

**Government/Industry Aeronautical Charting Meeting (ACM)**  
**Meeting 22-01**  
**Charting Group**  
**April 26-28, 2022**

**CHARTING GROUP MINUTES**

**I. Opening Remarks**

FAA, Aeronautical Information Services (AIS) hosted the Charting Group portion of the Aeronautical Charting Meeting (ACM) on April 26-28, 2022. Due to the impacts of the COVID-19 pandemic, this meeting was held virtually. Samer Massarueh, FAA/AJV-A223, opened the meeting on Tuesday, April 26. Samer recognized and introduced Valerie Watson, FAA/AJV-A250, Chair of the Charting Group. He then acknowledged Jeff Rawdon, FAA/AFS-420, Chair of the Instrument Procedures Group (IPG) portion of the meeting held the previous day. Samer provided an overview of the purpose of the ACM, his role as facilitator, and explained how he planned to manage participation for the meeting attendees.

**II. Review Minutes of Last Meeting, ACM 21-02**

The minutes from ACM 21-02 meeting were distributed electronically via the AIS ACM website: [https://www.faa.gov/air\\_traffic/flight\\_info/aeronav/acf/](https://www.faa.gov/air_traffic/flight_info/aeronav/acf/). The minutes were accepted as submitted with no changes or corrections.

**III. Agenda Approval**

The agenda for the 22-01 meeting was accepted as presented.

## IV. Presentations, ACM Working Group Reports and ACM Project Reports

### [Chart Supplement Update](#)

Jeffrey Lamphier, FAA/AJV-A240, [briefed](#) the audience on the progress of the Chart Supplement modernization effort. He reported that work is underway to document the current state of Continental United States (CONUS) Chart Supplements in the Interagency Air Committee (IAC) specifications. That work is expected to be completed by the end of 2022.

Jeffrey reported that the Alaska Chart Supplement stakeholder working group met in December 2021 and that the final report will be available in May 2022. He said the recommended revisions would be implemented incrementally.

Jeffrey also reported on the current work to enhance the XML. Phase 1 changes to add XML tags to the continuation pages for airport entries will be fully implemented in July 2022. Phase 2 changes to tag entries in the back matter portion of the Chart Supplement is in progress with an expected publication date of November 2022 (see [slide 4](#)).

Jeffrey said he will continue to brief the ACM on the progress of the Chart Supplement modernization effort.

### [Northeast Corridor Atlantic Routes](#)

Joey Tinsley, FAA/TETL1-ZTL, [briefed](#) the status of the project. This is a large-scale change to the National Airspace System (NAS). It is part of a transition to a Performance Based Navigation (PBN)-centric NAS involving the addition/amendment of 39 Q and Y Routes to replace the current north-south high altitude route system along the east coast. He reported the project is currently 66% done and the implementation of the remaining 55 routes are on track for completion on 11/3/2022. [Slides 4 and 5](#) show a final before and after depiction of the published routes. [Slide 6](#) shows what has been accomplished thus far. [Slide 8](#) is a list of the ZDC High Altitude sector changes that have been implemented and those that are tentatively planned for implementation on 9 May 2022. [Slide 9](#) shows the changes scheduled for the remainder of this year. Due to competing resources and constraints, some Standard Terminal Arrival (STAR) procedures might not be published this fall. The team is working through the issues and will come up with a new implementation plan if the STARs cannot be published as scheduled. [Slide 11](#) shows the Notices to Air Missions (NOTAMs) that will be issued until the full routes are available in November. Information on how operators can help with this work is listed on [slide 18](#).

Rich Boll, NBAA, asked whether published preferred routes and Coded Departure Routes (CDRs) in the database will reflect what pilots should be filing when the routes are NOTAM'd out or will pilots have to look at the NOTAMs. Joey said those routes should reflect what pilots should file during the transition period.

### [Noise Abatement](#)

Kent Duffy, FAA/APP-410, [briefed](#) the FAA's collaborative work on noise abatement information contained in the Chart Supplement. He explained his team's plan to standardize noise abatement remarks in the Chart Supplement so that it can be the primary source for this information. He said the draft best practices document will be out for review this spring. This document will be used by airports to develop new noise abatement

remarks and to incrementally revise existing noise abatement remarks to ensure they use consistent terminology and structure. Kent provided an example of an existing noise abatement entry and showed how it would change when following the proposed best practices ([slide 7](#)).

Bennie Hutto, NATCA, asked whether the noise abatement information will apply to voluntary or mandatory procedures. Kent said the vast majority of the operational measures are voluntary. They intend to use language to make it clear if the noise abatement procedure is mandatory. Bennie also asked whether the noise abatement procedures are evaluated for obstacles. Kent said that new procedures are evaluated but cannot guarantee that for existing entries. He emphasized that the new procedures are only approved if they're safe and if they're voluntary.

Valerie Watson, FAA/AJV-A250, suggested that whether a procedure is voluntary or mandatory should be added to the text of the entry. Kent said that was considered but since 99% of them are voluntary, they felt that would be redundant. He said they are open to more feedback on how to best convey that message once the document comes out for review.

Gary Fiske, FAA/AJV-P310, suggested it should be stated if a noise abatement procedure is VFR only. Air Traffic Control (ATC) needs to know if the noise abatement procedure is expected to be used. If there are IFR components, there is a process that needs to be followed to validate them and inform ATC. Kent said most entries are VFR at a mix of towered and non-towered airports. When the procedure has IFR components, it follows the validation process and ATC is part of the coordination. He said they did receive feedback that it was unclear whether a noise abatement procedure was IFR or VFR and towered or non-towered, so they are trying to ensure the distinction is explicit.

Scott Jerdan, FAA/AJV-A310, said he thinks these noise abatement procedures should first go into the Airport Data and Information Portal (ADIP) before being published in the National Airspace System Resource (NASR). Kent agreed and confirmed airports will input their noise abatement procedures into ADIP. There will then be an initial review to ensure it is viable.

Rich Boll, NBAA, voiced his support for the relocation of noise remarks under the newly-created NOISE header in the Chart Supplement airport entries, providing a consistent location for this information. He then asked if airports were aware of this new effort to standardize noise abatement information. Kent said his office has been in contact with airport associations and it was highlighted in the Advisory Circular 150 that is out for public comment. Rich then asked if hyperlinks could be added to the noise abatement entries in the digital Chart Supplement. He said airports often have good information on their airport websites when they have complex noise abatement procedures and it would be helpful to link that to the Chart Supplement entry. Kent said the goal is for the Chart Supplement itself to be the primary source for all noise abatement information. He said there can also be information published in the Special Notices section for more complex procedures or if a graphic is needed. Rich also said noise abatement information is not very well described in the Aeronautical Information Manual (AIM). He asked if Dan Wacker, FAA/AFS-420, could look at that in the Departure Working Group. Dan suggested Kent could lead that effort and his office would certainly assist. Kent said he will follow up with Dan.

When available, a link to the Noise Abatement Best Practices Document will be provided on the ACM website for comment.

## [Airports Data and Information Collection Program](#)

Drew Goldsmith, FAA/AAS-120, [briefed](#) the audience on the Airport Data and Information Collection Program, which is the primary airport data collection portal for Airport Surveys and Airport Master Records. The Airport Data and Information Portal (ADIP) simplifies, consolidates, and streamlines the current disparate data entry and management into a single platform. It allows users to easily view and search airport/heliport data including the options to extract the data into a CSV file and to download Airport Master Record (5010) forms. Registered users also have access to a portfolio of airport data collection applications ([slide 7](#)).

Valerie Watson, FAA/AJV-A250, asked whether the general public can access ADIP. Drew said the general public can access data on the public facing website, but not as a registered user. That is limited to only those entities that are inputting data into ADIP.

Rich Boll, NBAA, asked whether the performance engineering community can access the obstacle data. Chris Criswell, FAA/AAS-120, said engineering firms conducting surveys at airports are the main users who have access to ADIP at this time, but they have also made it available to the performance engineering community if they have a business need. Rich asked whether that community knows ADIP is available to them. Chris said there is a working group where they have discussed this issue. ADIP is not an official data source at this point, rather it is a collection point, and is intended to support surveying. He pointed out that the obstacle data in ADIP is the same as that provided by Obstruction Evaluation/Airport Airspace Analysis (OE/AAA). Brian Murphy, FAA/AJV-A350, confirmed ADIP is not the official data dissemination point and users should go to OE/AAA or the Digital Obstacle File (DOF) for obstacle information. Scott Jerdan, FAA/AJV-A310, suggested a focused briefing at the next ACM on the collection and dissemination of obstacle data would be useful to this audience. Scott offered to follow up with the Obstacle Team manager Eric Freed, FAA/AJV-A320 to arrange a briefing.

Jay Leitner, American Airlines, said the performance engineering groups at the airlines do have registered user access and have found it useful. He shared these groups have access to this data in their consulting role and have distributed the information about ADIP through Society of Aircraft Performance and Operations Engineers (SAPOE). He asked whether moving FAA Forms 7460 and 7480 into ADIP would integrate OE/AAA into ADIP. Drew said OE/AAA is not planning that action, but the process of getting the information will be through ADIP.

Steven Madigan, Garmin, asked whether the intent of ADIP is to contain the obstacle set that is available on FAA Form 8260. Chris said the intent is to support the airport surveys and the resulting surveys produce the obstacles that are used in procedure design.

Drew explained that a lot of the work the Office of Airports has focused on has been in response to [FAA Reauthorization Act of 2018 Section 314](#), which requires the FAA to assess the availability of information regarding helicopter air ambulance operation data and reports. His office evaluated the data being supplied for helicopter sites ([slide 9](#)) and added a number of hospital heliports. Drew said that concurrent with this effort, the FAA was also updating the Helicopter Design Advisory Circular (AC) (and now the Vertiport Design AC), so both could be updated in a coordinated way. Drew explained the new heliport data features that are being added ([slides 12-17](#)).

Drew explained work is underway to modernize the existing policy and forms and to streamline the data workflow. Currently airport and heliport owners must use multiple applications to submit changes. With ongoing developments, all changes can be submitted and managed from ADIP.

Drew closed his briefing with a discussion of future enhancements, which will include vertiports, droneports, and spaceports.

### 5G C-Band NOTAMs

Christina Clausnitzer, FAA/AFS-410, [briefed](#) on Radio Altimeter issues and 5G C-Band deployment. Almost two years ago, the Federal Communications Commission (FCC) announced a portion of the frequency band spectrum (3.7-3.98 GHz) would be auctioned off. The Radio Technical Commission for Aeronautics (RTCA) published a report that assessed 5G telecommunications interference impact on low range radio altimeter operations in the United States that said it can cause harmful interference and could degrade the radio altimeter to the point of loss and/or erroneous data. The FAA believes the expansion of 5G C-band and aviation can safely co-exist and will continue to work closely with the FCC and wireless companies.

The FAA was initially told the telecommunication companies would deploy broadband in phases into the 46 markets highlighted on [slide 6](#) until December 2023; however, it is expanding more rapidly than initially expected. [Slide 8](#) shows the mitigations that are in place. The FAA has published Airworthiness Directives (ADs) including a transport AD, a rotorcraft AD and Boeing issued six aircraft-specific ADs. The FAA also issued Alternative Methods of Compliance (AMOCs) and additional guidance in a Special Airworthiness Information Bulletin ([SAIB:AIR-21-18R1](#)) and a Safety Alert for Operators ([SAFO 21007](#)). Verizon and AT&T have voluntarily agreed to use reduced power levels, lower the frequency and provide partial protection for vulnerable airports.

The FAA determined NOTAMs are the best tool to provide the flexibility needed to convey the necessary information to pilots. Dez Silagyi, FAA/AJV-A360, explained the different types of NOTAMs being issued ([slides 11-15](#)). They are all issued where the radio altimeter is unreliable due to the presence of 5G C-Band interference and operations are prohibited unless the operator has an approved AMOC. [Slide 16](#) shows the total numbers of NOTAMs currently published.

Dez said the NOTAMs are issued for two years so they will have time to work with Aeronautical Information Services and Flight Standards to come up with a long term plan. Consideration is being given to charting a symbol on Instrument Approach Procedures (IAPs), updating the Temporary Flight Restriction (TFR) website with airspace NOTAMs, and/or adding aerodrome NOTAMs to the Chart Supplement.

Dez shared that the FAA has a 5G and Aviation Safety website with a lot of useful information on this topic that may be of interest: <https://faa.gov/5g>

Rich Boll, NBAA, said pilots are confusing the ADs and the NOTAMs and are misunderstanding that 5G NOTAMs take out everything on the AD. Pilots are dropping procedures that are not part of the NOTAM. He asked that guidance be added to make it clear exactly what the NOTAM governs. Christina said they have received several comments about this and they are working on updating the SAFO to address that concern.

Darrell Pennington, ALPA, asked if 5G interference is being considered at the procedure design phase. Christina said every radio altimeter on every aircraft responds differently. They built their NOTAMs based on the most susceptible radio altimeters. That is why most aircraft can use AMOCs. Christina said the first filters have been approved and are being installed on those aircraft with susceptible altimeters, which will allow the areas covered by NOTAM to shrink significantly. The long term solution is to publish new standards for radio altimeters that will allow aviation and 5G to safely coexist. Dez said the FAA is not yet ready to identify impacts on individual procedures, but that will be part of the ultimate goal in order to clear out the NOTAMs.

Bill Tuccio, Garmin, asked whether the FAA is getting reports of alerts because of the radio altimeters. Christina said in the first two weeks, the FAA received hundreds of reports. Lately they have been receiving fewer reports and they are primarily coming from those aircraft with more susceptible radio altimeters. This suggests the mitigations are working. For the alerts they are seeing, it has not been proven that 5G is definitely the cause of the interference, but it cannot be discounted either. Data is still being gathered and assessed.

Mark Mentovai, Manhattan Flight Club, asked how much the present AMOCs are predicated on the mitigations that have been taken by the telecommunications companies and whether there will be more problems waiting once the mitigations are removed. Christina said July 5, 2022 is the date telecommunications companies will remove the mitigations. The main issue will be power levels because at that time the watts will double. We know that currently telecommunications companies are not utilizing those power levels, but the FCC has authorized those higher levels. She said they are trying signal in space modeling so they can figure out the impacts for a specific aircraft at a specific airport. Once they have enough data, they can set limits on the power at a specific location. Mark asked if they are concerned with the passenger emitters that are on board the aircraft particularly as 5G handsets become more widely deployed. Christina said that is another issue and the FAA does not yet know the impact. Mark then asked whether this problem might recur and whether there is a plan now in place for future issues with the spectrum. Christina said the FCC's job is to regulate the spectrum and she hopes more studies will be done in advance next time. She agreed that how the FCC decides to manage the spectrum with aviation should be based on lessons learned from this experience.

Wes Googe, American Airlines, serves on a coalition that is led by Aerospace Industries of America (AIA) that is focused on the 5G issue. He reported the RTCA stood up a Spectrum Compatibility committee (SC-242) to help guide the aeronautical industry's process for developing standards for new equipment with a goal to make it as robust as possible for adjacent band interference. He said several industry groups raised the interference issue with the FCC when they were considering it two years ago, but the FCC ignored the concerns. The FAA doesn't control the FCC, but they are working toward joint consideration of these issues.

Valerie thanked Christina and Dez for their briefing and for all the work they have done. She asked that they provide an update at the next ACM.

### [Charting of Wind Turbine Farms](#)

Michael Rauchle, FAA/AFS-420, [briefed](#) on proposed enhancements to the charting of wind turbine farms on VFR charts. The Flight Procedures and Airspace Group is responsible for evaluating the VFR effect of any new obstructions in the National Airspace System (NAS), including wind turbine farms. Wind turbine construction has increased significantly in the NAS and along with the additional numbers of turbines, their heights are increasing. Wind turbines greater than 499' AGL present potential increased safety risk in the NAS as the unlit

wind turbine blade tips affect flight operations in both Class G (uncontrolled) and Class E (controlled) airspace. The team hopes to mitigate the safety risk by making charting improvements.

[Slide 5](#) shows a current wind turbine farm depiction near Albuquerque, NM. [Slide 6](#) shows a wind turbine farm in a congested area near Palm Springs, CA. Michael pointed out that the dashed line that borders the wind farm is very similar to the line that borders the Class D airspace and that there is a lot of clutter making it hard to discern the wind turbine farm among the other features. Michael said his proposal is intended to increase visual conspicuity, making wind turbine farms stand out, particularly near congested areas, and to improve VFR pilot awareness without creating excess chart clutter. He explained that there were about 25,000 wind turbines in 2011. Most were below 499' AGL, with an average of 408'. Now there are over 75,000 wind turbine farms in the NAS and the average height is greater than 499' AGL. This creates an increased hazard to VFR pilots.

Shawn Smith, FAA/AFS-420, shared the team's two proposed depictions. In the first proposed examples ([slides 15-16](#)) the outline has been changed to a dotted outline and a diagonal line interior fill has been added. The boxed elevation is located within the confines of the wind farm, but there is latitude to move the elevation box where space allows. They propose depicting the turbine symbol itself in pairs. Lastly, they propose that a caution box be applied to all wind turbine farms greater than 499' AGL. For the second example at Palm Springs, ([slides 18-19](#)), the dashed outline is retained, but increased in line weight. It has the same fill as the other proposed example. In this example, the boxed elevation is located outside the wind turbine farm due to space constraints. The caution box is below the wind turbine farm. An alternate proposal for the same wind turbine farm ([slides 20-21](#)) uses a dotted line for the border and a horizontal fill instead of diagonal lines. Shawn said this proposal will be posted to the ACM website and feedback would be appreciated.

Kevin Allen, American Airlines, said chart clutter is the most important thing to consider. He thinks the caution box is unnecessary and adds to the clutter. He believes the highest elevation box is sufficient.

Rich Boll, NBAA, asked about the subtle color shift in the examples. Michael said the examples were done in a drafting environment and the colors are not true. He confirmed that they are not proposing any color changes. Rich asked if masking the area had been considered. Mike said that was considered but they didn't want to occlude any of the underlying features. He said Canada does something similar to what Rich is suggesting ([slide 27](#)) and that if Rich feels strongly about it, he should send them that feedback. Rich said he would like to see more examples presented at the next ACM.

A number of audience participants voiced that without examples showing true chart colors, it is impossible to properly evaluate the charting changes and to provide good feedback. Valerie Watson, FAA/AJV-A250, agreed and asked if Visual Charting can provide prototypes in true color. Katie Murphy, FAA/AJV-A214, said her team will work on that so they can be included in the review document posted to the ACM website.

Mike Crim, GA Pilot, said he prefers the 45 degree fill versus the horizontal fill, but wonders if the fill is even needed and may add more clutter in already cluttered areas. Mike suggested they look at the fill on a big farm in an uncongested area to how the fill clutters the chart. He also asked if they can combine the caution box and the elevation box since there is duplicated information. Valerie agreed that showing both the boxed caution note and the highest elevation box is redundant and adds unnecessary clutter. She also said that it may cause a legal issue if someone hits an unlit blade at a location that doesn't carry the caution note. She believes the single boxed numerical elevation is sufficient and the information about unlit blade tips should be handled through

pilot education. Michael said Aeronautical Information Manual (AIM) updates and outreach are part of the implementation plan.

Mike Stromberg, IPA/UPS, said he prefers the dotted outline, but noted that the dotted leader line connecting the wind farm to the elevation box was confusing. He also suggested the proponents take this proposal to Air Venture in order to get feedback from more GA pilots.

Jim McClay, AOPA, pointed out that there is a Document Change Proposal (DCP) regarding wind turbine radar interference. Shawn said they had also seen the DCP and were working with the submitter, as well as with Rune Duke, FAA/AFS-001, on the update.

Gary Fiske, FAA/AJV-P310, asked whether it was a good idea to allow the wind turbine farms to continue to increase in height and how much control the FAA has over limiting the vertical height. Michael said they have similar concerns. Their group evaluates for VFR effect and thinks it might be a good idea to have an offline discussion with the Air Traffic Obstruction Evaluation Group as they set the policy.

Valerie summarized Michael and Shawn will work with VFR Charting to create true color examples that will be posted on the ACM website with the proposal to solicit input.

\*Post-ACM Note: The presentation has been updated to include true color examples. See [slides 29-34](#).

## V. New Charting Topics

### [22-01-368 Special Use Airspace on IAPs](#)

Steve Madigan, Garmin, [briefed](#) the audience on the inconsistent depiction of Special Use Airspace (SUA) areas on terminal charts. He explained that for Instrument Approach Procedures (IAPs), FAA Form 8260 will direct certain types of SUAs to be charted, but it is not always requested on all the 8260s for a given airport resulting in inconsistent charting of the SUAs. Examples are shown on [slides 3-8](#). Garmin recommends revising the policies regarding what types of SUA are relevant to IFR operations and worthy of charting. They also recommend the depiction of SUAs be consistent across all charts and chart types at an airport and a procedure amendment process involving removing SUAs should encompass all procedures where the SUA is depicted.

Valerie Watson, FAA/AJV-A250, clarified that SUAs are only shown on charts when specifically requested on the 8260. FAA Order 8260.19 states SUAs will be shown “as deemed necessary.” What are being characterized as inconsistencies are actually the result of deliberate choices made by Instrument Flight Procedure (IFP) design.

Johnnie Baker, FAA/AJV-A441, said the decision made by the procedure designer depends on whether or not the SUA will impact the specific procedure. Steve asked if that decision is documented. Johnnie said it is often documented on the back of the FAA Form 8260-9. Johnnie also pointed out IFP designs procedures by request, so not every procedure at a given airport is worked for the same effective date. This may lead to inconsistencies.

Diane Adams-Maturo, FAA/AFS-420, said Air Traffic Control (ATC) or the Flight Procedures Team (FPT) can request that a SUA be added to a specific procedure or not. She explained that there are a lot of factors involved but ultimately the request to chart an SUA on an individual procedure is up to the procedure designer.



Bill Tuccio, Garmin, asked if the size of the planview is taken into account when a decision is made about whether to request an SUA for charting on a given procedure. Krystle Kime, FAA/AJV-A222, pointed out that if an SUA is requested on the 8260, but doesn't fit within the boundary of the planview, it is not charted. The standard 500,000:1 scale of these charts is NOT revised to accommodate an SUA.

Valerie asked if the guidance in the 8260.19 is sufficient or if it should stipulate that SUAs should be charted consistently for all procedures at a given airport. Jeff Rawdon, FAA/AFS-420, said he does not think Flight Standards will want to make that change and he thinks it should remain at the discretion of the local facilities and the procedure designers. He also said he would take this question back for further discussion with the Flight Procedures and Airspace Group. Dan Wacker, FAA/AFS-420, pointed out that this issue also affects FAA Order 8260.46 for Departure Procedures.

**STATUS: OPEN**

**ACTION:** Jeff Rawdon, FAA/AFS-420, and the Flight Procedures and Airspace Group will review the criteria in FAA Orders 8260.19 and 8260.46 regarding the charting of Special Use Airspace Areas.

**[22-01-369 Wildlife, Seashore & Similar Areas on IAPs](#)**

Steve Madigan, Garmin, briefed the new recommendation. He explained some Instrument Approach Procedure (IAP) charts depict wildlife/seashore areas as a result of charting being requested on the 8260 procedure source document. Steve said the purpose of charting these types of areas on IFR charts is unclear since they do not present a regulatory impact on pilots operating in the IFR system. Garmin recommends against depiction of wildlife/seashore areas on IFR publications due to their lack of impact and the negative effect of adding clutter to the chart.

Jeff Rawdon, FAA/AFS-420, said he thinks most of these areas are on the chart because the local facility requested it. All the same points that pertain to Requirement Document (RD) [22-01-368](#) also apply to this issue. Valerie Watson, FAA/AJV-A250, agreed and said there is vague guidance in FAA Order 8260.19 that the procedure designer can request items be charted at their discretion for situational awareness. She suggests having Flight Standards review the language in the 8260.19 and report back at the next ACM. Jeff agreed.

Bill Tuccio, Garmin, said charting these areas increases the cognitive workload for the pilot with no benefit. Pilots do not need this information. Mike Stromberg, UPS/IPA, agreed there is very little benefit to a pilot seeing this information since there is nothing to be done about it.

Rich Boll, NBAA, pointed out that if a pilot flies into one of these areas below 2000' AGL, they may be in violation of a National Oceanic and Atmospheric Administration (NOAA) Code of Federal Regulations (CFR). He asked if the procedure designers consider that. Johnnie Baker, FAA/AJV-A441, said the 8260.19 does not directly address wildlife/seashore areas. Dan Wacker, FAA/AFS-420, said there is nothing in the FAA Orders 8260.46 that addresses them either. He sees no safety benefit to adding these areas. Diane pointed out that the 8260.19 addresses environmental requirements, but it doesn't say specifically wildlife areas. The Operations Support Group (OSG), Flight Procedures Team (FPT), and Air Traffic Control (ATC) would determine whether the

procedure was following the Environmental Policy Act. Dan agrees that Flight Standards needs to take a closer look at this issue.

John Moore, Jeppesen, said he doesn't think the 8260.19 should be revised to restrict the charting of the graphic or note. He thinks it should be left open to the procedure designer so they can coordinate with the local facilities on items that are issues for that specific area. Steve said Garmin acknowledges that having a note would be preferable to a graphic depiction that clutters the final approach.

Johnnie added that the majority of the requests to depict these types of areas come from ATC and airport owners and operators who ask for them to be added as part of the original IFP request. Valerie asked if the designers ever go back to the submitter and question those request. Johnnie confirmed those discussion do happen.

**STATUS: OPEN**

**ACTION:** Jeff Rawdon, FAA/AFS-420, will coordinate a Flight Procedure and Airspace Group review of the guidance in FAA Orders 8260.19 and 8260.46 for the charting of wildlife, seashore, and other similar areas on Instrument Approach Procedures.

**[22-01-370 Charting of NA Lines of Minima](#)**

Steve Madigan, Garmin, briefed the new recommendation regarding the charting of Not Authorized (NA) lines of minima on Instrument Approach Procedure (IAP) charts. He said there are approximately 80 IAPs with lines of minima that are wholly NA. He said the absence of a line of minima from the chart means the same thing to a pilot as an NA line of minima so depicting the NA line of minima amounts to chart clutter. Garmin recommends a charting specification change to remove wholly NA lines of minima from IAP charts.

Valerie Watson, FAA/AJV-A250, said from a charting perspective, if a NA line of minima is listed on the procedure source document, current charting specifications require it be charted. This could be revised if it is determined that it's not important for a pilot to know these lines of minima are NA. Steve said his preference would be that wholly NA lines of minima not be listed on the procedure source form.

Diane Adams-Maturo, FAA/AFS-420, said FAA Order 8260.19 already says to "make no entry in the minimums blocks when minimums are not authorized for all categories." Pat Mulqueen, FAA/AJV-A440, said he agrees that the line of minimums should not be there if none of the categories are available. He thinks that perhaps the Instrument Flight Procedure (IFP) designers were given specific guidance about what lines of minima to publish for specific types of charts and may have used templates. Valerie said if the FAA needs the NA lines to remain on the forms for documentation purposes, a charting specification could be written that that says if the line of minima is designated NA across every category, the whole line of minima should not be charted. Pat agreed, but said he thinks there is no reason it has to remain on the procedure source document and it would be better to remove it at the source. Krystle Kime, FAA/AJV-A222, said she agrees and said it would be better for Terminal Charting automation if it is removed from the procedure source document.

Jeff Rawdon, FAA/AFS-420, said the 8260.19 is clear that the NA lines of minima should not be documented on the form. He thinks these remaining procedures with NA lines of minima haven't caught up to the new criteria. Dan Wacker, FAA/AFS-420, agreed and said the criteria was changed in 2011.

Rich Boll, NBAA, said he supports this recommendation to remove the NA lines of minima.

John Collins, ForeFlight, pointed out that Jeppesen doesn't chart the line of minima and are using the same source.

Pat said he will ensure the IFP group will remove wholly NA lines of minima from procedure source forms on a day forward basis. Bill Tuccio, Garmin, suggested a little more research is needed before dropping the Category III lines of minima since it might affect international pilots.

Valerie summarized the issue. FAA Order 8260.19 already contains criteria that states that wholly NA lines of minima need not be documented on the procedure source form. The IFP team will begin work to remove those NA lines of minima from the approximately 80 affected IAPs on a day forward basis. No specification changes are needed and Terminal Charting will remove the lines of minima from the charts as the procedure source forms are updated.

**STATUS: CLOSED**

#### [22-01-371 Enroute References & Coordinates on DPs & STARs](#)

Krystle Kime, FAA/AJV-A222, presented the new recommendation. She said in the 1980s there were two Requirement Documents (RDs) that updated the specifications for Standard Instrument Departures (SIDs) and Standard Terminal Arrival (STARs) charts that added the requirement to chart geographic coordinates and enroute chart references on fixes and NAVAIDs. At the time, this information was needed because pilots had to manually enter this information. Since Flight Management System (FMS) technology has made this no longer necessary, Terminal Charting would like to update the specifications and remove this unnecessary information from the charts. She showed [sample charts](#) to demonstrate the reduction in chart clutter and asked if there is ACM support for this recommendation.

Rich Boll, NBAA, said that the inclusion of the geographic coordinates was intended to facilitate systems that relied exclusively on pilot-entered data to fly the procedures. This need has become increasingly rare, however, before this change moves forward, he recommends reaching out to MITRE to see how many Inertial Navigation System (INS) aircraft are still flying in the National Airspace System (NAS). He also pointed out that if the FMS goes down, a pilot flying a non-RNAV SID could possibly need the coordinates. He does not agree with taking the coordinates off the Enroute charts. He does support taking the coordinates and enroute references from SIDs and STARs depending upon the number of INS aircraft currently existing in the NAS. Valerie Watson, FAA/AJV-A250, said she will contact MITRE regarding remaining INS aircraft.

John Collins, ForeFlight, said he is opposed to removing the coordinates because they are used to confirm that the FMS database is up to date. He said he does support the removal of the Enroute chart references. John Barry, FAA/AIR-622, agreed with John and thinks the coordinates are still needed as a means to verify that what is in the database hasn't changed. Cameron Korrekt, NGA, pointed out that the currency of the FMS data can be

verified by using the procedure effective date that is published on the chart. Rich Boll agreed and explained that procedure effective dates were added to charts for this very reason. John Collins then agreed that the procedure amendment date can be used for verification and the coordinates and chart reference identifier aren't needed.

Dan Wacker, FAA/AFS-420, asked about the history of why this information was originally added to the charts. Valerie said it was because in the '80s pilots had to manually enter the information, which is no longer the case. Dan also questioned if the military would be in support of the recommendation. Valerie stated that if the specification change to remove the coordinates were to be proposed, it would be fully vetted through the military for their concurrence.

Sheri Ehrenborg, IPA/UPS, agrees with taking off the coordinates and chart references. She said she recently polled the military and they did not identify any aircraft not using GPS. Gary Fiske, FAA/AJV-P310, said he also supports elimination the coordinates and chart references, as did Mike Crim, GA pilot, and John Moore, Jeppesen.

Bill Tuccio, Garmin, suggested removing the items from the charts, but creating a new publication that contains the geographic coordinates for all the fixes and NAVAIDs in the U.S. NAS. John Collins voiced he also thinks a separate document containing the coordinates would be useful. Steve Madigan, Garmin, said this data is readily available and if needed, such a document could be easily parsed from the National Airspace System Resource (NASR) fix subscriber file.

Mark Mentovai, Manhattan Flight Club, said the electronic flight bag (EFB) should make it easy for a pilot to verify a procedure even if the FMS database is out of date. Mike Crim agreed and said pilots can easily look up the latitude/longitude during preflight, plus the coordinates are already available on the FAA website. He thinks a separate file is excessive. Valerie agreed and thinks the procedure effective date can be used to verify whether their database is up to date or not. There seemed to be consensus.

Aaron Jacobson, Jeppesen, said Jeppesen removed the geographic coordinates a while back and have received no complaints.

Valerie summarized that since the charts contain a procedure effective date to allow pilots to confirm their database is up to date, there is no disagreement from the ACM audience for removal of the coordinates. There also is consensus agreement for removal of enroute references. She confirmed that she will first reach out to MITRE to see how many aircraft still need the geographic coordinates and will report the numbers to Rich and to Flight Standards. If Flight Standards approves, she will then draft an Interagency Air Committee (IAC) specification change.

**ACTION:** Valerie Watson, FAA/AJV-A250, will reach out to MITRE to determine the number of aircraft that are still dependent on the charting of geographic coordinates on SIDs and STARs.

**ACTION:** Krystle Kime, FAA/AJV-A222, will draft an Interagency Air Committee (IAC) specification change to remove geographic coordinates and enroute references from SIDs and STARs after the above step has been accomplished and the results are acceptable to Flight Standards.

## VI. Outstanding Charting Topics

### [17-02-314 Charting of ILS Classification System for Category I ILS Approaches](#)

Mike Melssen, FAA/AFS-410, reported that his office is working on a rewrite of the Aeronautical Information Manual (AIM) Chapter 1-1-9, which discusses Instrument Landing System (ILS) operations. The main focus is on critical area protection to ensure it is in line with FAA Order 7110.65. He said they are looking at adding a link to the [ILS Procedures & Components List](#) in the AIM during the rewrite. He also reported that a Safety Alert for Operators ([SAFO 21004](#)), was published for Air Traffic Control (ATC) notification and pilot awareness when conducting an ILS Autoland Procedure. He said Flight Standards was considering doing a Safety Risk Management Panel about multipath issues, but it is undetermined yet if that will move forward. Flight Standards will consider adding language to Advisory Circular (AC) 120-118, but that will not happen until after the AIM update.

Mike Stromberg, UPS/IPA, said he still believes his original request to add the information about ILS Classifications Codes that is currently published in the Chart Supplement legend into the AIM would be helpful. Mike Melssen said his office can take another look at the recommendation. Valerie Watson, FAA/AJV-A250, said if AFS determines that the guidance can't be published in the AIM, it may still need to be added to the AC.

#### **STATUS: OPEN**

**ACTION:** Mike Melssen, FAA/AFS-410, will report on the effort to publish Category I Autoland guidance in AC 120-118.

**ACTION:** Mike Melssen, FAA/AFS-410, will report on the rewrite of AIM Chapter 1-1-9 and the addition of a link to the [ILS Procedures & Components List](#).

**ACTION:** Mike Melssen, FAA/AFS-410, and Flight Standards will reconsider the original proposal to add the information about ILS Classifications Codes that is currently published in the Chart Supplement legend into the AIM.

### [18-01-323 Standardizing the Labeling of Parking Areas on Airport Diagrams](#)

Jim McClay, AOPA, reported that not much has changed since the last ACM. AOPA is continuing to encourage airports to adopt the ACM-supported terms voluntarily, and a few more airports have, but in order to get wider adoption they need the FAA to standardize the terms. Jim reported that the FAA Office of Airports said the decision to standardize the terms is not in their purview. They said the labels need to be adopted in the Interagency Air Committee (IAC) Specifications first, but in order to do that the terms need to be added to the Aeronautical Information Manual (AIM) and it is unclear how to make that happen. Jim said AOPA would like to keep this item open at least until the next ACM to see if the FAA can find a way forward.

Valerie Watson, FAA/AJV-A250, agreed that the only way to mandate use of these parking terms in IAC 4 is to first get them added to the AIM. Valerie said she and Rune Duke, FAA/AFS-001, requested the terms be added to the AIM a few years ago, but the AIM office would not accept them unless the Office of Airports first sanctioned them. The AIM Office explained that FAA Charting offices are not authorized to create standardized terminology

for airports and that responsibility rests with the Office of Airports. Unfortunately, the Office of Airports was not in attendance during this discussion. Valerie expressed her frustration that what seems a simple and useful standardization of airport terminology that has overwhelming pilot support should be so difficult to accomplish. She said she is willing to leave the issue open, but said they will need cooperation from the Office of Airports. She said she would work with Jim on that effort.

**STATUS: OPEN**

**ACTION:** Valerie Watson, FAA/AJV-A250, and Jim McClay, AOPA, will continue to coordinate with the Office of Airports to sanction use of the proposed terms and to update relevant guidance/documents.

### **[18-02-327 IAP Chart Modernization](#)**

Jeff Rawdon, FAA/AFS-420, reported that Rich Boll, NBAA, finalized the IAP Chart Modernization Working Group [recommendations](#) and submitted them to Flight Procedures and Airspace Group (FPAG), where they are currently under review. He expects FPAG will initiate an agency workgroup to determine the next steps.

Valerie Watson, FAA/AJV-A250, asked whether FPAG is likely to initiate a Safety Risk Management Panel (SRMP) review of the proposal. Jeff said if the proposal moves forward, he expects that they would conduct an SRMP since there are so many charting changes with this recommendation.

**STATUS: OPEN**

**ACTION:** Jeff Rawdon, FAA/AFS-420, will report on the Flight Procedures and Airspace Group review of the IAP Chart Modernization Working Group Recommendations.

### **[19-01-331 Hotspot Information on Departure/Arrival Charts](#)**

Rich Boll, NBAA, [briefed](#) the status of this issue. He said in late 2021, Air Traffic Safety concluded the safety study associated with the RUUDY DEPARTURE at Teterboro Airport (TEB). It was found that the procedure has since been improved and that improvements will continue to be made as needed, both to the procedure and to operating processes. Rich reported the number of pilot deviations has dropped. It was reported that the FAA will continue to monitor the RUUDY Departure. As a result, Flight Standards does not support publication of either an Attention All Users Page (AAUP) or an Alert Notice for this location. Rich said without Flight Standards concurrence it would be difficult to move forward with a charting solution so he recommends closing this issue. He said he will keep an eye on this location and if a safety case emerges, he may look to readdress the issue. He said he reached out to the original proponents of this item and no comments were received. There were no audience objections to closing.

**STATUS: CLOSED**

#### **Addendum to 19-01-331:**

During the discussion of [20-02-345 Wrong Surface Hot Spots](#), Rich pointed out that in past issues, the use of a test was rejected because it was the FAA's policy that the NAS not be used as a test arena. If running tests in the NAS is now acceptable as FAA policy, based on the precedent set in the handling of the Hot Spot issue, Rich

would like to leave open the possibility to have the FAA reconsider adding a test Attention All Users Page (AAUP) at Teterboro (TEB).

### [19-01-332 Charting Waypoints with Both Fly-Over and Fly-By Functions](#)

Joel Dickinson, FAA/AFS-410, reported that the agreed upon [revised language](#) was published in the December 2021 edition of the Aeronautical Information Manual (AIM).

Krystle Kime, FAA/AJV-A222, said she wanted to share some [examples](#) of procedures where the rules for depicting Fly-over (FO) and Fly-by (FB) are not clear for charting. She explained that in the first example, there is a holding waypoint that is designated elsewhere on the procedure as both FO and FB for reasons other than holding. She asked the audience if they would prefer that the holding waypoint be charted as FO or FB. She would like to understand what pilots would like to see in such cases and then improve the language in the specifications to ensure they are charted consistently.

Valerie Watson, FAA/AJV-A250, said it is understood that in the Flight Management System (FMS) the waypoint will be depicted as it is coded for the segment that is being flown. This question is strictly about how it should be shown on the paper chart.

Rich Boll, NBAA, said it doesn't matter how it is charted. Each FMS will depict it differently and that explanation is documented in the Aeronautical Information Manual (AIM). Bill Tuccio, Garmin, said he thinks they should be charted as FB as they are shown in the examples. He said the pilot will have been trained how to use them. Rich agreed and said it should only be charted as a FO of that is the only use of that point.

Diane Adams-Maturo, FAA/AFS-420, said FAA Order 8260.19 states the following, "Although designated as a FO waypoint in the section of the form, a holding waypoint will normally be charted as a FB waypoint. It will be charted as a FO waypoint only if it is the same waypoint designated as a FO on some other part of the procedure." Valerie said the order language would need to be changed to say something like "only if it is used as a FO in all other aspects of the procedure." If there is agreement that such waypoints should be charted as FB in these cases, the specifications and the language in the 8260.19 will need to be updated or eliminated. Krystle said she doesn't think many charts will need to be revised since she believes that most are already charted as a FB. Jeff Rawdon, FAA/AFS-420, said he thinks the Flight Procedures and Airspace Group (FPAG) needs to take another look at the guidance in the 8260.19. He is not sure why the Order is addressing charting.

Bennie Hutto, NATCA, said that from an Air Traffic Control (ATC) perspective, he would want to give the pilot flexibility and agrees such waypoints should be charted as a FB.

John Moore, Jeppesen, said he thinks it would be confusing to show a waypoint as a FO when it is not one in all cases.

Rich said holding pattern guidance has been revised to address the fact that every FMS may handle them differently. If the fix is a FO 100% of the time it should be charted as a FO. Otherwise, it should be charted as FB. It is incumbent on pilots to understand it can be charted either way even if their FMS shows it one way. He said he would like to like to add an additional note in the AIM telling pilots to look at the holding pattern chapter on

how RNAV systems fly holds. He thinks this should be done regardless of the results of this discussion. Rich said he will speak with Joel Dickinson, FAA/AFS-410, about that update.

Mark Mentovai, Manhattan Flight Club, asked if a new symbol could be used to convey the waypoint's joint FO/FB status. John Collins, ForeFlight, pointed out that there are 6000+ RNAV procedures that are depicted this way, so if you change anything, it will affect a lot of charts. Bill Tuccio and Rich said they do not support creating a new symbol.

Valerie summarized this group agrees with the way FO/FB waypoints are charted today. FPAG will first take a look at the 8260.19 language to determine what needs to change in the Order. After the FPAG makes their determination, Valerie will process an Interagency Air Committee (IAC) specification change to make it clear that FO waypoints will only be shown if designated as a FO (and only as FO) in all other aspects of the procedure.

**STATUS: OPEN**

**ACTION:** Diane Adams-Maturo, FAA/AFS-420, and the Flight Procedures and Airspace Group will review FAA Order 8260.19 to determine if any changes need to be made to the FO/FB waypoint guidance.

**ACTION:** Krystle Kime, FAA/AJV-A222, will process an IAC Specification change if/when FAA Order 8260.19 is changed to ensure the charting guidance is consistent.

**[19-01-333 LED Lighting at Airfields](#)**

Matt Harmon, FAA/AFS-410, reported the project to collect LED lighting information is gaining traction. He said FAA Form 5010 (Airport Master Record) and the Airport Data and Information Portal (ADIP) will be updated to collect and reflect LED lighting information. Advisory Circular (AC) 150 is being updated to add LED lighting to the airfield approach lighting requirements to explain how they will be collecting that information.

Aaron Jacobson, Jeppesen, asked if they are still planning to update the lighting symbology to indicate LED lighting as was briefed originally. Matt said there is no consensus yet about how it will be charted, but he does expect that it will be graphically depicted. Valerie Watson, FAA/AJV-A250, said the first step is securing the source, then it must be determined how the data will be stored in the National Airspace System Resource (NASR) database. Then we can look at where and how LED lighting will be shown on/in the products.

**STATUS: OPEN**

**ACTION:** Matt Harmon, FAA/AFS-410, will continue to work with the Office of Airports, FAA/AAS-100, to secure a source for the LED data and will report back at the next ACM.

**[19-01-335 Charting of Unusable Airway Segments](#)**

Jeff Rawdon, FAA/AFS-420, reported that his office has been meeting with Aeronautical Information Services on this issue. He said there are three ways unusable airway segments are identified: 1) conventional airway segments charted with the unusable symbol, 2) airway segments made unusable by a Temporary Notices to Air



Missions (T-NOTAM), and 3) notes on airway segments that say “unusable except” in certain cases. The first two are acceptable, but the notes are not.

Jeff explained that the exception notes were charted because they were requested by Flight Inspection and documented on FAA Form 8260-16. He said he is seeking Flight Standards approval to issue T-NOTAMs to cover the exception notes so the charted notes can be removed from the 8260-16 forms and thus the charts. They will also need to work with Flight Inspection to make sure they don’t continue to add any new notes to 8260-16 forms in the future. Jeff said Flight Standards is also investigating the possibility of removing the charted unusable segments entirely via rule making. He said his office will continue to work these issues.

Valerie Watson, FAA/AJV-A250, asked when and under what circumstances a radial would be designated as unusable. She said there is not clear guidance in FAA Order 8260.19. Jeff said they will continue to investigate that as well.

John Collins, ForeFlight, said with regard to removing the unusable segments, when pilots file airways that have gaps in them, ERAM doesn’t accept across the gap and the pilot will get an error in their flight plan. He said it is important that the pilot is able to identify the gap information. Jeff said he understands the difficulty and will take that into consideration.

Johnnie Baker, FAA/AJV-A441, reported that he and Jeff met recently and plan to amend the seven airways that have the RNAV exception note. He also shared that, as a result of the VOR MON program, some of those airways may already be scheduled for cancelation.

**STATUS: OPEN**

**ACTION:** Jeff Rawdon, FAA/AFS-420, will report on investigation and discussions internal to the Flight Procedures and Airspace Group (FPAG) and with Aeronautical Information Services (FAA/AJV-A) to resolve existing issues related to unusable airway segments/routes/radials and investigate potential criteria and pilot guidance updates.

**[19-02-341 Review of Mountain Passes on VFR Charts](#)**

Tom George, AOPA, [briefed](#) this issue. He said the workgroup focused on (1) removing unsafe/unused mountain passes from the VFR charts, (2) identifying mountain passes that should be charted, and (3) establishing collocated checkpoints/VFR waypoints that will improve identification/location of mountain passes.

He reported that two Alaska Brooks Range passes were added to the Sectionals on March 24, 2022. One pass was removed and outreach has begun in Alaska to advertise the changes.

Tom said the next step is the approval and publication of the Joint Order 7210.3 policy change for the application of VFR Waypoints with respect to mountain passes. Once that is complete, requests can be made for new VFR waypoints/checkpoints and they can begin to publicize a process for submitting requests to add or delete mountain passes moving forward.

Gary Fiske, FAA/AJV-P310, reported the 7210.3 policy change is out for coordination and is due back on May 29, 2022. He said they are on track to publish in November.

**STATUS: OPEN**

**ACTION:** Tom George, AOPA, will report on progress of the Mountain Pass Working Group at the next ACM.

**[20-02-345 Wrong Surface Hot Spots](#)**

Note: The original proponents of this issue, Giovanni Dipierro and Ray German from the FAA Runway Safety Program Office (AJI-14) were not in attendance at this or the previous meeting.

Jeff Rawdon, FAA/AFS-420, [briefed](#) the audience on the proposal to publish wrong surface hot spot Arrival Alert Notices and associated Airport Diagram wrong surface symbology. He shared that Flight Standards initially submitted a non-concur to the Safety Risk Management Document (SRMD) proposing this publication strategy. However, after Flight Standards division management met with Runway Safety, they agreed to withdraw the non-concur to allow the program to proceed as a one-year test. Flight Standards collaborated with Runway Safety in order to provide the authorization for Aeronautical Information Services (AJV-A) to publish test Arrival Alert Notices and specific wrong surface hot spot symbology at 11 airports outside of Interagency Air Committee (IAC) Specifications. Flight Standards issued a memorandum authorizing AJV-A to (a) publish Arrival Alert Notices (AANs) for the 11 test airports in the Chart Supplement and, (b) depict associated wrong surface “cylindrical” hot spot symbology on applicable Airport Diagrams. The test will begin with the 19 May 2022 publication date. An IAC specification change proposing permanent and NAS-wide wrong surface hot spot symbology has been proposed.

The test publication is authorized for the 11 airports indicated on [slide 4](#). [Slide 5](#) is an example of an AAN. The relevant hot spots are depicted on the AAN, which includes descriptive text to explain the issue at that location. A note in the Airport/Facility Directory (A/FD) entry of associated airport will refer users to the AAN as shown on [slide 7](#). [Slide 6](#) shows the revised depiction of the wrong surface hot spots on the Airport Diagram. Wrong surface hot spots will be identified with a cylindrical symbol at the ends of the runways to refer users to the Hot Spot Tabulation for a detailed description ([slide 8](#)). Jeffrey Lamphier, FAA/AJV-A240, reported no new hot spot descriptions were received for the 11 test airports.

Jeff reported that Runway Safety has initiated community outreach including updates to the Runway Safety website, podcasts, YouTube videos, From the Flight Deck (FTFD) videos, etc. Flight Standards will soon be issuing an Information for Operators (InFO) to describe the specifics of the test. Jeff explained that six months after the initiation of the test, Runway Safety and Flight Standards will conduct a review of the test progress. If success is demonstrated, the offices will work together to determine the next steps in pursuit of permanent implementation.

To submit feedback on the test publication of wrong surface hot spot Arrival Alert Notices and associated Airport Diagram symbology, visit the following website and click the feedback link at the bottom of the page: [https://www.faa.gov/airports/runway\\_safety/](https://www.faa.gov/airports/runway_safety/).

John Collins, ForeFlight, asked if the reference to the AANs in the A/FD could be a hyperlink. Valerie Watson, FAA/AJV-A250, responded that the Special Notice reference in the Airport Remarks is the current method that is used to alert pilots that such notices are published in the back of the Chart Supplement. She understands that a hyperlink would be helpful, but AJV-A is unable to provide that at this time.

Rich Boll, NBAA, asked what metrics the test is going to use and how success will be measured. Jeff said Runway Safety is putting the criteria together and will continue to monitor runway safety concerns. The 11 airports are known to have fairly regular runway confusion issues, so success would be a quantifiable decrease in the number of such instances. They also want to gather pilot feedback. Rich asked if Runway Safety is planning to follow up with these 11 airports or query the operators at those locations regarding the usefulness of the changes before opening this up to wider use in the National Airspace System (NAS). Jeff said Runway Safety focused on these 11 because they are the airports with the most concerns and any future addition of airports to this program would be identified by Runway Safety based on safety data.

Jim McClay, AOPA, stated that AOPA does not have concerns with the new AANs, but rather with the changes to the Airport Diagrams. He said AOPA is concerned with the way this issue was pushed forward over unanimous objections raised at ACMs 20-02 and 21-01. He expressed concerns with the precedent this sets with the way issues are raised and audience objections are ignored. Jim also said he has concerns about the terminology that is being used. "Misalignment risk" is not the same as "wrong surface" and AOPA feels they should be defined and handled separately. He thinks these issues should have been addressed before the initiation of this test because it will now be much more difficult to readdress these concerns later.

Mike Stromberg, IPA/UPS, asked what Jeppesen/third party providers will do with the test hot spot information. Jeff Rawdon explained that this test will be conducted via FAA-produced Arrival Alert Notices and Airport Diagrams. He explained an IAC Requirement Document (RD) specification change proposal has been submitted for wrong surface hot spot changes, but has not yet been approved. The RD would formalize the test aspect discrimination between "Ground Movement Hot Spots" and "Wrong Surface Hot Spots". The RD specifies that Ground Movement Hot Spots are to be shown by circles or ovals and Wrong Surface Hot Spots are to be shown by cylinders.

Aaron Jacobson, Jeppesen, said he agrees with what Jim McClay said about how this issue was handled by Runway Safety in light of previous ACM discussion. He said his offices have concerns regarding the terminology and with including approach/arrival information on Airport Diagrams. He said Jeppesen will not make any changes in response to the test, but will follow the FAA's guidance on any permanent specification changes. Jeff said Runway Safety should be able to report on the success of the test by the next ACM and could then pursue more permanent and NAS-wide changes in place. Valerie pointed out that permanent changes are still contingent on approval of the IAC specification change.

Mike Crim, GA pilot, asked if the new wrong surface hot spots should be more clearly distinguished from a regular hot spot by labeling or naming them something other than a hot spot. Valerie said the decision was made by Runway Safety to call out the wrong surface hot spots by depicting them with a cylindrical shape and by publishing the associated AANs. Mike pointed out that the shape difference between a cylinder and an ellipse is very subtle and an education piece is going to be very important if pilots are expected to notice the distinction. Jeff said the information about the changes to the shapes will be in the InFO and if eventually

approved, in the Aeronautical Chart Users' Guide. He encouraged Mike to also provide his feedback through the Runway Safety feedback link.

Mike Stromberg asked if the AANs will be available for third party providers to publish in their electronic applications. He pointed out that Runway Safety needs to track what charts (FAA or 3<sup>rd</sup> party) were being used during this test period. They will need to determine if an increase or decrease in runway incidents is experienced by actual users of the test material or is unrelated to use of that material. He voiced that because many pilots will not be using the FAA publications, success determinations may prove difficult. This is essentially only a test for users of FAA products and Runway Safety's success data will need to account for that.

Rich pointed out that in past issues, the use of a test was rejected because it was the FAA's policy that the NAS not be used as a test arena. Because, based on the precedent set in the handling of this issue, if running tests in the NAS is now acceptable as FAA policy, he would like to leave open the possibility to have the FAA reconsider adding a test Attention All Users (AAUP) at Teterboro (TEB) for ACM issue 19-01-331.

John Barry, FAA/AIR-622, pointed out that what is being called a cylinder is actually a racetrack symbol. He thinks making that small change to the terminology might help alleviate some of the confusion. Valerie agreed that "cylinder" is normally understood to be a 3-dimensional figure and that perhaps better terminology could be used. She asked John to provide this input through the Runway Safety feedback link. Jeff said the issue of the symbol name has been discussed, however since "cylinder" was used in the SRMD, Runway Safety didn't want to change the terminology.

John Collins, ForeFlight, said most pilots that look at the Airport Diagram example ([slide 6](#)) would not notice that there is something new or different about it. He also doesn't think they'll go into the A/FD to look for the AAN. He suggested that something more should be added to the Airport Diagram to alert pilots to the wrong surface concern.

John Moore, Jeppesen, stated that documented concerns that will be published in the ACM minutes should go to Runway Safety and attendees should not have to separately submit feedback to their website. He voiced disappointment that Flight Standards and the charting offices have allowed Runway Safety to drive these changes through. He repeated others' concerns about the NAS being used as a test arena. He voiced he doesn't understand why the FAA would do a public test in the NAS instead of running it through the Department of Transportation Volpe Center for human factors testing. He pointed out that Runway Safety needs to attend the ACM to hear the concerns being raised. (As mentioned, no representatives of Runway Safety have attended since April of 2021.) Kevin Allen, American Airlines, agreed that Volpe should conduct a safety analysis before the FAA proceeds with this test. Jeff said that there have been no concerns that this test will have any impact on flight safety. No information is being taken away, but additional information is being provided with the AANs and the added symbology. Valerie said in defense of the charting office, a test like this has never been done before and concerns were raised by her organization, however AJV-A has been directed by Flight Standards to run the test so users can expect it to begin with the May 19 chart cycle. John said he thinks it is incumbent on the chairs of the ACM to engage with the Runway Safety office regarding the ACM's feedback. Jeff agreed and said that those conversation will occur.

Bill Tuccio, Garmin, agrees that Runway Safety should be participating in this meeting, but he also expressed that he thinks this is a reasonable effort by the FAA and does not think it compromises safety.

Rich Boll, NBAA, agreed with John Moore and thinks it is disappointing that Runway Safety and Flight Standards did not take the advice and input of the ACM participants into account. He also pointed out that he has often raised the issue of the proliferation of hot spots in the NAS. He asked if any work is being done to remove unnecessary hot spots. Valerie said Runway Safety had committed to looking into removing unnecessary hot spots at a previous ACM, but that is not part of this effort.

Mark Mentovai, Manhattan Flight Club, thinks if this is being viewed as a test, which is without precedent, the FAA will not get valuable data since no one knows the test is being conducted. Pilots won't notice that anything on the chart has changed. The sample size of both airports and operators is too small. The FAA has done the test a disservice by conducting it this way and Mark doesn't think the FAA will get statistically significant data. He expects the data will show something should be changed, but if so how will those changes and follow up testing be done? Testing on the flying public without notifying them of the changes will not elicit solid test results. If the FAA truly wants to assess a positive safety impact, a proper test needs to be conducted.

Bill Tuccio pointed out that Runway Safety has not communicated that these changes are part of a test in any of the guidance on their website. Valerie said Charting and Flight Standards pointed that out to Runway Safety. She reiterated that regardless of the absence of clarification by Runway Safety that this is a test, charting is proceeding based on a signed memorandum from Flight Standards that only authorizes the charting changes for the 11 airports for a test period of one year.

Aaron Jacobson, Jeppesen, asked if there is criteria that identifies a wrong surface risk. He is concerned that once these hot spots are in use, they will start to proliferate. Jeff stated he is not aware of documented criteria for what constitutes a wrong surface risk. He repeated his belief that widespread proliferation of wrong surface hot spots is not expected to occur. He stated Runway Safety is only planning to roll this out to airports with recurring documented problems determined based on a threshold of incidents.

Mark Mentovai suggested consideration of issuing a Charting Notice that includes language that makes clear the changes are a test. Jeffrey Lamphier said that was not part of the test plan. He said they discussed it but it was not considered necessary and the InFO was the agreed upon mechanism for public notice of the test. Valerie said AJV-A has the freedom to issue a Charting Notice to communicate the same information that is to be included in the InFO. Jeff Rawdon agreed but said Flight Standards would have to approve the language of the Charting Notice. Jeff Rawdon will share the InFO language and work with and Jeffrey Lamphier to draft a Charting Notice.

Valerie summarized that the test will begin with the 19 May 2022 publication date at the 11 airports identified. There is a permanent specification change proposal that has been submitted to the IAC and she will report on its status at the October ACM, but would not expect either acceptance or rejection of the proposal until test results have been assessed and published. She expects Runway Safety will be at the next ACM to report on the test progress. She asked the audience again to communicate their concerns directly to Runway Safety via the feedback link on their website. She also repeated Jeff Rawdon's commitment to communicating the concerns expressed at this meeting to Runway Safety when he meets with them.

**STATUS: OPEN**

**ACTION:** Jeff Rawdon, FAA/AFS-420, and Jeffrey Lamphier, FAA/AJV-A240, will collaborate on the publication of a Charting Notice to announce the initiation of the Wrong Surface Hot Spot Arrival Alert Notices and Associated Airport Diagram Symbology test.

**ACTION:** Jeff Rawdon, FAA/AFS-420, and Runway Safety, FAA/AJI-141, will provide an update on the test of Wrong Surface Hot Spot Arrival Alert Notices and Associated Airport Diagram Symbology.

**ACTION:** Valerie Watson, FAA/AJV-A250, will report on the proposed Interagency Air Committee (IAC) specification change for the wrong surface hot spot symbology.

### **20-02-348 NASR Improvements for ARTCC/RCAG Frequencies**

Brian Murphy, FAA/AJV-A350, reported that the National Airspace System Resource (NASR) improvements to the databasing of Air Route Traffic Control Center (ARTCC) frequencies is still planned to be included in the large database revision planned for 2023. In the meantime, the Aeronautical Data Team (ADT) created an FRQ.csv file, which consolidates all frequency information from the NASR subscriber files. Brian said the FRQ.csv files have been available for about six months now and he hopes that they are useful. He also said they have added additional CSV files to the original output.

Steve Madigan, Garmin, thanked Brian for putting out the CSV files, stated that they are extremely useful and asked if they can be used as legal source. Brian said if they are posted on the AJV-A website, they are official source. There shouldn't be any data found in the CSV files that isn't in the legacy text files.

Mark Mentovai, Manhattan Flight Club, asked why the CSV file has to be downloaded separately. Brian said he can take that recommendation back and consider adding the CSV files to the ZIP file for the legacy information.

Steve asked if the intent is eventually to sunset the text files and replace them with the CSV files. Brian said there is no plan to get rid of the legacy text files at this point.

### **STATUS: OPEN**

**ACTION:** Brian Murphy, FAA/AJV-A350, will report on the status of the request to improve the databasing of Air Route Traffic Control Center (ARTCC) frequencies in the National Airspace System Resource (NASR) database.

### **21-01-350 Holding Pattern Leg Lengths on Terminal Charts**

Jeff Rawdon, FAA/AFS-420, said the Flight Procedures and Airspace Group (FPAG) received data from the Aeronautical Data Team (ADT) regarding this issue, but that they still need to investigate this issue further to make a determination as to whether holding pattern leg lengths should be documented on all Departure and Arrival procedure source forms as Garmin proposed and as Jeppesen, AJV-A, and NBAA supported.

Scott Jerdan, FAA/AJV-A310, said ADT completed their review of all the holding pattern information in the National Airspace System Resource (NASR) database and are continuing to work on resolving the discrepancies.

Steve Madigan, Garmin, asked if they should report any discrepancies they find through the Aeronautical Information Portal. Scott said yes.

**STATUS: OPEN**

**ACTION:** Jeff Rawdon, FAA/AFS-420, and the Flight Procedures and Airspace Group will investigate the documentation of holding pattern leg lengths on procedure source forms and report back at the next ACM.

**[21-01-351 Non Air Carrier Runways in the Chart Supplement](#)**

Alberto Rodriguez, FAA/AAS-320, [briefed](#) the audience on the background of this issue and on the ongoing work of the Non-Air Carrier Runways working group. The Office of Airports is developing a requirement for Part 139 airports with non-Part 139 runways to report standardized remarks to identify the non-Part 139 runway(s) in the Airport Data and Information Collection Portal (ADIP), which will be reflected on 5010 forms. It is also recommended they be identified in the National Airspace System Resource (NASR) database and in the Chart Supplement airport entries.

Alberto explained that the FAA plans to use the 5010 to clarify the information. In the 5010 example on [slide 4](#), the location highlighted in green is where they intend to add an “Air Carrier Runway” field that will identify whether each runway is available for air carrier use. The information highlighted in red shows the current state of remarks identifying runways that are not available for air carrier use. They plan to remove these lengthy remarks once the new field is in use. [Slide 5](#) shows the new air carrier yes/no field that will be added to ADIP. [Slide 7](#) shows where the new “non-Air Carrier” remark is proposed to be added in the Chart Supplement airport entry. Alberto said the workgroup also discussed adding the information to airport diagrams. [Slide 9](#) shows an airport diagram with the proposed note to indicate runways that are not for air carrier use. He said an indication on the approach plates was also discussed but this was not supported by the workgroup.

Valerie Watson, FAA/AJV-A250, said if only runways that are not for air carrier use are identified, one could assume that every other runway in the National Airspace System (NAS) is for air carrier use. Alberto said this entry would only be used at certificated airports. Valerie said a pilot looking at the airport diagram doesn’t know if it is a certificated airport or not.

Dan Wacker, FAA/AFS-420, asked if there is an official FAA definition of what an air carrier is. Alberto said he doesn’t know what is in the Aeronautical Information Manual (AIM), but it is defined in 14 CFR Part 121 and 14 CFR Part 139. Dan asked whether large airplanes that are not “air carriers” can still use those runways. Alberto said the regulations apply to those certified as a Part 121 operators.

Mark Mentovai, Manhattan Flight Club, asked what the data in the airport entry of the Chart Supplement looks like when all the runways at an airport are not for air carrier use. Alberto said there would be nothing listed for non-certificated airports. Valerie asked how you know whether it is a certificated airport looking at the airport entry. Alberto pointed out that information is presently only shown in the airport remarks. Mark said if the plan is to annotate the runways in a structured fashion, they should also pull the “Class I” information out of the remarks in order to show the certificated status of an airport. Alberto said Part 121 operators are not looking in

the Chart Supplement for the certificated status of an airport. That is information they already have. Mark said his concern is for those operators using the Chart Supplement as their primary source.

With regard to the note on the airport diagrams, Mark said he thinks the note should be a graphical indication so as not to clutter the chart with additional notes. Alberto said the working group looked into using a symbol but they decided against that because of the education piece that would be necessary when introducing a new symbol. The note provides the information succinctly and directly. Mark pointed out that general aviation pilots won't understand what "Not for Air Carrier Use" means. He thinks a large education campaign will be needed either way.

Mike Stromberg, UPS/IPA, said his concern is that airlines don't use the Chart Supplement and by putting the information there, it won't reach the pilots who need it. He said it is also only a very small audience that would use it on the airport diagram. He thinks they should be targeting the providers of the performance information. Alberto said this information will be available in NASR subscriber files and 3<sup>rd</sup> party providers can package and distribute it as they see fit.

Rich Boll, NBAA, said NBAA will not concur with the proposed note "Not for Air Carrier Use" on the airport diagram. He said as it is written, it denies access to those runways to every Part 125 and 135 operator in the NAS. He thinks the note should specifically state "CFR 14 Part 121 Air Carrier Use". Alberto said they are still working to refine the language of the note. John Barry, FAA/AIR-622, suggested that the new airport diagram note should be included with the weight bearing information. John also agreed with Rich's comment that the note as it is written now will exclude too many airplanes.

Rich suggested a field at the top of the airport entry in the Chart Supplement be added to designate an airport as Part 139. Valerie said she agrees with that suggestion. She asked if a field to designate Part 139 airports exists in NASR. Brian Murphy, FAA/AJV-A350, said "ARFF Index" is a field that is present in NASR and in the subscriber files. Scott Jerdan, FAA/AJV-A310, said ARFF Index is already indicated at the top of the airport entry, which is defined in the Chart Supplement legend as indicating that it is a certificated airport (14 CFR Part 139). Colleen Kubont, FAA/AJV-A350, said in the NASR database there are three fields, one for the Part 139 type code, one for the Part 139 carrier certification code, and one for the ARFF certificate type date. Those attributes are put together for publication in the Chart Supplement. Valerie asked if this was not too complicated and perhaps there should be a simpler way to identify whether it is a Part 139 airport. If so, could that simpler designation be placed in the header of the airport entry?

Colleen said there is currently an open ticket for a NASR enhancement for adding a runway parameter for Part 139 airports called "Air Carrier Runway" that can be set to Yes or No. Valerie said if the note on the diagram is to be changed to "CFR 14 Part 121 Air Carrier Use", the database and Chart Supplement should be consistent with that. Colleen said this is different from the current requirement so they would need to revisit the NASR ticket. Valerie said the working group will first need to finalize the language that will be used and then bring that back to the group.

Jay Leitner, American Airlines, said he is fine with adding "Part 139" to the header of the airport entries, but he requests that the Class and ARFF Index entries remain.



Valerie summarized the discussion. She said there was general ACM support for adding some form of the Part 139 note to the airport diagram and to Chart Supplement runway entries, however the language on of the note still requires further investigation. There was also support expressed for adding a Part 139 indication to the heading of the airport entries in the Chart Supplement. The working group will continue to investigate these items.

**STATUS: OPEN**

**ACTION:** Alberto Rodriguez, FAA/AAS-320, will report on the progress of the Non-Air Carrier Runways Working Group as it continues to investigate the data and publication requirements for the identification of both Part 139 airports and runways.

**[21-01-353 Airport and Runway Lighting in the Chart Supplement](#)**

Jeffrey Lamphier, FAA/AJV-A240, briefed his team's investigation into the recommendation to consolidate airport and runway lighting into a single section within Chart Supplement airport entries. Jeffrey explained that the Chart Supplement is pulled together from a variety of sources and is put together in a desktop publishing application by a small team of employees. Some parts of the process are automated and other parts are manual. The Airport Remarks section is completely manual. To accomplish this recommendation, one third of the changes would be automated and two thirds of this effort would require manual movement of text and information. The team had several internal meetings on this effort and it was determined that they do not have the resources or the technology and automation capabilities at this time to accomplish it. All the information is already there in the airport entry and it would be a major impact to the organization to make this change.

Rich Boll, NBAA, thanked Jeffrey for evaluating the effort. He asked if there were any of the recommended changes that could be accomplished given the office's resources. Rich asked if requesting National Airspace System Resource (NASR) to better classify and organize lighting information and to make it more automated would make it easier for the Chart Supplement team to implement these changes in the future. Jeff said if NASR could be updated, it would help with automating the lighting elements in the Chart Supplement. Rich then asked about the PAPI lighting information that is currently found in both the Runways section and the Service section of the airport entry. He asked why PAPI lighting information is found in two locations and if they could be consolidated. Jeffrey said he would have to look at NASR to see where the PAPI source came from but he suspects it's because they came from different locations in NASR.

Scott Jerdan, FAA/AJV-A310, said this effort would be complicated and require research from the data side. He and Jeffrey haven't discussed the process from the data side, so he doesn't know what is manual and what is automated. He thinks the key factor for Jeffrey would be to determine if the build process could be done in a fully automated way. Scott said his team is also limited in what they can do in NASR. Rich asked if they could just split the lighting information out from the service section and make it into a separate lighting section above the Service section as an incremental improvement. Jeffrey said his team can investigate that.

Valerie Watson, FAA/AJV-A250, asked if it is possible to modify NASR so the remarks that are currently in all caps could be entered in sentence case so that translation would not need to be manually done and the remarks could be pulled directly from NASR. Scott said that could be looked into.

Valerie suggested the Chart Supplement Team and the Aeronautical Data Team commit to internal discussions about the placement of lighting information (data and the remarks referenced to them) in the NASR database. Scott said his team would investigate and see if a cleanup of the data is needed. This will require collaboration to determine what is desired and where the problems lie. He also committed to looking into the all caps issue. Scott recommended leaving this item open for his and Jeffrey's teams to look into lighting data/remarks placement in NASR and in the Chart Supplement. This investigation will include the recommendation to move the remarks to a pilot controlled lighting subcategory above the Service section.

**STATUS: OPEN**

**ACTION:** Jeffrey Lamphier, FAA/AJV-A240, will investigate the addition of a new subcategory for pilot controlled lighting information and report back at the next ACM.

**ACTION:** Scott Jerdan, FAA/AJV-A310, and the Aeronautical Data Team will investigate the placement of lighting remarks in NASR.

**ACTION:** Scott Jerdan, FAA/AJV-A310, and the Aeronautical Data Team will determine if remarks in NASR can be stored in upper/lower case rather than all caps.

**[21-01-354 Concurrent Operations with RF/TF Legs on IAPs](#)**

Rich Boll, NBAA, [reported](#) that at ACM 21-02 the working group received ACM Charting Group consensus to move forward with the proposal of charting two charts from a single procedure source document, identified with title suffixes Radius-to-Fix (RF) and Track-to-Fix (TF). Since the last ACM, the working group prepared a [set of recommendations](#) and posted them on the ACM Charting Group website for review. Rich said that pending ACM concurrence, the recommendations will be formally forwarded to the Performance Based Aviation Rulemaking Committee (PARC) Navigation Working Group for their review, acceptance, and incorporation into the full RF/TF Concurrent Operations recommendation.

Gary Fiske, AJV-P310, said he supports the proposal, but said he's never seen a procedure titled "RNAV (GPS)" that contains RF legs. They've always been titled "(RNP)." Rich agreed that though not common, it is allowable under current criteria to have an RF leg on an RNAV (GPS) approach. John Barry, FAA/AIR-622, pointed out that while not common on standard GPS approaches, RF legs have been used on Instrument Landing System (ILS) approaches. The key to the RF/TF two chart approach is that aircraft not RF-capable are still eligible to fly the TF version of the procedure. Bennie Hutto, NATCA, said he sees an issue with titling it an RNAV (GPS) procedure, when in reality it is a RNP APCH (Approach) according to International Civil Aviation Organization (ICAO) standards. Since more of these procedures with RF capability are coming, he supports changing the name to RNP APCH or RNP AR to match ICAO. Rich agreed that Aeronautical Information Manual (AIM) guidance will likely be necessary to explain the procedure titles, but clarified the U.S. is not yet moving to the ICAO titling standard.

Dan Wacker, FAA/AFS-420, asked if there is already criteria in FAA Orders 8260.3 and 8260.19 for these types of procedures or will those Orders need to be updated. Valerie Watson, FAA/AJV-A250, said those changes still need to be addressed. The PARC requested the ACM develop a charting recommendation first, which if approved by this audience will be forwarded to the PARC steering group for consideration. If the full PARC

recommendation is approved by the FAA, Flight Standards will then address the order changes and AJV-A will update the Interagency Air Committee (IAC) charting specifications.

Diane Adams-Maturo, FAA/AFS-420, said there will be a lot of underlying changes necessary if this recommendation goes forward. She explained that all procedure changes have to go to the Federal Register and the FAA will have to gain authorization for these procedures to result in two charts. Dan Wacker said the changes would be much simpler if both TF and RF operations could be depicted on a single chart. Valerie explained that this would follow the current standard for ILS Cat I and Cat II/III charting from a single 8260 procedure source document and that we have a precedent. She reiterated the ACM Charting Group was tasked to come up with a recommendation for the best depiction of RF/TF concurrent operations and the two chart solution was determined to be optimal. The working group was not asked to assess the ease of the processes required to arrive at that solution.

Charles Wade, Delta Air Lines, said Delta has already deployed this two chart solution on specials. Pilots receive both the RF and TF charts and it is only the selection in the database that is aircraft-specific. Charles explained they originally used the inset, but that resulted in too much chart clutter. He said the only difference is they don't use the TF title on the charts, but do use RF in the title of that version of the chart.

An informal poll of the audience was conducted and there was support for the two chart solution. The ACM audience also voted in support of forwarding the workgroup recommendations document to the PARC Navigation Working Group. Rich will take the recommendation to the PARC and this ACM issue can be closed.

**STATUS: CLOSED**

### [21-01-357 Single Direction Airways](#)

Rich Boll, NBAA, [briefed](#) on the issue of Single Direction (SLD) airways. See [slides 1-5](#) for a summary of this issue. Rich said the workgroup agreed that in the U.S. there are no true Single Direction Airways. The arrows on the airways/routes on enroute charts in the U.S. indicate preferred directionality NOT a directional restriction. This means the directionality of these airways/routes should continue to be documented in the Preferred Route resource of NASR. Database providers need to understand that preferred route directional data is not a restriction and flight plans need to be able to be filed in the opposite direction. Rich reported that the workgroup is developing guidance material for the navigation database providers so they do not include directional restrictions as part of the ARINC 424 airway coding. The group is also working on developing flight planning provider guidance and pilot/operator guidance.

Diane Adams-Maturo, FAA/AFS-420, said she is part of a workgroup that is working on related airway issues. This group is sending several items to the FAA Office of General Counsel regarding old airway criteria. She also said preferred routes are not necessarily airways and don't fall under Part 95. They are only contained in the preferred route database, they are not regulatory, and they are the only U.S. routes that have directional statements. Rich agreed and said that is why they need the educational piece to solve this problem. Valerie Watson, FAA/AJV-A250, agreed and said this issue has been misunderstood for years, so she supports the work group's plan to use all outreach tools available to clarify this issue.

Curtis Davis, FAA/AJV-A311, said some of the older offshore non-regulatory ATS airways were published in the National Flight Data Digest (NFDD) with directionality but were not stored in the National Airspace System Resource (NASR) database. They are captured in National Geospatial-Intelligence Agency's (NGA's) Digital Aeronautical Flight Information File (DAFIF) with directionality. He thinks that for consistency, all the airways should be published with directionality using preferred route database. Cameron Korrekt, NGA, said the military doesn't have the capability in DAFIF to differentiate a preferred direction. He said they are coding them as single directional airways. Scott Jerdan, FAA/AJV-A310, stated DAFIF is not an authorized source for domestic charting information. He believes the focus should be on the source for FAA products and the charted result of that source. Curtis said there are several airways offshore that have directionality and the directionality is sourced with an airway remark. Scott clarified those are non-regulatory Air Traffic Services (ATS) routes 12 nautical miles offshore and that Diane is addressing those non-regulatory routes as part of her working group. He asked Curtis to look at the non-regulatory ATS routes with directionality and ensure they are databased in NASR consistently with the intent of their use. Rich said now that he knows what Diane's group is working on, he thinks this working group should concentrate on the FAA preferred routes and communicating that they need to be coded in such a way that they can be flown in either direction

Gary Fiske, FAA/AJV-P310, agreed and said he thinks this is being overanalyzed and the issue is simply that guidance is needed to ensure that the FMS database providers are not coding these routes with directionality. Valerie agreed and said Rich is working to provide that education piece to the navigation database providers.

Valerie said she also had an action from the last ACM to research if the U.S. should file a difference to International Civil Aviation Organization (ICAO) Annex 4 with regard to the charting of preferred directionality. She said ICAO documentation states for airways/routes "any limitations in the direction of traffic flow" should be charted. She said direction is charted, but it is not a mandatory traffic flow and is clearly indicated as preferred on the chart legend. She doesn't think this constitutes a difference, but said she can file a clarification the next time IACO Annex 4 is reviewed.

**STATUS: OPEN**

**ACTION:** Rich Boll, NBAA, will report on the progress of the Single Direction Airway Working Group at the next ACM.

**ACTION:** Curtis Davis, FAA/AJV-A311, will ensure non-regulatory ATS routes with directionality are correctly represented in NASR.

**ACTION:** Diane Adams-Maturo, FAA/AFS-420, will report on anything relevant to this discussion that arises from the airway workgroup she is part of.

### [21-01-361 Alternate Minimums in the TPP](#)

Valerie Watson, FAA/AJV-A250, reported that the updated introductory text for the Alternate Airport Minimums section of the Terminal Procedures Publication was received from Flight Standards. The Interagency Air Committee specification change document has been approved and the [updated text](#) will be published with the 14 July 2022 effective date.

**STATUS: CLOSED**

### [21-02-362 Graphic Circling Restrictions on Instrument Approach Procedures](#)

Jeff Rawdon, FAA/AFS-420, reported that the ACM recommendation review group looked at this recommendation and agreed that the depiction of graphic circling restrictions on Instrument Approach Procedures (IAPs) could well be a useful safety improvement and is worthy of pursuit. The review group thinks the majority of circling restrictions would be well served with a graphic; however, there are some restrictions that would be difficult to handle as a graphic and may need to remain as notes. His office will investigate how the procedure source would need to change to support graphic circling depictions. Additionally, Jeff committed that the Flight Procedures and Airspace Group will also look into standardization of the current note format guidance in FAA Order 8260.19. He pointed out that there are likely a lot of circling restriction notes published that are based on older criteria, so individual restriction notes might not reflect what is currently in the criteria. He pointed out that if this does come to fruition, it will take a long time to implement and would be a day forward process as procedures are amended.

Valerie Watson, FAA/AJV-A250, concurred that some of these restrictions are complicated and might still be better served with a textual note. Krystle Kime, FAA/AJV-A222, committed to develop prototypes of a few complicated examples for the next meeting to show how those instances might be depicted.

**STATUS: OPEN**

**ACTION:** Jeff Rawdon, FAA/AFS-420, will report back on FAA Order 8260.19 changes necessary to support the graphic depiction of circling restrictions on Instrument Approach Procedure charts.

**ACTION:** Jeff Rawdon, FAA/AFS-420, will report back on the Flight Procedures and Airspace Group's work to ensure standardization of the current circling restriction note format guidance in FAA Order 8260.19.

**ACTION:** Krystle Kime, FAA/AJV-A222, will develop prototypes of complex graphic circling restrictions on Instrument Approach Procedure charts for review at the next ACM.

### [21-02-363 Simplification of Airport Sketch Final Bearing](#)

Kevin Carter, NGA, reported that the DoD has submitted a specification change to the Interagency Air Committee (IAC) for the simplification of the final approach into the airport sketch of instrument approach charts to only show the bearing. Valerie Watson, FAA/AJV-A250, said the IAC has received concurrence from Flight Standards and she is still finalizing AJV-A internal coordination. She explained that this is purely a charting

change and implementation does not require any changes to FAA Form 8260 or to the source data. She said concurrence is expected soon and she will then move forward with implementation.

**STATUS: OPEN**

**ACTION:** Valerie Watson, FAA/AJV-A250, will report on the status of the Interagency Air Committee (IAC) specification change for the simplification of the airport sketch final bearing.

**[21-02-364 Airport Sketch – Final Approach Track](#)**

Jeff Rawdon, FAA/AFS-420, said the ACM recommendation review group saw value in this proposal with minimal impact necessary to implement. There are concerns, however, that this change could introduce potential hazards. Pilots might be confused and think they have operational allowance to continue beyond the missed approach point even if they are not visual over the runway. The group feels a Safety Management System (SMS) review may be necessary before moving forward with this change. Jeff said Flight Standards will continue to investigate this issue with consideration of a future SMS review.

**STATUS: OPEN**

**ACTION:** Jeff Rawdon, FAA/AFS-420, will report back on the Flight Procedures and Airspace Group's continued investigation into the recommendation to show the final approach track extended in the airport sketch including a determination regarding a Safety Management System (SMS) review.

**[21-02-365 Add SSV Classification to IFR Low Altitude Enroute Charts](#)**

Valerie Watson, FAA/AJV-A250, reported that the Interagency Air Committee (IAC) specification change for the depiction of all VOR, VOR/DME, VORTAC, TACAN & DME NAVAID Standard Service Volume (SSV) designations on IFR Low and High Altitude Enroute charts has been approved. She clarified that this does not change the charting criteria for NAVAIDs, it only updates the SSV designations that are depicted in the NAVAID facility box. The specification change will be implemented on the 8 September 2022 effective date.

Aaron Jacobson, Jeppesen, asked if it is possible to have a VORTAC with the VOR portion extended and a legacy TACAN portion, i.e., (VH) (H). Dale Courtney, FAA/AJW-263, said that it is possible to have cases like that.

John Collins, ForeFlight, said he noticed some inconsistencies with how these have been charted thus far. Valerie said there were some issues with the initial implementation, however those should be resolved with the implementation of the current update.

**STATUS: CLOSED**

**[21-02-366 Chart Supplement Remarks in List Format](#)**

Jeffrey Lamphier, FAA/AJV-A240, acknowledged that this was an excellent recommendation, however the compilation of the Airport Remarks section of airport entries in the Chart Supplement is still a manual process and his team does not have the resources to move forward with the change at this time. If this section of the

Supplement were fully automated, Jeff suggested this proposal might be supported. He pointed out that the data is present in the entries, just not in the format desired. If this were a safety issue or a matter of missing data, the FAA would find funding to make the change.

Concerns were raised that there needs to be a long-term strategy to move away from manual compilation. Jeffrey agreed to take those concerns to his management.

Mike Stromberg, UPS/IPA, suggested moving forward with this item on a day forward basis. Jeffrey said his team can look into that option.

**STATUS: OPEN**

**ACTION:** Jeffrey Lamphier, FAA/AJV-A240, will investigate the level of effort required to revise the airport remarks in the Chart Supplement to a list format on a day forward basis.

**ACTION:** Jeffrey Lamphier, FAA/AJV-A240, will take the concerns raised regarding resource allocation to Chart Supplement automation to FAA/AJV-A management.

**[21-02-367 Improve NASR Storage of GCO Frequencies](#)**

Brian Murphy, FAA/AJV-A350, reported that this request will be part of the larger National Airspace System Resource (NASR) communications upgrade to that is planned for 2023. Steve Madigan, Garmin, reported that, in the meantime, the FRQ.csv file has been working well for their needs and thanked Brian.

**STATUS: OPEN**

**ACTION:** Brian Murphy, FAA/AJV-A350, will report back on the implementation of airport GCO frequencies in a dedicated field in the NASR database.

## **VII. Closing Remarks**

Samer Massarueh, FAA/AJV-A223, and Valerie Watson, FAA/AJV-A250, thanked the attendees for their participation and input to the issues discussed.

Notices of the official minutes will be announced via email and provided via the ACM website. The two website addresses (CG and IPG) are provided below:

- Charting Group – [http://www.faa.gov/air\\_traffic/flight\\_info/aeronav/acf/](http://www.faa.gov/air_traffic/flight_info/aeronav/acf/)
- Instrument Procedures Group – [http://www.faa.gov/about/office\\_org/headquarters\\_offices/avs/offices/afx/afs/afs400/afs420/acfi/pg/](http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs400/afs420/acfi/pg/)

Please note the attached Office of Primary Responsibility (OPR) listing for action items. It is requested that all OPRs be prepared to provide verbal input at the next meeting or provide the Chair, Valerie Watson (with an informational copy to Jennifer Hendi), a written status update. These status reports will be used to compile the minutes of the meeting and will serve as a documented statement of your presentation.

## **VIII. Next Meetings**

ACM 22-02 is scheduled for October 24-27, 2022, location TBD.

## **IX. Attachments**

- a. [22-01 Attendee Roster](#)
- b. [Office of Primary Responsibility \(OPR\)](#)