

## Taskforce Meeting #4

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# Southern Departure Procedure Task Force

Date: June 29, 2022

Time: 9 a.m. – noon

Location: The Wort Hotel – Jackson Room – 50 Glenwood St. Jackson, WY

## Agenda

The presentation will show the operational and noise analysis results through a series of questions and answers based upon information requested by the committee, as outlined below.

- What are the proposed flight procedure options?
- What altitude are aircraft flying today?
- What are the air traffic constraints with turning left?
- How would the noise change and what is the potential perception?
- What is the noise from an individual flight on each procedure?
- How would these options be studied in the Environmental Process?
- Summary and Next Steps

## Summary

Valerie introduced the meeting and the fact that the group will be going over a lot of technical information with the modeling of the noise for the various procedure concepts. Then Valerie introduced Bill as the facilitator, and Bill asked the taskforce to reintroduce themselves. All taskforce members were present.

Bill started by discussing the purpose of the meeting: to continue the analysis for the likely sound characteristics of the potential procedure concepts, including calculated noise levels and elevation of the aircraft above ground level (AGL) for various points located in the community and public lands. Questions for clarification will be taken throughout the presentation from the Task Force, but lots of time will be saved for discussion at the end of the presentation.

Bill reinforced that he felt it was also useful to remind people of the mission of the Task Force, as detailed in the first meeting. It is as detailed below.



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- Gain a common understanding of the physical, environmental, and regulatory context for operations at the Airport.
  - Gain a common understanding of the history of flight operations and southern departure options used and considered in the past.
  - Review the Airport’s history of noise abatement as it relates to both northern and southern procedures for commercial and general aviation operations.
  - Identify and prioritize possible improvements to southern departures that will reduce aircraft noise intrusion.
  - Target August 2022 to provide findings to the Airport Board.

Bill emphasized that we will not be shifting noise from one area at the detriment of another. Bill then turned the floor over to Paul Dunholter, noise modeling expert, for the summary of noise analysis.

Paul started with an agenda of some questions received to date regarding how to understand the noise relative to any change in procedure and the perception of noise. He started by reviewing types of procedures (conventional, RNAV and RNP), discussing where the industry is in implementing these various procedures, and explaining how the various concepts fit into these procedure types. After talking through the existing procedure (ALPIN), he described the general flight paths of the FAA proposed concept (KICNE ONE), followed by the five other procedure concepts that were developed as part of this Study for Task Force consideration (C1 through C5).

**Developed Concepts include:**

- C1 RNAV to the Southeast
- C2 RNP to the Southeast
- C3 RNAV the Southwest
- C4 RNP to the Southwest
- C5 RNP Corkscrew Concept

Following the procedure descriptions, Paul described the general altitudes of the concepts above the ground for the area south of the Airport. Valerie provided the clarification that air traffic control happens at Salt Lake Center, not at JAC, and that is where decisions are made regarding turns and routing. Greg Dyer then discussed the air traffic constraints of the left turn and how arrivals and departures need to be safely managed where they cross. According to Greg, C1 through C4 generally would work with the existing way that arrivals and departures are managed from air traffic control, but C5 has challenges from an air traffic perspective.

Paul then discussed how the procedures were modeled and related to the perception of noise. He reminded the Task Force about the difference between the FAA cumulative metric of DNL and a single event metric (Lmax), which is what we are using for analysis in this Study. For this Study, noise is evaluated where a change of noise 3 dBA or less is considered the threshold of what a human ear can detect. Changes from 3 dBA to 9 dBA are considered a noticeable change, and a 10 dBA change is perceived as very noticeable. For 10 dBA, it is perceived as a doubling of noise



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(increase) or a halving of noise (decrease). It is important to note that people react and notice an increase in noise more than a decrease in noise.

Existing noise from ALPIN and the FAA KICNE ONE concept, as well as the five concepts were all analyzed for noise comparison. Paul talked through the Lmax contours for existing ALPIN, KICNE ONE, and the five concepts. He then walked through the comparison of each procedure compared to the existing ALPIN and the change (under 3 dBA, 3-9 dBA or over 10 dBA change) at various locations in the community and public lands. He gave the comparison that 65 dBA is generally considered to be conversational level, but it is important to note that this does not correlate with any threshold. The evaluation criteria for this Study is whether the procedure will PERCEIVABLY increase or decrease noise, as detailed above (above 3 dBA change would be perceivable, and about 10 dBA would be very noticeable). All concepts resulted in a shift of noise at one or more of the noise evaluation sites in the community and public lands, resulting in an increase at some sites and a reduction at others.

Paul then turned the presentation over to Ryk Dunkelberg to discuss the environmental reviews required for any procedure to move forward. The procedure must undergo a National Environmental Policy Act (NEPA) analysis which will be prepared by the Federal Aviation Administration (FAA). There would likely need to be a Section 4(f) analysis, which is a more strict special purpose law associated with potential impacts on public lands, such as the national park or Elk Refuge. Valerie also clarified that because of these special concerns, and the Airport's lease with the Grand Teton National Park, this will have to be taken into account when the Board evaluates any recommendations to move forward with.

Paul then summarized the data and next steps. All concepts (C1 through C5) and the FAA proposed KICNE ONE shift noticeable noise from one noise sensitive area to another. Next steps include further reviewing this information for discussion at a meeting in August. It was requested that Task Force members submit any further questions by July 11.

## Comments and Questions

The floor was opened to the Task Force for questions and comments. Questions that benefit all will be summarized in the FAQs. The floor was then turned over for each Task Force member to react to the noise analysis and provide comments. The Comments from the Task Force are summarized below.

**Jeremy Barnum, National Park Service** provided the following comments. He stated that one of the things he loves about living and working here is the public participation. He also mentioned he is evaluating the noise looking at this from the perspective of the Park, as the keystone of this valley, the Park provides wildlife, scenery, historic value, and economic benefits via tourism. It is important to note that this process is talking about what is happening to the south with departure flights from the airport. However, it is important to note that every flight in and out of the Airport impacts the Park – including all arriving flights that fly over the park from the north. This process doesn't look at impacts in the north – every flight arriving or departing does impact the Park. The Airport has done



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fantastic work relative to mitigating those arrival flights, especially away from noise sensitive areas in the northern part of the park. However, even with that, the Park still gets a lot of comments regarding aircraft noise within the Park. Visitors want less aircraft noise within the Park, not more (regardless of north versus south), so the park needs to evaluate the totality of impacts on the Park, not just the ones focused on in this Study.

When looking at impacts to the Park, he mentioned that the concepts have impacts on Kelly (in the park), Gros Ventre (in the park), and the Elk Refuge North, specifically on the Gros Ventre River (part of the Wild and Scenic River System) and the Gros Ventre campground, which is the biggest campground in the park. Four of the six procedures would result in increased noise on areas of the Park. In the interest of transparency and a productive conversation, the Park would have serious reservations about those concepts, but particularly the corkscrew option would result in a large impact. With red impacts (10 dBA impacts or greater) for that concept, it would be substantial. It would be a regression, not progression to shift more noise to the Park. The Park would oppose Concept 5 and have serious concerns about Concepts 1 and 2, as well. He appreciated that it is an extraordinarily complex question but does not want the impacts to be shifted to public lands owned by all. He mentioned that it was important to consider that when discussing options of compromise, it needs to be taken within the context of the big picture challenges - noise not just to the south, increased visitors, encroachment into areas, climate change- because all of these factors can degrade public lands and are part of the compromise.

**Frank Durbian, Elk Refuge:** Frank fully supported what Jeremy said. Five of these concepts would impact and increase noise on the Elk Refuge and other public lands. He stated we should really want to carefully consider how we move forward with this. We continually chip away at what makes those land special and we need to consider those impacts.

**Todd Stiles, Bridger Teton.** Todd stated that he concurred with Jeremy and the Refuge, relative to the impact on public lands. Public lands are what the entire economy is based on and it is important to do what is right for these resources as public lands. It is challenging to understand what the noise impacts mean relative to cost benefits, and when looking out for public lands we are trying to find a winner. Specifically, the corkscrew would result in a pretty fundamental change to the existing condition and impacts the Gros Ventre, which is a very special area. Sections of the Gros Ventre are designated as a Wild and Scenic River, there are wildlife corridors, all lands south of the road are considered wilderness, and . all the way up the drainage are critical winter ranges. While there might be seasonal considerations, we should consider the use and the distribution of animals. When animals are most vulnerable, we are concerned, but there are also a lot of other considerations relative to the impacts on public lands. He agreed with Grand Teton and the Elk Refuge perspectives to look at the whole system holistically. It is challenging to distill this type of information and we certainly appreciate it.

**Sally Painter, ANPAC:** Sally asked if it would it be possible for the smaller nimbler aircraft take a tighter turn. The increase is a result of the smaller aircraft, business jets. Could we divert the smaller aircraft on the southeast path, resulting in smaller impacts and more of a compromise?



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The team responded that while that might be able to be considered (Sally's comment), it would likely still increase noise from a single event side, perhaps to a smaller level, but likely still to a perceivable level for those operations. However, the benefit of a high technology procedure is that it is typically flown by the newer aircraft which tends to be the quieter aircraft anyway. To do that effectively, it is possible, but it can be complicated from the air traffic side. However, on a single event, it would not likely drop it that much compared to what is going on here just with a slightly different aircraft.

There was a question on quieter and higher performing aircraft, how would the selection process between tower, SLC and the pilot really work relative to the departure process to make sure that the quietest aircraft would be using it? The team responded that you cannot really select based on a noise filter. You would need to put in a filter for the type of aircraft, saying that a particular aircraft type gets one departure. However, if you have the business jets doing the left turn, then you have a slight delay in that path, which means the aircraft behind would be waiting to take off, you have to build in agreement for how much longer they would need to wait until the air carrier can take off. It might be doable, but you cannot do it based on noise, but by aircraft type (air carriers in one bucket and the others in the another). It can create additional complexity in the system. It also could not be based on a climb requirement because there is no filter for climb requirement.

**TJ McCann, Neighborhood Representative and Pilot:** Stated that it was clear that noise would shift somewhere under all the options, and to not forget that the KICNE ONE option was the reason that the whole Southern Departure Procedure Task Force and Study started, because it too would likely shift the flight path and the noise associated with it.

**Public Comments and Questions:** Following the Task Force questions and comments, public questions and comments were taken. As with the other meetings, questions pertinent to the Southern Departure Procedure process will be summarized and included in the FAQ periodically during the process. **The FAQs will be updated based on the discussion at the meeting, as well as any additional comments received.**

Valerie then went over next steps, where the public and Task Force should provide questions or comments by July 11<sup>th</sup>, in preparation for the next meeting occurring August 16<sup>th</sup>. She reminded everyone that no new concepts will be considered.

