



So You
Want to Fly
a Drone?

What You've Always Wondered, But Didn't Know Who to Ask

A Drone Operator Guide

The City of

SAN DIEGO

sandiego.gov

So You Want to Fly A Drone?

What You've Always Wondered, But Didn't Know Who to Ask

Introduction

Over the last several years, cities across the United States have seen an increased presence of both recreational and commercial unmanned aircraft (more commonly known as “drones”). This new technology is used by hobbyists, aerospace enthusiasts, and a growing range of businesses in a wide variety of industries from real estate and construction to photography and first responders. As the use of drones become more widespread, the Federal Aviation Administration (FAA), which regulates all airspace across the country, is developing new rules to address the safe adoption of this industry.

While the FAA continues to develop the official rules of the road for airspace access, the City of San Diego is working to encourage the safe integration of drones into the National Airspace System. As drone use increases, it's important to understand what operations are allowed and how to operate drones while being mindful of the people around you. This guide has been put together to give a general overview of drone rules, give you tips for safe operation, and provide specific suggestions on how to handle a situation where you feel a drone is operating illegally or is being used inappropriately.

Drone Regulation & Enforcement

The Federal Aviation Administration (FAA) is responsible for the safety of all civil aviation in the nation. This includes all manned and unmanned aircraft operating within the jurisdiction of the United States. The FAA regulates civil aviation by developing, issuing, and enforcing regulations and minimum standards that cover the manufacturing, operating, and maintaining of aircraft.

The City of San Diego and the FAA are committed to promoting safe operation through the education, including drone safety tips, best practices, and information about regulations. Although the FAA possesses the exclusive authority to enforce all aviation law, certain situations may also involve your local or state authorities for the deterrence, detection, and investigation of unauthorized or illegal activity by drone operators. This guide can help you decide if a situation needs to be reported and to whom you should report the activity. Of course, if you feel there is an immediate threat to life or property, call 911.

Types of Drones

Drones for Fun and Drones for Business: What's the Difference?

Drones for Fun

According to the FAA, if you're flying a drone for fun without any compensation, you're a recreational drone user. Under these circumstances, you must follow all FAA safety guidelines during operation and register your drone with the FAA. To help educate recreational drone use on the safe and legal uses of drones, the FAA has released a variety of resources accessible here: https://www.faa.gov/uas/recreational_fliers/

General Rules

- Register your drone with the FAA at www.FAADroneZone.FAA.gov and choose "I fly under The Exception for Recreational Flyers"
- Fly only for fun or recreation
- Follow the safety guidelines of a model aircraft community-based organization
- Fly at or below 400 feet when in uncontrolled airspace (Class G)
- Do not fly in controlled airspace except at FAA-approved sites
- Fly within visual line-of-sight, meaning you as the drone operator must be able to use your own eyes and needed contacts or glasses to ensure you can see your drone at all times; this means using binoculars or First-Person View (FPV) goggles are not allowed
- Never fly near other aircraft.
- Never fly over groups of people, public events, or stadiums full of people.
- Never fly near or over emergency response efforts.
- Never fly under the influence of drugs or alcohol

Where Can I Fly?

- Stay away from stadiums during sporting events, airports, military bases, and other Security Sensitive sites
- Don't fly near scenes of an emergency – remember, if you fly then first responders can't!
- Download the FAA's "Know Before You Fly" (B4UFLY) app on your cell phone or tablet to see restricted areas.
- You can also look up the FAA's UAS Facility Maps here:
https://www.faa.gov/uas/commercial_operators/uas_facility_maps/

Changes Coming Soon

Congress passed a new law that will require:

- Drone operators to pass a knowledge and safety test, and carry proof of passage
- The FAA to issue guidance for how it will recognize community based organizations

Types of Drones

Drones for Fun and Drones for Business: What's the Difference?

Drones for Business

If you're using a drone in connection with a business or is for the use of gaining monetary compensation for services, then you're considered a commercial operator. This includes using a drone ancillary to a business, like taking pictures of a house you're selling, using a drone to inspect a construction site, or putting video on a blog that charges for ads.

General Rules

- When you fly as a commercial operator, you're required to obtain a Part 107 Certification, or "Remote Pilot Certificate," from the FAA before any flights.
- Register your drone with the FAA at www.FAADroneZone.FAA.gov and choose "I fly under Part 107 or as a Public Aircraft"
- Unless you get a specific Part 107 Waiver, the following operations are restricted:
 - Operation from a moving vehicle or aircraft
 - Night operations
 - Flight beyond visual line of sight (You'll still need a waiver if you're using binoculars or FPV goggles)
 - Operation of multiple drones by one person
 - Operation over people
 - Operation without yielding to manned aircraft
 - Operation in restricted airspace

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What Do I Do If...

I'm in my home or in my backyard and a drone keeps flying over my property?

Is someone spying on me?

Residents and drone operators should be conscious of how drone flights might be perceived. Though drones are a newly-popular technology, they are still subject to existing privacy laws. Unless someone has specific legal authority (e.g., a warrant), they cannot record your familial activities without your permission; this is more commonly known as a "Peeping Tom." It's not illegal to fly over someone's property, but if a drone is hovering near your window you might have reason for concern.



If you're a resident...

Anecdotal evidence tells us the majority of these drone incidents aren't malicious, but rather someone in the area who is learning how to fly. When assessing if someone is invading your privacy, ask yourself some questions:

- Do you believe the drone is being flown in an inappropriate or dangerous manner?
- Was the drone intentionally being directed to fly over you, or is it passing above you to get somewhere else?
- Was the drone flying or hovering?
- Are any laws being violated by the drone operator?
- What is my liability if I take down the drone?

After answering these questions, if you believe the drone is being used to invade your privacy, there are a few things you can do:

- Note the color and type of drone, as well as the registration number
- You can report unsafe operations to the FAA at <https://hotline.faa.gov/>
- Contact your local law enforcement agency. If you're in the City of San Diego, call the SDPD non-emergency line at (619) 531-2000 or (858) 484-3154.
- If you feel there is an immediate threat to life or property, call 911.

If you're the drone operator...

To avoid running into issues, ask yourself some questions before and during flights:

- Can this flight be perceived as an invasion of someone's privacy?
- What steps can you take to ensure you're not mistaken for a "Peeping Tom?"
- Is my flight compliant with all FAA rules?

What Do I Do If...

A drone is annoying me?

Can I shoot it down?

The short answer is NO, you can't take down a drone.

If you're a resident...



Taking down a drone falls under the same statute (and penalty) as taking down a manned aircraft – the Aircraft Sabotage Act. In addition to potential charges, you might be found liable for the drone itself and any property damaged in the crash. Some commercial drones can cost hundreds of thousands of dollars, and usually come with a high-resolution camera that's last transmission to the owner is a recording of you damaging it.

The drone might belong to someone in your neighborhood. Sometimes issues can best be resolved by talking through issues face-to-face. The operator may not be aware that they're making you uncomfortable. If you have the drone registration number, you can look up owner information on the FAA's website: https://registry.faa.gov/aircraftinquiry/ActRef_Inquiry.aspx.

If you've tried everything else and you still think the drone is being used to invade your privacy, take these steps:

- Note the color and type of drone, as well as the registration number
- You can report unsafe operations to the FAA at <https://hotline.faa.gov/>
- Contact your local law enforcement agency. If you're in the City of San Diego, call the SDPD non-emergency line at (619) 531-2000 or (858) 484-3154.
- If you feel there is an immediate threat to life or property, call 911.

If you're the drone operator...

Before flying over someone's property, consider the potential impact on the resident's privacy. Use the "Golden Rule" – if you wouldn't want someone flying their drone around your backyard, don't do it to your neighbor. Remember: your drone information is searchable on the FAA website, so be nice!

What Do I Do If...

A drone is too loud?

“Buzzing” Drones

Drones are a recently-popular technology, but still fall under existing rules about noise.

If you're a resident...

Noises that might bother people can sometimes be permissible in public or private areas under local noise ordinances. The City of San Diego has a noise ordinance (Article 9.5 Noise Abatement and Control, Division 4: Limits), and has the following limits:

Land Use	Time of Day	One-Hour Average Sound Level (decibels)
Single Family Residential	7 a.m. to 7 p.m.	50
	7 p.m. to 10 p.m.	45
	10 p.m. to 7 a.m.	40
Multi-Family Residential	7 a.m. to 7 p.m.	55
	7 p.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
All other Residential	7 a.m. to 7 p.m.	60
	7 p.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
Commercial	7 a.m. to 7 p.m.	65
	7 p.m. to 7 a.m.	60
Industrial or Agricultural	Any time	75

For reference, the National Institute on Deafness and Other Communication Disorders, Environmental Protection Agency, and Noise Pollution Clearinghouse provide the following for reference:

Source	Decibels (approx., varies by source)
Bathroom exhaust fan	54-55
Hair dryer	59-90
Alarm clock	62-85
Normal conversation	55-65

If the drone isn't compliant with the City's noise ordinance, take the following steps:

- Note the color and type of drone, as well as the registration number.
- If the drone is violating the City of San Diego noise ordinance, you can report it here: <https://www.sandiego.gov/development-services/code-enforcement/request-investigation>.

If you're the drone operator...

It's important to be courteous to your neighbors and remain aware of how close your drone might be to someone. When legal, try flying at higher altitudes to reduce the noise impact on those around you.

What Do I Do If...

A drone is following me around?

Is someone harassing me?

The State of California Penal Code Penal Code 646.9 states:

“harasses” means engages in a knowing and willful course of conduct directed at a specific person that seriously alarms, annoys, torments, or terrorizes the person, and that serves no legitimate purpose.



If you're a resident...

If a drone is following you, it might be harassment. When assessing whether or not someone is using a drone to harass you, ask yourself some questions:

- How long has the drone been following me?
- Does the drone follow me every time I move, or is it just in my vicinity?
- Is the drone so close to me that I feel unsafe?

If the drone is harassing you, take the following steps:

- Note the color and type of drone, as well as the registration number
- You can report unsafe operations to the FAA at <https://hotline.faa.gov/>
- Contact your local law enforcement agency. If you're in the City of San Diego, call the SDPD non-emergency line at (619) 531-2000 or (858) 484-3154.
- If you feel there is an immediate threat to life or property, call 911.

If you're the drone operator...

Flying too close to people or following someone with your drone could easily be considered harassment. According to the California Penal Code, harassment could be punishable by “imprisonment in a county jail for not more than one year, or by a fine of not more than one thousand dollars (\$1,000), or by both that fine and imprisonment, or by imprisonment in the state prison.” Make sure you're being considerate of others' comfort when you're flying your drone.

What Do I Do If...

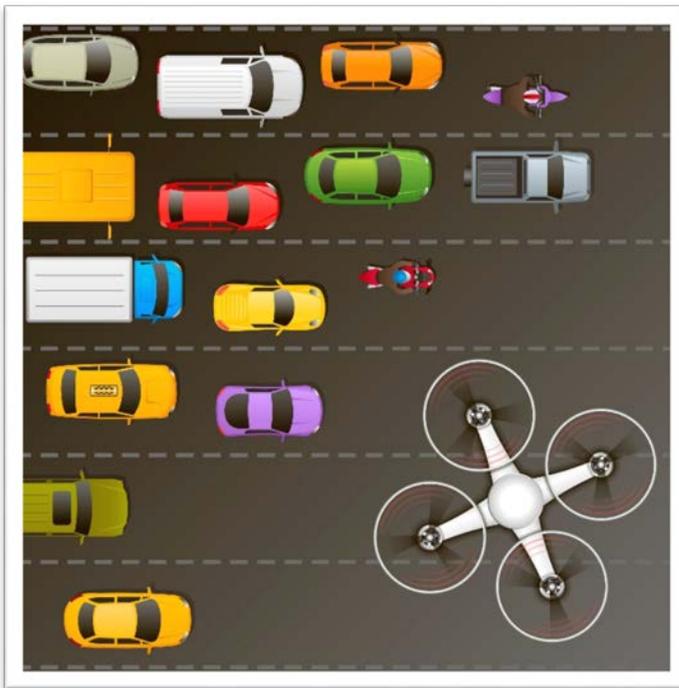
I see a drone flying near my car?

Drones and Cars

It's not safe to fly a drone over cars without an explicit waiver from the FAA. A drone can distract drivers and pedestrians and could cause accidents.

If you're a resident...

Drones flying around traffic can be dangerous. A drone might be legally authorized to be in the area; for example,



a drone might be used to check the condition of the road pavement or to take pictures of the house for sale next to the road. If you see one, continue to drive safely. If you're too distracted to drive, pull over until you feel comfortable getting back on the road.

If the drone is not conducting a specific activity and has become a dangerous distraction:

- Note the color and type of drone, as well as the registration number
- You can report unsafe operations to the FAA at <https://hotline.faa.gov/>
- Contact your local law enforcement agency. If you're in the City of San Diego, call the SDPD non-emergency line at (619) 531-2000 or (858) 484-3154.
- If you feel there is an immediate threat to life or property, call 911.

If you're the drone operator...

Unless you have a specific exemption or waiver, you may be in violation of federal rules or regulations. Be mindful of how your operations may be impacting those around you; drivers or pedestrians could be distracted by your drone instead of focusing on the road. If you're conducting a specific and authorized operation, complete your operation as quickly and safely as possible. This will keep our roads and our skies safe.

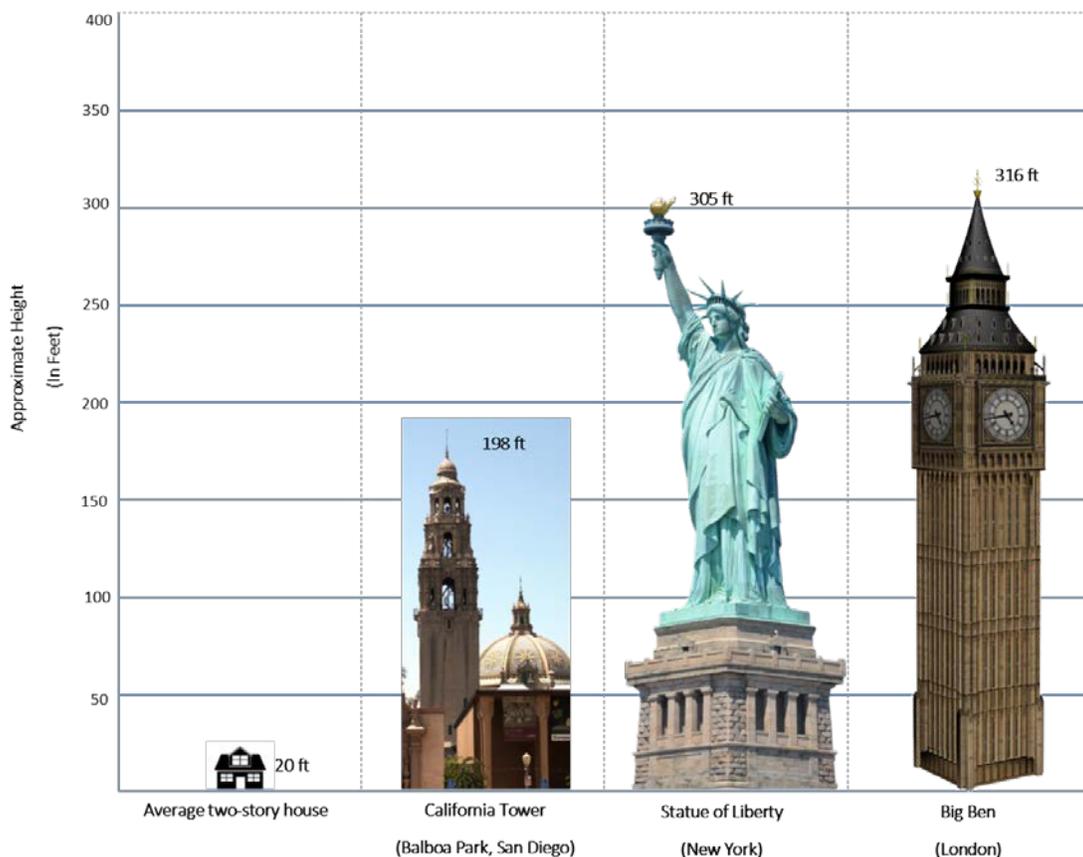
What Do I Do If...

I think a drone is flying too high?

FAA Limits

In uncontrolled airspace (Class G), drones are allowed to fly at or below 400 feet. When in restricted airspace, the height limits could be lower or flying could be prohibited completely (unless the operator has an exemption or waiver from the FAA).

How high is 400 feet?



*Chart is for representative purposes; sites are not pictured to scale

Who do I report this to?

If you believe a drone is flying over 400ft, or flying in violation of FAA restrictions, you can report unsafe operations to the FAA at <https://hotline.faa.gov/>.

The Rules of the Sky

What are the laws around drones and who has authority to enforce them?

Enforcing the Rules

When it comes to unsafe drone operations, the FAA has exclusive authority over aviation. The FAA is responsible for civil aviation standards and enforcement by developing, issuing, and enforcing regulations that cover manufacturing, operating, and maintaining aircraft. Currently, the FAA has sole enforcement authority of federal rules, regulations, and laws.

California Laws

Drone activity can also be subject to state and local criminal offense laws if the activity falls within an existing code. If a drone is being used to invade privacy, harass someone, or to violate existing state or local laws, your local law enforcement may have authority to enforce the violation. The California constitution states, "All people are by nature free and independent and have inalienable rights. Among these are enjoying and defending life and liberty, acquiring, possessing, and protecting property, and pursuing and obtaining safety, happiness, and privacy." California laws that can be applied to drone operations include, but may not be limited to:

Civil Laws

- Civil Code Section 1708.8 – Trespass
- Civil Code Section 3481 - Private Nuisance
- Code of Civil Procedure Section 525-526 – Injunction
- Code of Civil Procedure Section 527.6 - Temporary Restraining Order Prohibiting Harassment

Criminal Laws

- Penal Code Section 632 – Eavesdropping (Invasion of Privacy)
- Penal Code Section 634 – Trespass (Invasion of Privacy)
- Penal Code Section 647 – Disorderly Conduct (Concealed Recording)
- Penal Code Section 646.9 – Stalking

City Law

In 2017, the City of San Diego passed legislation to encourage the same operation of unmanned aircraft systems (52.5403). It is unlawful for any person to operate a drone in the air, on the ground, or on the water under the following circumstances:

- In a reckless manner so as to endanger the life or property of another; or
- In a manner that interferes with law enforcement, firefighting, or any government emergency operations.

Drone Resources

How do I keep up with drone rules?

This Guide

Thank you for reviewing this UAS guide. It's important that both operators and onlookers understand their rights and responsibilities in accordance with all applicable laws. While this guide is a good start, laws that impact drone operations are constantly changing, and this guide should not be used as the sole source of information about compliance with laws.

FAA Resources

The FAA has sole jurisdiction over aviation laws and rules and maintains a thorough and informative website to help operators stay compliant with the law, regardless of the type of operation. For the latest information, visit the FAA's UAS site at www.faa.gov/uas or visit the following:

- Flying for fun: https://www.faa.gov/uas/recreational_fliers/
- Flying for business: https://www.faa.gov/uas/commercial_operators/
- Flying for educational purposes: https://www.faa.gov/uas/educational_users/
- For information about the FAA's Know Before You Fly (B4UFLY) app: https://www.faa.gov/uas/recreational_fliers/where_can_i_fly/b4ufly/

City Resources

Although the FAA has exclusive jurisdiction over aviation law, the City of San Diego is participating in the FAA's UAS Integration Pilot Program. As part of the program, the City has the opportunity to relay any comments received about the program to the FAA on a regular basis in order to influence future federal policies. We strongly encourage all feedback on drone integration and activity in the region. You can email your feedback to unmannedsystems@sandiego.gov or visit <https://www.sandiego.gov/uas>.