.g., decimal notation (0.7277) instead of scientific notation (72.77×10^{-2} or 72.77E-02). Failure to provide all requested information may delay processing.

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 U.S. Department of Transportation Federal Aviation Administration		
Notice of Proposed Outdoor Laser Operation(s)		
1. General information		
a. To: (FAA Service Center)	b. From: (Proponent)	
c. Name of event or facility	d. Report date	
e. Customer	f. Site address	
2. Date(s) and time(s) of laser operation		
a. Testing and alignment	b. Operation	
3. Brief description of laser operation		
4. On-site operation information		
a. Operator(s)		
b. On-site phone #1 (primary)	c. On-site phone #2 (secondary)	
5. FDA/CDRH information (if applicable)		
a. Variance #	b. Variance expiration date	c. Accession #
6. Brief description of control measures		
7. Attachments		
a. Number of laser configurations: State the total number of configurations and complete a copy of page 2 (blocks 10 through 15) for each configuration		
b. Attachments: List all attachments, e.g., maps, diagrams, control measure details, calculation details, or software printouts		
8. Designated contact person (if FAA requires further information)		
a. Name	b. Position	
c. Phone	d. Fax	e. E-mail
9. Statement of accuracy <i>To the best of my knowledge, the information provided in this form (all pages) and corresponding attachment(s) is accurate and correct</i>		
a. Name (if different from contact person)	b. Position	
c. Signature	d. Date	

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Laser Configuration Worksheet

10. Configuration information

a. Configuration number _____ of _____ of _____
 (example: 7 of 9)

b. Brief description of configuration

11. Geographic location

a. Site elevation (mean sea level), in feet: _____

b. Laser height above site elevation (above ground level), in feet: _____

c. Overall laser elevation (a) + (b), in feet: _____ mean sea level

d. Information determined by: GPS Map (topo) Other _____

e. Latitude: _____ degrees, _____ minutes, _____ seconds

f. Longitude: _____ degrees, _____ minutes, _____ seconds

12. Beam characteristics and calculations (check only one mode of operation and fill in only that column)

MODE OF OPERATION	<input type="checkbox"/> Single pulse	<input type="checkbox"/> Continuous wave	<input type="checkbox"/> Repetitively pulsed
a. Laser and beam characteristics			
Laser type <i>(example: DPSS, sodium-vapor, etc.)</i>			
Laser hazard class <i>(example: Class 3B or Class 4)</i>			
Power Watts (W)	<i>(not applicable)</i>	(maximum power)	(average power)
Pulse energy Joules (J)		<i>(not applicable)</i>	
Pulse duration Seconds (s)		<i>(not applicable)</i>	
Pulse repetition frequency (PRF) Hertz (Hz)		<i>(not applicable)</i>	
Beam diameter at 1/e points Centimeters (cm)			
Beam divergence 1/e at full angle Milliradians (mrad)			
Wavelength(s) Nanometers (nm)			
b. Maximum permissible exposure (MPE) values (use this value to calculate the NOHD)			
MPE Milliwatts per square cm (mW/cm ²)	<i>(not applicable)</i>		
MPE per pulse Joules per square cm (J/cm ²)		<i>(not applicable)</i>	
c. Visual effect calculations <i>The following items are for lasers with visible wavelengths (400-700 nm). If the laser has no visible wavelengths, enter "N/A (non-visible laser)" in all blocks.</i>			
Pre-corrected power (PCP) Watts (W)	Pulse energy (J) x 4	Maximum power (W)	Pulse energy (J) x PRF (Hz)
Visual correction factor (VCF) <i>Enter "1.0" or use FAA AC 70-1 Table 3</i>			
Visually corrected power <i>PCP x VCF</i>			

13. Beam direction(s)

a. Maximum elevation angle (degrees)

b. Minimum elevation angle (degrees, where horizontal = 0 degrees)

c. Azimuth (degrees) True or Magnetic north

d. Magnetic variation (degrees)

14. Protection distances (fill in all three columns below)

	Slant range (feet)	Horizontal distance (feet)	Vertical distance (feet)
a. NOHD (based on MPE value)			
<i>The following items are for lasers with visible wavelengths (400-700 nm). If the laser has no visible wavelengths, enter "N/A (non-visible laser)" in all blocks.</i>			
b. SZED (for 100 μW/cm ²)			
c. CZED (for 5 μW/cm ²)			
d. LFED (for 50 nW/cm ²)			

15. Calculation method

Commercial software (print product name) Other (describe method such as a spreadsheet or calculator)