

Aerobatic Practice Areas

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MANY OF OUR MEMBERS ARE ACTIVE PILOTS who like to perform aerobatics for a variety of reasons — whether the objective is to develop new aerobatic skills, maintain aerobatic proficiency, or practice for an aerobatic competition or air show demonstration. However, there are limitations on where aerobatic flights may be performed. The FAA describes, in 91.303 (a) through (f), where aerobatic flights *cannot* be conducted. The rules include restrictions on the height above ground, ceiling and visibility, proximity to a published federal airway, proximity to persons on the ground, and certain types of airspace. Depending on your or your chapter's objectives, these restrictions may be obstacles to reaching your goals. This is the first of two articles describing how to obtain an aerobatic practice area (APA) that will meet your needs.

First, become familiar with the FAA's guidance for approving APAs. It may be found in 8900.1, Volume 3, Chapter 5 and is an easy read.

WHY PURSUE AN AEROBATIC PRACTICE AREA?

The primary reason to obtain an APA is for enhanced *safety*. You will carefully review the underlying surface area where maneuvers will be performed, plan your flights in advance, issue a NOTAM so that other pilots will be aware of your activity, and coordinate with air traffic control (tower, TRACON, or center) both before and during practice. You will have established boundaries for your maneuvers, and these will be reviewed/ approved by the FAA. Secondary benefits include 1) convenience in being able to fly closer to your home field rather than travel to where the constraints of 91.303 are met, 2) the ability to practice at contest altitudes rather than be limited to 1,500 feet, and 3) the ability to be coached/judged from the ground. The three steps prior to submitting application paperwork to the FAA include 1) site selection, 2) attitude check, and 3) stakeholder coordination. Laterally, your APA should be a 1-nm radius from the center of the practice area in order to provide some buffer and, vertically, should extend to the surface when possible. This avoids discussions about being inverted outside of the box, drifting outside of the box, or being too low.

SITE SELECTION

The sites you choose depend on your goals for the aerobatic practice and can affect the difficulty of obtaining FAA approval. If you are simply seeking a convenient location with altitude and possibly airway relief, start with a sectional, your starting airport, and Google Earth/Maps to find a nearby location that is over an unpopulated area (the FAA will never approve an APA over a populated area).

As shown in Figure 1 below ...



FIGURE 1

... this patch of unpopulated farmland is located in a flood plain just north of the Missouri River. It's about 6 miles from a nontowered airport and has no overlying class B, C, or D airspace. It does encompass a small portion of a federal airway (remember, they are 8 nm wide) and is near an arrival route for St. Louis Lambert International Airport. It is not bordered by heavily populated areas, schools, churches, or hospitals. The terrain is suitable for an off-airport landing or parachute landing and includes orthogonal field boundaries/roads with structures that approximate the limits of a contest box. This might be an excellent location for an APA if a convenient ground/coaching critique is not required. It should be relatively easy to obtain FAA approval and would be suitable for less experienced pilots in terms of the precision required to control altitude and position.

As shown in Figure 2 below, there is enough flat, unpopulated terrain at the KALN airport to contain an aerobatic practice area. There are several advantages to locating an APA at an airport, such as the ability to obtain ground coaching/critiquing, food, water, restrooms, shelter, fuel, and some services in case of a mechanical issue. This airport lies under the KSTL Class B airspace (approximately 4,500 AGL), has an operating control tower, serves corporate jet aviation, and accommodates practice instrument approaches for other nearby fields. As shown in the figure, the airport is bordered by densely populated areas to the north and west, and although the south side has a golf course, this too would be considered a no-aerobatic area. Greater coordination can help achieve APA approval at this location, and greater pilot skills are needed due to the altitude (Class B overlying airspace) and population constraints.

ATTITUDE

Now that you have your goals defined and several sites identified, it's time for an attitude check before beginning the pre-application coordination. Some applicants think that obtaining an APA is a right and not a privilege. They either perform no coordination or try to bulldoze their way through, ignoring the concerns of other stakeholders. This approach is inconsiderate, does not help IAC's reputation, and leads to delays, confrontation, and possibly denials. The "good neighbor" attitude where the applicant seeks input and listens to concerns from other stakeholders is the high road that I and the IAC recommend. This approach has proven successful in both the short and long term.

FIGURE 2



PRE-APPLICATION COORDINATION

Although not required in order to submit the APA application to the FAA, presenting your plan ahead of time to those who might be affected by APA operations is the best path to follow for long-term compatibility. Failure to properly socialize the APA, listen to concerns, and address them can lead to complaints (noise, traffic conflicts, unsafe operation, regulatory violations) that may end the APA or at the very least create disharmony within the community. Below are some of the groups that you should coordinate with before submitting your APA application to the FAA:

ATC

It's important to note that ATC does not approve the APA, but it will probably have an opinion and can influence the FSDO's view of your proposed APA. Each APA can have its own unique issues related to ATC and is very site-specific. ATC issues usually arise at towered airports or areas where there is a nearby TRACON that services class B, C, or D airports. Does the proposed APA encroach on arrivals, departures, or instrument approaches for a busy airport? If so, what is your plan for that?

It is worth mentioning to ATC that APA operations will be conducted only during VFR conditions and will not conflict with IMC approaches or other IMC-related handling on their part. Depending on your situation, it might be a good idea to meet with the tower or TRACON guys as part of your planning process. Face-to-face meetings where you can lay out pictures and diagrams and have a better two-way discussion are usually better than phone calls since APAs are not a topic many of these ATC folks have dealt with much, and it can sometimes be hard to communicate exactly what you want and how the APA will operate. When you have these discussions, put yourself in their shoes. Be reasonable and willing to tweak your plans if ATC has legitimate issues or concerns.



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Airport Management

It's a *really* good idea (mandatory, in my opinion) to touch base with your airport manager about your plans to get an APA over or close to the airport. While the airport managers don't have the authority to approve or disapprove the issuance of the APA and do not have any authority to regulate the airspace above the airport, they are stakeholders who deserve your genuine attention. The FSDO will likely reach out to them for their thoughts about the APA, and you don't want this to be the first time they've heard about your plans. If you don't already have a relationship with the airport management, establish one.

Airports that receive federal funding (and most do) are obligated to permit lawful aviation activities under the Grant Assurances Program that they sign onto when they get their check from the feds. The FAA decides what is lawful, not the airport manager. Depending on the organization and management of the airport, it may be useful to talk to the airport board. You'll need to feel out the best path forward, but your life will be much better with their support.

Flight Schools and FBOs

If there is a flight school at the airport on or near your proposed APA, you should touch base with them. Be prepared to explain what, if any, impact this may have on them. Specifically, address any impacts to the traffic pattern instrument approaches, real or perceived. It's also a good opportunity to make them aware of the benefits of unusual attitude training, the responsibility of all pilots to "see and avoid," and any issues with off-normal airport and traffic situations. This doesn't have to be a big deal. Understanding their operations and concerns can help you design your APA. Again, having a good relationship with these guys can go a long way.

Airport Tenants

Each airport has its own vibe and personality. Presumably, you are seeking the APA at or near your home base and know whom it would be a good idea to talk with about your plans. As with your discussions with the airport manager, this is an opportunity to explain how an APA works, assure tenants that it should not impact normal operations, and put to bed any misconceptions they may have. Making friends here is also very important. These could be your advocates or the guys who make the complaints about noise, safety, or whatever. Which would you prefer? Don't expect them to necessarily share your excitement or enthusiasm about aerobatics, but you definitely want to respect their views.



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Off-Airport Stakeholders

This group varies by location. Stakeholders could include churches, farmers, local residents, or business owners. If you think your APA would significantly impact them, it may be worthwhile to reach out. As an example, if there is a church near the APA, let them know that you will not use the APA before 11 a.m. on Sundays, or whatever makes sense for your location.

MY RESULTS

Although each situation is unique, I will share my experiences with two APAs that I applied for in the St. Louis area, as they illustrate many of the challenges our members may encounter when creating an APA.

THE PRIMARY REASON TO OBTAIN AN APA IS FOR ENHANCED SAFETY.

I followed these steps with the potential APA sites shown in the proceeding figures. Here's how things went:

For the first site, located over the flood plain farmland next to the Missouri River, we received the APA waiver and have been operating without any issues for several years. The TRACON provides traffic advisories that permit us to discontinue aerobatics when a nonparticipating aircraft is approaching (ADS-B traffic alerts become unreliable/nonexistent during aerobatics). Safety is enhanced through the constant controller oversight, and in the event of an emergency, we are already in contact with a controller and just 6 miles from an airport.

For the second site, located at KALN airport, we received the APA waiver and have been operating for several years without any issues. The tower assigns us a discrete frequency so we are not bothered with the other traffic calls and are allowed to use this frequency for real-time coaching/critique. The airport is generally underused, so interruptions/restrictions are infrequent. The tower seems to appreciate the free entertainment and the break in routine.

In a future issue, I will discuss the process of completing the APA application (Form 7711-2 and environmental impact document). Until then, discuss your chapter's aerobatic goals and start thinking about the best location for an APA in your area. **IACT**