

AERONAUTICAL CHARTING MEETING
Instrument Procedures Group
Meeting 22-02 – October 24-25, 2022

RECOMMENDATION DOCUMENT

FAA Control # 22-02-372

Subject: Circling NA Areas and Implicit NA Runways

Background/Discussion:

Circling restrictions can be stated either by enumeration of NA runways or by giving an area through which Circling is not permitted. Both are often used concurrently when flight inspection or obstacle surveys deem circling in certain areas are hazardous and/or certain runways are not authorized.

In some cases, this can result in ambiguity when considering the splay applied to circling area restrictions. See KIYK, RNAV RWY 02 (Figure 1):

INYOKERN, CALIFORNIA		AL-5417 (FAA)	21280
APP CRS 017°	Rwy Idg 6275 TDZE 2442 Apt Elev 2457	RNAV (GPS) RWY 2 INYOKERN (IYK)	
RNP APCH. ▼ ▲ NA		MISSED APPROACH: (Do not exceed 165K until SW bound) Climbing right turn to 8600 direct MIGPE then left turn on track 197° to ASUYU and hold.	
MHV AWOS-3 132.225		JOSHUA APP CON 133.65 348.7	AUNICOM 122.8 (CTAF) 0

Figure 1. Chart Header

Circling Rwy 10, 33 NA at night.
Circling NA east of Rwy 15-33
Circling NA at night west of Rwy 2 and 15

Considering this example and assuming night operations (which are the most restrictive), Figure 2 illustrates the areas both available (in white) and not available (in shading) for circling operations:

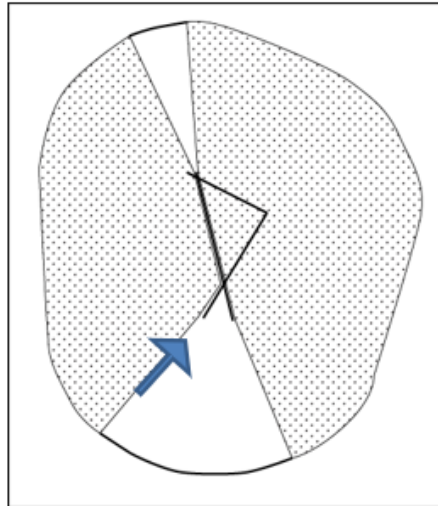


Figure 2. Circling authorized and not authorized areas showing procedure flow

Figure 3 includes annotations of circling NA area notes along with runway callouts. Runways 20 and 28 are not reachable (yellow) because they are contained within the larger “Circling NA east of Rwy 15-33” area; as a consequence, the FAA does not specifically callout runways 10 and 28 as “NA.” Runways 10 and 33 are unambiguously NA (red) based on the note “Circling Rwy 10, 33 NA at night.” Runway 2 is unambiguously permitted. Runway 15 is ambiguous due to the splay area cutout and lack of note restricting circling to runway 15.

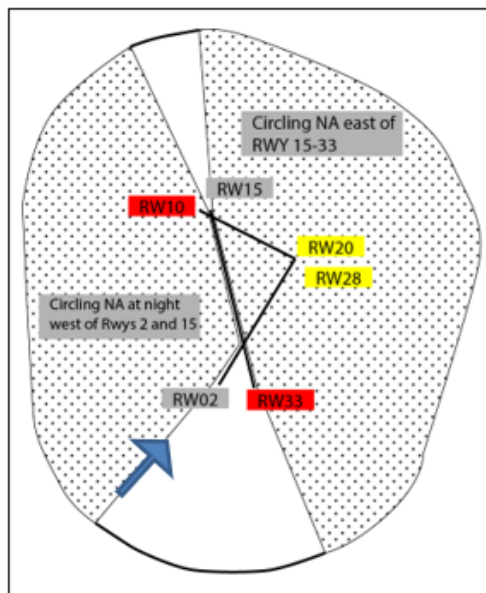


Figure 3. Annotated authorized and not authorized circling areas and runway callouts

Most prudent pilots assume (rightfully) that Circling to Rwy 15 is NA at night on account of the two NA circling areas, but graphical application of TERPS criteria shows an open splay on runway 15 and no note specifically states that Circling is NA to runway 15. In our estimation, runway 15 ought to be added to the Circling NA at night note since runway 15 is unreachable other than by entering an NA area.

The other issue is the splay. Pilots don't have intimate knowledge of 8260 guidance on splay geometries. Accordingly, while the pie-shaped cutout north of the airport seems to be the consequence of notes "Circling NA east of Rwy 15-33" and "Circling NA at night west of Rwy 2 and 15," a clearer wording could be used to indicate what is likely intended and what is likely in the mind of the pilot as shown in Figure 4.

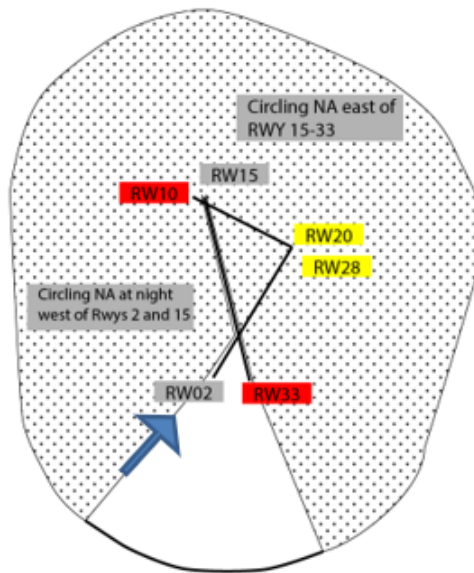


Figure 4. Notional intent of NA circling areas

Recommendations:

Garmin recommends criteria changes to cover cases like KIYK runway 15 and provide clarity via a chart note stating that a specific runway is NA.

When more than one runway is used to define NA circling areas, improve splay design and/or wording used to describe the NA circling area.

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