

Severe Weather Hazard Frequency Comparison Ellsworth AFB vs. Dyess AFB

Introduction:

Statistics based on severe weather reports have been compiled into map form at the National Severe Storms Laboratory. See <http://www.nssl.noaa.gov/hazard/> . A review of these statistics shows that in spring and summer the Dyess AFB area experiences much more frequent severe weather than the Ellsworth AFB area.

The National Weather Service classifies a storm as severe if it produces high winds, hail, or tornadoes. Often the same storm will produce all three of these phenomena. A storm is classified as severe if straight-line winds exceed 50 kts (58 mph), if hail size exceeds ¾", or if a tornado of any severity occurs. Damage to aircraft and facilities on the ground, and in the case of hail, to aircraft in flight, is likely when these criteria are met. At this time, neither the dollar value of property losses, nor statistics on injuries and deaths, are involved in classifying a storm as severe.

We review here statistics on the frequency of these severe storm phenomena, using charts available at the above-referenced web site. These charts, unless otherwise stated, were compiled using storm reports from 1980-1999.

Library Routing Slip: 2015 BRAC Commission Materials

Title of Item: Weather and Litigation Information

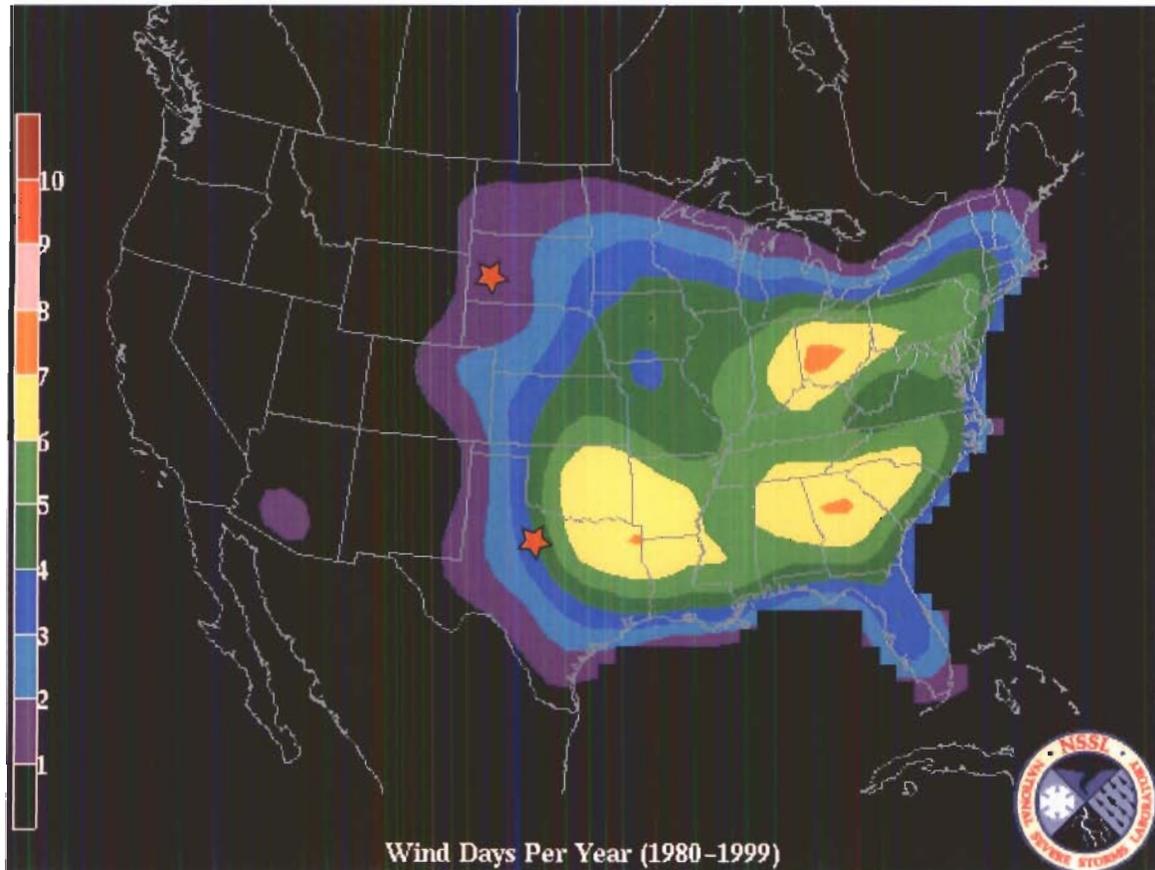
Installation or Community: Dyess AFB

Source: Rapid City Community

Certified Material? Yes No

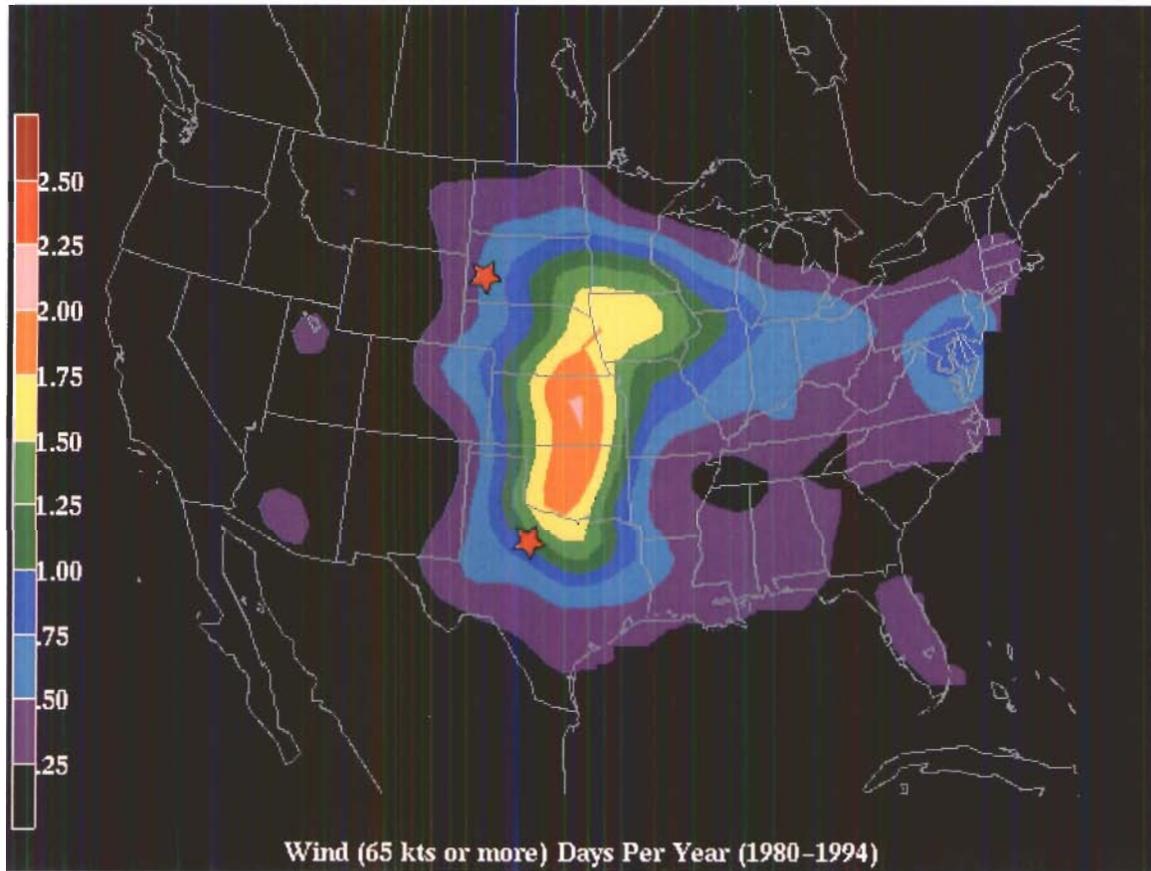
Analyst: J. Clark Date Received: _____

High Winds



The frequency per year of severe storm magnitude straight-line winds with speed greater than 50 kts (58 mph) within 25 miles of a given point is depicted here. In this type of analysis, the problem of multiple reports of the same event are factored out. The frequencies range from less than one (black) to greater than 7 (deeper shade of orange) wind episodes per year. The red stars indicate the locations of Ellsworth and Dyess Air Force Bases. Around Ellsworth the frequency is fairly uniform and is between once and twice per year, while Dyess is located in a region with a much sharper gradient in frequency. Near Dyess, the frequency is in the 3 to 5 times per year range.

The next chart displays frequency of occurrence of extremely high winds, 65 kts (75 mph) or greater, based on reports from 1980-1994.

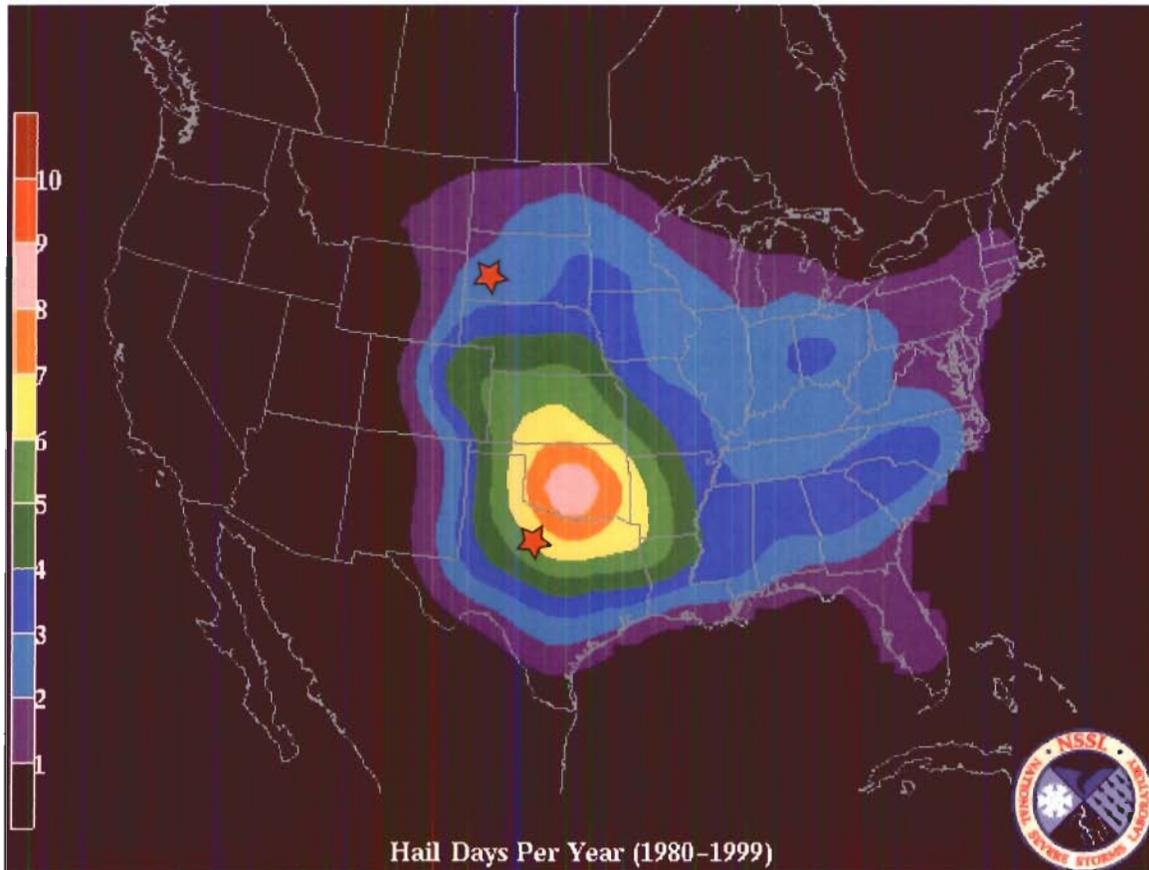


Ellsworth is in a region experiencing this kind of wind between .5 and .75 times per year, while Dyess is in the 1 to 1.25 times per year regime.

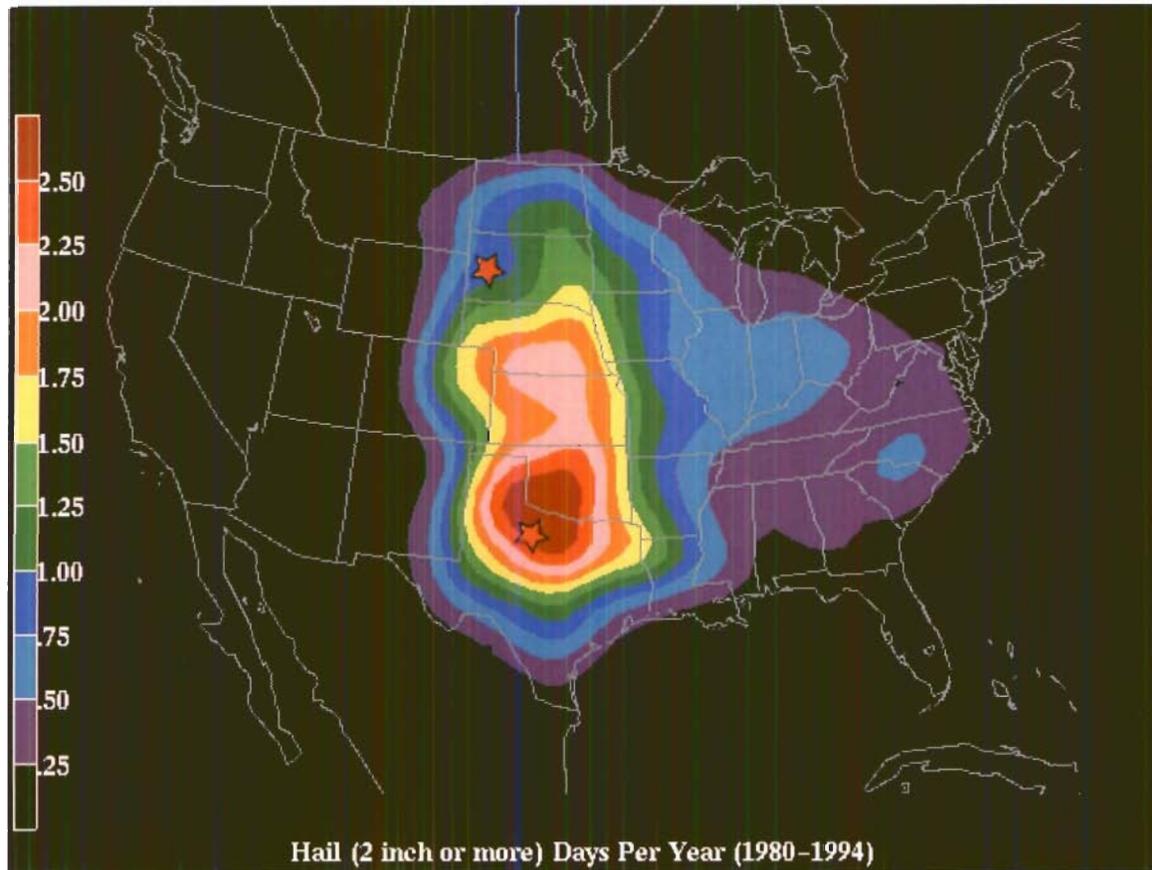
Thus, with respect to high and extremely high straight-line winds, the Dyess area experiences both categories of winds about twice as often as the Ellsworth area.

Hail

The panel below shows the frequency of occurrence of damaging hail (diameters greater than $\frac{3}{4}$ ").



Ellsworth is in a region experiencing damaging hail between 2 and 3 times per year, while Dyess is in a region where the frequency is 5 to 7 times per year. Although $\frac{3}{4}$ " hail is the size at which significant damage to metallic vehicles, and roofs, siding and windows of structures begins to occur, larger hail causes more severe damage. A database spanning 1925-1999 was analyzed for the occurrence of very large hail (2" diameter or greater). The figure below shows the results of this analysis.



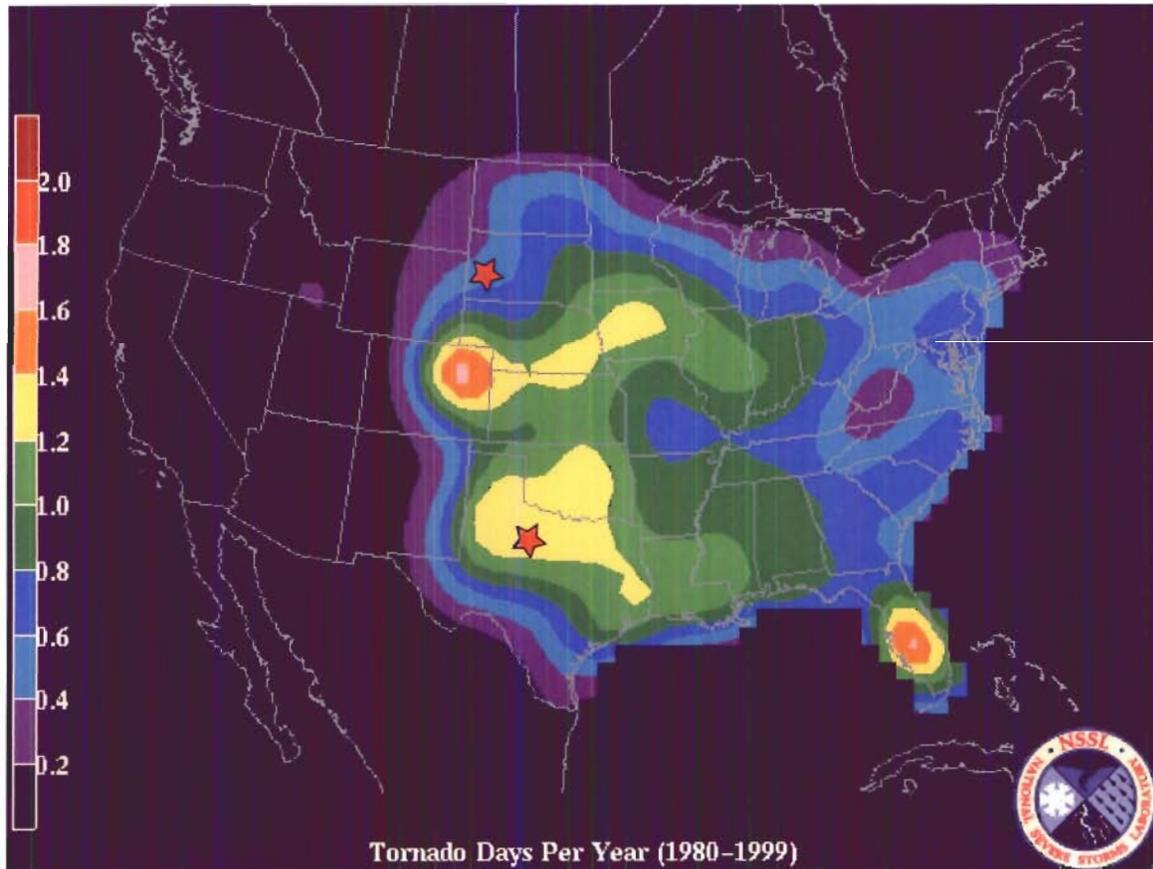
Near Ellsworth, hail this large occurs once per year or less, while near Dyess, such large hail is expected twice per year or more.

Thus hail large enough to begin to result in significant damage falls more than twice as often around Dyess as around Ellsworth, when one looks at even larger hail, the Dyess area experiences it more than 3 times as frequently as the Ellsworth area according to these analyses.

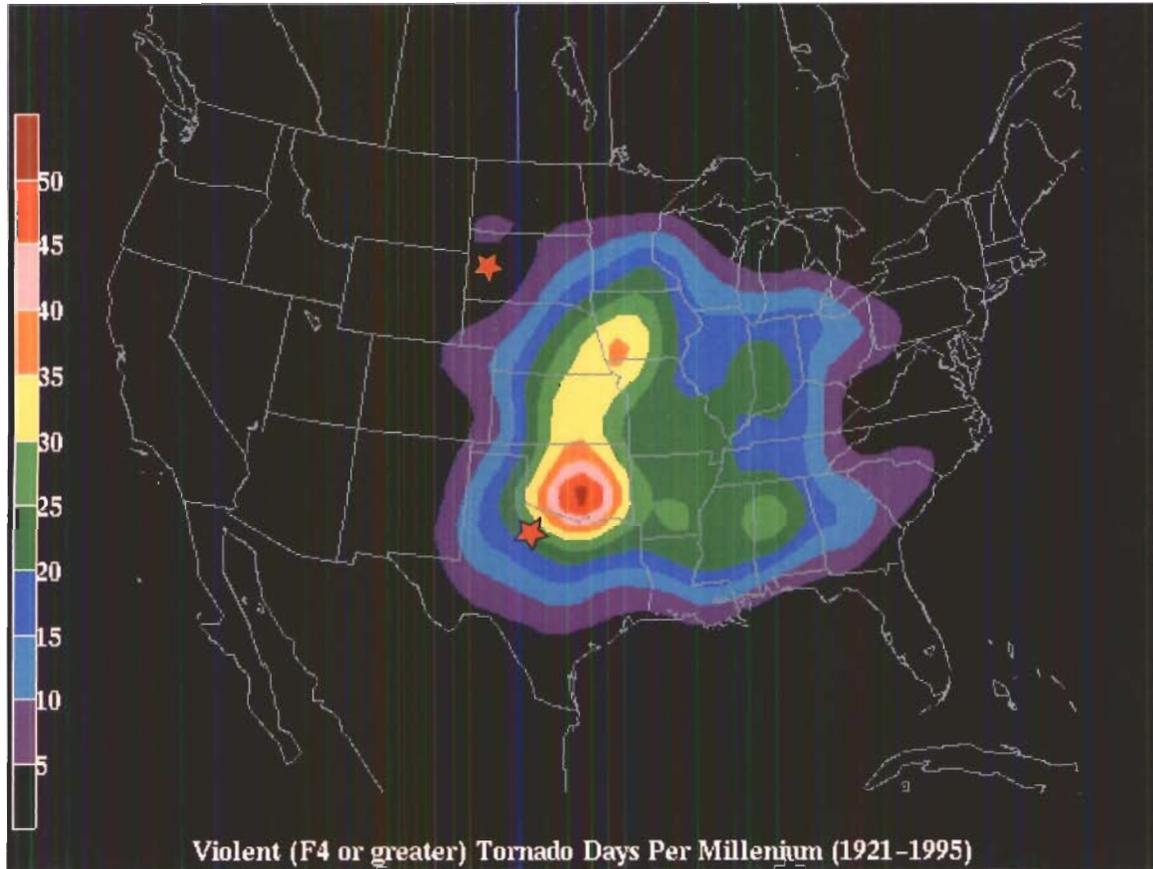
An independent analysis, published by certified consulting meteorologist Chris Orr in the Rapid City Journal on 19 June 2005 looked at the number of reports of hail 2" diameter or greater from the two counties surrounding Dyess and two surrounding Ellsworth, from 1950 – spring 2005. There were 71 reports of such hail around Dyess, and 88 around Ellsworth. In this analysis, multiple reports of the same storm often occurred, so the ratio of reports in the two regions does not truly reflect the ratio of events.

Tornadoes

Tornado frequency is much higher at Dyess than at Ellsworth, as shown below.



While the Ellsworth area experiences tornadoes about once every other year, on average, the Dyess area experiences tornadoes more than once per year. When looking just at very violent tornadoes the contrast in frequency is even more striking, as the next figure shows.



Here is shown the frequency of tornadoes classified as F4 or F5 on the 5-level Fujita scale, based on data from 1921-1995. The Dyess area expects to experience such violent tornadoes 20-30 times per millennium, while the Ellsworth area expects such tornadoes less than 5 times per millennium. Thus the frequency of violent tornadoes is low in both areas, but is 5 to 6 times more likely around Dyess than around Ellsworth.

Historically, neither base has had any tornado pass directly over it, in the 50+ year lifetimes of these bases. Orr, in the article cited above, points out that between 1950 and 2002, two strong tornadoes passed within 40 miles of Ellsworth, while 10 strong tornadoes passed within 40 miles of Dyess. Using this view, the frequency of strong tornadoes 5 times higher at Dyess than Ellsworth.

Looking at these statistics another way, the climatological chance of seeing a violent tornado near Dyess, over a 20 year period, is 46%. At Ellsworth, the probability is less than 10%. The chance of a violent tornado intercepting either base perimeter while on the ground will be small fractions of these percentages, and at Ellsworth at least such a probability is negligible.

Summary

Severe weather in general is more than twice as probable around Dyess AFB compared to Ellsworth AFB. The two areas differ proportionally the most in tornado frequency, by more than a factor of two for all tornadoes, and a factor of 5 to 6 for violent tornadoes. Damaging straight-line winds and damaging hail each occur on the average every year at both bases, at least once at Ellsworth and more than twice at Dyess. Very high winds occur on the average once every other year at Ellsworth, and once per year at Dyess. Very large hail occurs a little more often than once per year at Ellsworth and about 2 ½ times per year at Dyess.

Addendum

It would be useful to provide information on damage experience during actual cases of severe weather near or at Air Force bases. However, we don't know how to reliably and quickly find damage statistics. By chance, we found information on one relatively famous case.

The following damage account refers to an Oklahoma base, and comes from Galway (1992):

20 March 1948 – A tornado struck Tinker AFB near Oklahoma City, destroying 32 military aircraft and damaging many structures on the base.

Bomar (1995), pg 237, provides a list of “most memorable tornado” events in Texas. From among them, events near towns with air bases at the time were selected. Perhaps someone with access to military records, or possibly through a search of local newspaper accounts, can find information on damage at the affected bases.

11 May 1953 – There was a very damaging tornado outbreak around Waco, TX and nearby Connally AFB.

3 April 1964 – Large tornado outbreak near Wichita Falls and Sheppard AFB

10 April 1979 – Another large tornado outbreak near Wichita Falls and Sheppard AFB.

From a web posting by Luchtzak Aviation (<http://www.luchtzak.be/postt10079.html>) :

Hail caused moderate to severe damage to 96 of 121 TH-57 helicopters and 50 of 151 T-24's at Whiting Naval Air Station in Florida. In addition, buildings were damaged. Total damage was estimated to be at least \$2.1 M.

The point is that weather hazards are going to cause damage and that weather damage losses are part of the cost of doing business at these bases. Were weather-related damage costs included in the Air Force analysis of the costs of doing business at Dyess and Ellsworth?

References

Bomar, G. W., 1995. Texas Weather. U. of Texas Press, Austin, TX. 275 pp.

Galway, J. G., 1992: Early severe thunderstorm forecasting and research by the United States Weather Bureau. *Weather and Forecasting*, 7, 564-587.

Luchtzak Aviation. Accessed 5 July 2005 at <http://www.luchtzak.be/postt10079.html>)

National Severe Storms Laboratory Severe Thunderstorm Climatology. Accessed 5 July 2005 at <http://www.nssl.noaa.gov/hazard/>.

MILITARY VALUE OF THE AERIAL TRAINING ROUTES AND MILITARY OPERATING AREAS (MOA) SUPPORTING DYESS AFB

SUMMARY

The USAF submitted flawed, misleading and egregiously incomplete analysis with respect to the availability, capability and future access to aerial training routes and MOAs supporting Dyess AFB. Inexplicably, the USAF failed to acknowledge in its analysis, scoring and recommendations that Dyess' primary training route (IR-178) and Lancer MOA, together known as the Realistic Bomber Training Initiative (RBTI), are in fact operating subject to a Federal District Court order that has placed limits on its availability and operating conditions. The USAF failed to consider that this training route and MOA have been under continuous litigation since 2000 and are, in fact, vulnerable to future litigation that could further limit USAF operations and access. The service also failed to reveal in its recommendations that these key Dyess training assets will remain subject to Court imposed restrictions until the USAF prepares a supplemental Environmental Impact Statement (EIS) and both the court and FAA issue new decisions on whether to retain these airspace training assets. Any such decision could result in yet further operational limitations. Finally, the USAF negligently failed to consider the cumulative effects from an increase of training requirements resulting from the addition of B-1s coming from Ellsworth and a possible court imposed cap on sortie-operations. As a consequence, the final DoD scoring value for Dyess AFB lacks integrity and was based upon flawed scores related to proximity to Airspace Supporting Mission (ASM) and Low Level Routes under the Current and Future Mission category. The over-inflation of Dyess' assessed military value in this category – in comparison to Ellsworth AFB - was a principle determining factor in placing Ellsworth on the closure list. Therefore, DoD substantially deviated from its evaluation of military criteria and the recommended consolidation of the B-1 fleet at Dyess AFB should be rejected.

LITIGATION BACKGROUND

As early as 1997, the Air Force recognized that the aerial training ranges available to aircraft proximate to Dyess and Barksdale AFB were inadequate for realistic and effective training to ensure readiness. The Realistic Bomber Training Initiative was the result of that requirement. As such, an environmental impact statement (EIS) was initiated in December 1997. The AF initiative generated significant controversy with over 1,500 written and oral comments in opposition. The Final Environmental Impact Statement (FEIS) was published in January, 2000. The AF Record of Decision selected a route and range complex (IR-178 and the Lancer MOA) which it deemed critical to the effective training and readiness of bomber air crews stationed at Dyess and Barksdale AFB. After the FEIS was published in January, 2000, litigation was initiated in the United States District Court for the Western District of Texas on behalf of residents and organizations adversely affected by the noise, vibration, vortices and loss of value of their property resulting from the training flights over their land.¹

- Two cases were decided by the District Court and were consolidated on appeal to the United States Court of Appeals for the Fifth Circuit, which decided on October 12, 2004 that the Air Force and FAA compliance with the National Environmental Policy Act, 42

¹:Davis Mountains Trans-Pecos Heritage Assoc., et. al., ("Plaintiffs"), v. United States Air Force, et. al., ("Defendants"), 249 F. Supp. 2d 763 (N.D. Tex. 2003); Welch v. USAF, 2001 U.S. Dist. LEXIS 21081 (N.D. Tex., Dec. 19, 2001)

U.S.C. 4321-4370(f), was defective. The Court of Appeals vacated the AF's Record of Decision, the decisions of the district court and the FAA orders approving the Realistic Bomber Training Initiative (RBTI) and ordered the AF to prepare a supplemental EIS (SEIS) (Westlaw at 2004 WL 2295986, No. 02-60288 (5th Cir. Oct. 12, 2004)).

- On January 31, 2005, the appellate court on petition for rehearing, denied the Air Force a rehearing but granted continued use of the RBTI pending the preparation of the EIS "under conditions of operation set by the district court." (2005 U.S. App. LEXIS 1620)
- On June 29, 2005, the district court issued an order imposing flying restrictions proposed by the USAF (under FCIF A05-01) to allow limited use pending the SEIS; thus setting limitations on the Air Force that no aircraft will fly lower than 500 ft. AGL, AP/1B altitude in IR-178, and no lower than 12,000 ft. MSL when utilizing Lancer MOA.

From the foregoing, it is apparent that Dyess' access to the RBTI throughout the foreseeable future is far from being a settled issue. The approval of the SEIS is a lengthy process, potentially lasting up to two years, assuming no further legal challenges. The RBTI's future availability as an optimal training range is, in fact, tenuous at best and vulnerable to finding itself in a continuous litigation limbo. In effect, Dyess access to RBTI is presently under the control of the district court, not the Air Force. And, it is operating under altitude limitations which render the training inadequate when compared to alternative MOAs (e.g. compare to Powder River MOA, Hays MOA, Belle Fourche MTR, Nevada Test & Training Ranges (NTTR) and the Utah NTTR).

QUALITY OF TRAINING UNDER COURT ORDER

On January 5, 2005, the Director of Air and Space Operations, Air Combat Command, filed with the appellate court two separate declarations. First, he asserted the essential nature of IR-178 and the Lancer MOA to the readiness and training of the Dyess AFB bombers. His declaration described the continued use of the RBTI as critical. Second, he asserted the Air Force will make temporary operational changes to its use of the RBTI by flying no lower than 500 feet above ground level or the published minimum altitudes on IR-178, whichever is higher and that aircraft will fly no lower than 12,000 feet mean sea level (an increase of approximately 6,000 ft.) during normal training operations in the Lancer MOA (FCIF A05-01).

- As to the matters of military value, two major discrepancies are generated by the declarations. First, these proffered changes are characterized as temporary, implying that these limitations will be abandoned when the Supplemental EIS and resulting Record of Decision are completed. No doubt, this will be challenged in the courts by the plaintiffs when the Supplemental EIS is completed, unless the Air Force abandons the present location of the RBTI site. At a minimum, this represents substantial delay in final judicial approval, if such final approval can ever be obtained. The second declaration is an acknowledgement that the court accepted limitations are inadequate for Air Force training; "[T]he changes to the bomber training program, which would be in effect while the Air Force completes the SEIS and the FAA takes action accordingly, do not, in my opinion, allow aircrews to fully meet necessary realistic training objectives."

Thus, by the admission of the Director of Air and Space Operations, Air Combat Command, adequate training objectives for the B-1B bomber crews presently stationed at Dyess AFB cannot be met with the court imposed restrictions of June 29, 2005.

FUTURE LITIGATION

As this matter has been in litigation since at least 2001, it is reasonable to conclude that litigation could, and probably will, continue pending the results of the SEIS.² However, the recommended consolidation of all USAF B1-B operations at Dyess AFB raises numerous new issues that have yet to be addressed:

- The court order of June 29, 2005, and prior filings, make no mention of Air Force plans to consolidate and double the number the B-1B aircraft at Dyess AFB.
- Although the January, 2005 court order was well before the BRAC recommendations were announced, it should be noted that the USAF failed to advise the district court of the BRAC recommendations after their release and the possibility of increased flight activities at Dyess (an estimated 35% increase in annual missions utilizing the RBTI).
 - Whatever the existing baseline of flight operations in the RBTI, that number will increase significantly if all B-1Bs are located to Dyess AFB - unless the Air Force accepts a significant decrease in readiness and training. As noted by the appellate court in its reversal and remand of the case, the implementing regulations of NEPA, promulgated by the President's Council on Environmental Quality, at 40 C.F.R. 1502.9(c)(1), ". . . require agencies to supplement an EIS if the agency makes substantial changes to the proposed action or significant new circumstances or information arise bearing on the proposed action or its impacts."
- It is clear that the Air Force will be required to supplement the RBTI EIS to reflect the impacts associated with the increase in use of the RBTI training areas. The potential increases of required sortie-operations will only exacerbate the complaints raised by plaintiffs, thereby leading to further litigation delaying and jeopardizing the final approval of the RBTI project.
 - While the failure of the Air Force to inform the court of these issues is a matter for the court to address, the failure of the Air Force to apprise the Base Closure Commission of the limitations on use and challenges to the RBTI represents a serious omission and should be sternly addressed by the Commission in the context of its evaluation of the Air Forces credibility in preparing their military value assessments.
 - Of particular note, the Air Force's analysis of the environmental implications of the recommended closure of Ellsworth and the movement to Dyess reflects that ". . . flight operations at Dyess have been diverted, delayed or rerouted because of noise. Additional operations may further impact this constraining factor and

² It should be noted to the Commission as a matter of significance, the State of Texas submitted an Amicus Curiae brief in support of Plaintiffs in their successful appeal before the Fifth Circuit.

therefore further restrict operations.” This particular comment is noteworthy for three reasons:

- By placing it in the analysis for environmental implications of the recommendation, the Air Force has relegated this constraining factor to a category of the statutory criteria that does not pertain to military value, thereby avoiding the clear implication of the constraint on readiness;
- The language used is similar to that reported for other gaining bases, thereby masking the constraint and implying that this limitation on use is not worthy of special attention as a matter embroiled in litigation;
- By commenting on the need for analysis under NEPA in a routine manner, the Commission would not be alerted to the predictable contentiousness of the addition of significantly more sortie-operations in these range areas.³

CONCLUSION

In assessing the military value of IR-178 and Lancer MOA, the analysis performed by the Air Force for the purposes of BRAC 2005 implies that these training assets will be available to Dyess AFB without limitation or qualification. As the facts suggest, the related USAF data and assumptions used were grossly incorrect. In fact, the continued use of these ranges is now under the aegis of the judicial system and is potentially subject to additional litigation that renders the future use of the ranges supporting Dyess AFB problematic, at best.

³ Although the Base Closure statute includes an exemption from NEPA for the recommendations of the Department of Defense and the actions of the Commission, this exemption does not extend to the implementation of the decisions of the Commission. Under ordinary circumstances, it would be appropriate for the Commission to assume that the Air Force can implement the decision of the Commission. However, no such assumption would be appropriate where, as here, there is a serious challenge to the closely related actions of the Air Force.

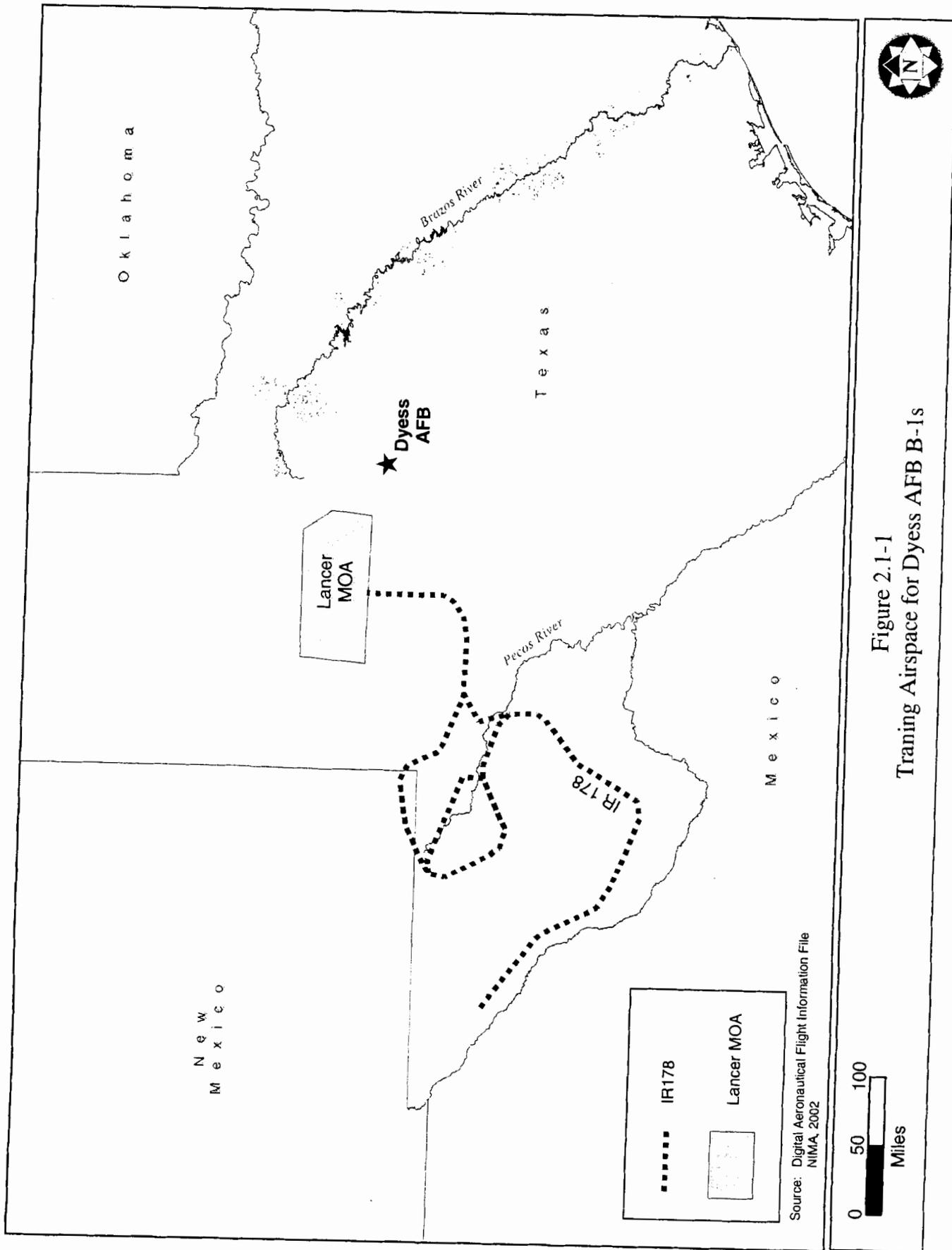


Figure 2.1-1
Training Airspace for Dyess AFB B-1s

11638

FILED

October 12, 2004

Charles R. Fulbruge III
Clerk

IN THE UNITED STATES COURT OF APPEALS

FOR THE FIFTH CIRCUIT

No. 02-60288

DAVIS MOUNTAINS TRANS-PECOS HERITAGE
ASSOCIATION, a Texas non-profit corporation,

Petitioner,

versus

FEDERAL AVIATION ADMINISTRATION;
MARION C. BLAKEY, Administrator, FEDERAL
AVIATION ADMINISTRATION; NORMAN Y.
MINETA, SECRETARY, DEPARTMENT OF
TRANSPORTATION,

Respondents.

No. 03-10506

DAVIS MOUNTAINS TRANS-PECOS HERITAGE
ASSOCIATION; DALE TOONE; SUSAN TOONE;
TIM LEARY; REXANN LEARY; EARL BAKER;
SYLVIA BAKER; MARK DAUGHERTY; ANN
DAUGHERTY; DICK R. HOLLAND; J. P. BRYAN;
JACKSON BEN LOVE, JR.; KAARE J. REEME,

Plaintiffs-Appellants,

versus

UNITED STATES AIR FORCE; JAMES G. ROCHE;
Secretary United States Air Force; UNITED STATES
DEPARTMENT OF DEFENSE; DONALD H. RUMSFIELD,
Secretary of Defense,

Defendants-Appellees.

No. 03-10528

BUSTER WELCH; JOHN F. OUDT; LESA OUDT;
JOHN DIRK OUDT; CINDY ANN SPIRES; ET AL,

Plaintiffs-Appellants,

versus

UNITED STATES AIR FORCE; F. WHITTEN
PETERS, Secretary of the United States Air Force;
WENDELL L. GRIFFIN, Colonel, Commander,
7th Bomb Wing, Dyess Holloman Air Force Base;
CURTIS M. BEDKE, Brigadier General, Commander,
2nd Bomb Wing, Barksdale Air Force Base; UNITED
STATES DEPARTMENT OF DEFENSE; DONALD H.
RUMSFIELD, SECRETARY DEPARTMENT OF
DEFENSE,

Defendants-Appellees.

Petitions for Review of an Order of the
Federal Aviation Administration

Before REAVLEY, JONES and DENNIS, Circuit Judges.

REAVLEY, Circuit Judge:*

In these consolidated appeals, petitioners challenge various actions by the United States Air Force (Air Force) and the Federal Aviation Administration (FAA) in connection with the Realistic Bomber Training Initiative (RBTI).¹

Petitioners allege that the Air Force and FAA failed to follow procedures mandated by the National Environmental Policy Act, 42 U.S.C. §§ 4321-4370f (NEPA) and its implementing regulations, 40 C.F.R. §§ 1500.1-1508.28 (2003) (CEQ regulations), 32 C.F.R. §§ 989.1-989.38 (2004) (Air Force regulations), and ask this court to set aside those agency actions and remand to the agencies for NEPA-sufficient procedure.² We agree that the Environmental Impact Statement (EIS)

*Pursuant to 5TH CIR. R. 47.5, the Court has determined that this opinion should not be published and is not precedent except under the limited circumstances set forth in 5TH CIR. R. 47.5.4.

¹ A list of acronyms used in this opinion is appended.

² This case comes to us as two appeals from two district court decisions (*Davis Mountains Trans-Pecos Heritage Association v. U.S. Air Force*, 249 F. Supp. 2d 763 (N.D. Tex. 2003) and *Welch v. U.S. Air Force*, 249 F. Supp. 2d 797 (N.D. Tex. 2003)), consolidated for briefing, and a direct appeal from two orders of the FAA brought by Davis Mountains Trans-Pecos Heritage Association in which the Welch parties have intervened.

prepared by the Air Force and adopted by the FAA does not satisfy NEPA and therefore remand to the agencies to prepare a supplemental EIS in accordance with this opinion.

I. Background

The basis of petitioners' complaints is the RBTI, a plan to provide airspace and ground-based assets for realistic and integrated B-52 and B-1 Bomber flight training within 600 miles of Barksdale and Dyess Air Force Bases. The RBTI includes a Military Operations Area (MOA), linked to a Military Training Route (MTR) by an Electronic Scoring Site system. The MOA provides space, identified to civil and commercial aircraft, where military aircraft can practice air-to-ground and air-to-air training. The MTR is a flight corridor where pilots can practice low-altitude navigation and maneuvers.

Concluding that implementation of the RBTI would constitute a "major action" under NEPA, the Air Force prepared an EIS.³ The FAA participated in the NEPA process as a cooperating agency.⁴ The EIS analyzed three alternative locations for the RBTI and a no action alternative. Two months after issuing the final EIS, the Air Force issued a Rule of Decision (ROD) adopting its preferred

³ 42 U.S.C. § 4332(C).

⁴ 40 C.F.R. § 1501.6.

alternative (Alternative B). Alternative B, located mostly in western Texas, would modify and enlarge existing MTR Instrument Route 178 (IR-178) and create Lancer MOA by consolidating and expanding three existing MOAs. The FAA adopted the final EIS and approved Lancer MOA and the IR-178 modifications.

Petitioners are Davis Mountains Trans-Pecos Heritage Association (DMTPHA), a nonprofit corporation whose members are farmers, ranchers, and business people living and working in the areas underlying the RBTI airspace, and similarly situated named individuals. Concerned with potential impacts of the RBTI on underlying land, petitioners challenged the NEPA compliance of the Air Force and several named federal defendants in the district court. *Davis Mountains Trans-Pecos Heritage Association v. U.S. Air Force*, 249 F. Supp. 2d 763 (N.D. Tex. 2003); *Welch v. U.S. Air Force*, 249 F. Supp. 2d 797 (N.D. Tex. 2003) (hereinafter “Air Force cases”). Petitioners seek review of that court’s summary judgments in favor of defendants as well as the FAA’s approval of Lancer MOA and modified IR-178.

II. Jurisdiction

This court has jurisdiction to review the district court’s grants of summary judgment in the Air Force cases under 28 U.S.C. § 1291. We have jurisdiction to review the FAA’s approvals under 49 U.S.C. § 46110(a), providing for review of

FAA orders in the Courts of Appeals. We lack jurisdiction, however, to hear any claims of the Welch intervenors in the FAA appeal not raised by petitioners in that case. *United Gas Pipe Line Co. v. FERC*, 824 F.2d 417, 434-38 (5th Cir. 1987). In *United Gas*, we held that intervenors in a suit challenging FERC action under the Natural Gas Act could not raise issues in addition to those raised by petitioners, in order to prevent intervenors from effectively appealing outside the sixty day statutory period for appeal. *Id.* The same reasoning applies in the present case, where intervenors did not appeal the FAA decisions and filed their motion to intervene well outside the sixty day period for appeal provided for in § 46110(a). Therefore, we will not address intervenors' argument that the FAA failed to adequately consider the effects of the RBTI on Lubbock, Texas.

III. Standard of Review

We review the district court's grants of summary judgment in the Air Force cases *de novo*.⁵ Our review of the FAA orders is also *de novo*, and we may "affirm, amend, modify, or set aside any part" of the orders approving Lancer MOA and modified IR-178.⁶ As petitioners in both the Air Force cases and FAA appeal challenge those agencies' NEPA compliance, we must determine whether the

⁵ *Miss. River Basin Alliance v. Westphal*, 230 F.3d 170, 174 (5th Cir. 2000).

⁶ 49 U.S.C. § 46110(c).

actions complained of were arbitrary or capricious under the Administrative Procedure Act.⁷ Generally, agency action is arbitrary and capricious

if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.⁸

Preparation of an EIS under NEPA furthers two broad goals. First, it ensures that the agency will consider relevant factors when making its decision. Second, its disclosure requirements foster meaningful public participation in the decisionmaking process.⁹ NEPA does not, however, mandate a particular result.¹⁰

In determining the adequacy of an EIS, this court considers three factors:

- (1) whether the agency in good faith objectively has taken a hard look at the environmental consequences of a proposed action and alternatives;
- (2) whether the EIS provides detail sufficient to allow those who did not participate in its preparation to understand and consider the pertinent environmental influences involved; and
- (3) whether the EIS explanation of alternatives is sufficient to permit a reasoned choice among different courses of action.¹¹

⁷ 5 U.S.C. § 706(2)(A); *Sierra Club v. Sigler*, 695 F.2d 957, 964 (5th Cir. 1983).

⁸ *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

⁹ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

¹⁰ *Westphal*, 230 F.3d at 175.

¹¹ *Id.* at 174.

The EIS must provide information satisfying these criteria, and its conclusions must be supported by evidence in the administrative record.¹²

IV. Environmental Effects of the RBTI

A. *Livestock*

Petitioners raise several challenges to the EIS's analysis of the RBTI's environmental effects. First, petitioners claim that the Air Force, and the FAA in adopting the EIS, did not adequately consider the effects of the proposal on the livestock on ranches underlying the RBTI route. Presumably relying on the principle that agencies must follow their own rules¹³, petitioners argue that the Air Force failed to take the requisite "hard look"¹⁴ at livestock impacts because it did not follow its 1993 handbook, "The Impact of Low Altitude Flights on Livestock and Poultry" (Handbook).¹⁵ Petitioners argue that, because the Air

¹² *Id.* at 174-75.

¹³ *Lyng v. Payne*, 476 U.S. 926, 934 (1986).

¹⁴ *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 374 (1989).

¹⁵ In its "Findings" section, the Handbook states:

Any establishment of new low altitude airspace will seek to minimize potential impacts on livestock and poultry. An initial consideration is the regional distribution of sensitive livestock and poultry operations in the geographical region being considered for low altitude flight. This regional distribution will be determined by identifying those counties that are among the leading counties for livestock and poultry commodities in their respective

Force did not undertake the county- and individual-level inquiry outlined in the Handbook, but instead relied on several studies of the effects of low-level overflights on livestock and a general overview of the underlying region, its analysis was inadequate under NEPA.

Petitioners rely on *Idaho Sporting Congress, Inc. v. Rittenhouse*, in which the Ninth Circuit invalidated a Forest Service EIS, because it analyzed impact on certain species on a “home range” scale, contrary to a Forest Service report stating, “the habitat needs of these species must be addressed at a landscape scale.”¹⁶ Contrary to *Rittenhouse*, however, cases have generally required that an agency pronouncement have the force and effect of law in order to bind the agency.¹⁷ To have the force and effect of law, an agency pronouncement

state. ...

In addition to consideration of counties, individual livestock and poultry operations within an area proposed for an MTR will also be considered.

¹⁶ 305 F.3d 957, 973-74 (9th Cir. 2002); see also *Utahns for Better Transp. v. U.S. Dep’t of Transp.*, 305 F.3d 1152, 1165 (10th Cir. 2002) (stating that “[a]gencies are under an obligation to follow their own regulations, procedures, and precedents, or provide a rational explanation for their departure” and invalidating EIS because agency did not follow its own regulation).

¹⁷ See, e.g., *Lyng*, 476 U.S. at 937 (stating that “not all agency publications are of binding force”); *Schweiker v. Hansen*, 450 U.S. 785, 789-90 (1981) (holding that Social Security Administration Claims Manual was not binding agency rule); *Fano v. O’Neill*, 806 F.2d 1262, 1264 (5th Cir. 1987) (holding that INS Operations Instructions did not bind agency “because they are not an exercise of delegated legislative power and do not

normally “must have been promulgated pursuant to a specific statutory grant of authority and in conformance with the procedural requirements imposed by Congress.”¹⁸ Petitioners do not argue, nor does the record show, that the Air Force’s Handbook was promulgated according to the APA’s procedural requirements. *See* 5 U.S.C. § 553. Thus the Air Force retained discretion to analyze impacts on livestock by methods other than those contained in the Handbook, and we must address the adequacy of the Air Force’s chosen method according to the arbitrary and capricious standard and the relevant criteria announced in *Westphal*.

Because determining whether the RBTI overflights will have a significant adverse effect on livestock requires resolution of issues of fact, we defer

purport to be anything other than internal house-keeping measures.”); *Western Radio Servs. Co. v. Espy*, 79 F.3d 896, 900-01 (9th Cir. 1996) (“[W]e will review an agency’s alleged noncompliance with an agency pronouncement only if that pronouncement actually has the force and effect of law.”); *Gatter v. Nimmo*, 672 F.2d 343, 347 (3d Cir. 1982) (holding that Veteran’s Administration publications did not bind agency, because they were not promulgated using APA procedural requirements for rulemaking); *Fed. Land Bank in Receivership v. Fed. Intermediate Credit Bank*, 727 F. Supp. 1055, 1058 (D. Miss. 1989) (holding that agency directive not promulgated according to APA procedure did not have force and effect of law).

¹⁸ *U.S. v. Fifty-Three Eclectus Parrots*, 685 F.2d 1131, 1136 (9th Cir. 1982); *see also Gatter*, 672 F.2d at 347; *McGrail & Rowley v. Babbit*, 986 F. Supp. 1386, 1393-94 (S.D. Fla. 1997); *Fed. Land Bank*, 727 F. Supp. at 1058.

substantially to the Air Force's expert analysis of the relevant data.¹⁹ The EIS and administrative record reveal that the Air Force considered several studies and comments regarding potential impacts on livestock, including those indicating adverse effects. "[I]n making the factual inquiry whether an agency decision was 'arbitrary or capricious,' the reviewing court 'must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment.'"²⁰ After reviewing the administrative record, we conclude that the Air Force's determination that no conclusive evidence showed adverse effects, based on its consideration of relevant studies, was not a clear error of judgment. In addition, the Air Force included a discussion of these studies in the main body of the EIS and its appendices, providing "detail sufficient to allow those who did not participate in its preparation to understand and consider the pertinent environmental influences involved."²¹ We therefore find the EIS's analysis of livestock impacts adequate.

¹⁹ *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 377 (1989) (quoting *Kleppe v. Sierra Club*, 427 U.S. 390, 412 (1976)).

²⁰ *Marsh*, 490 U.S. at 378 (quoting *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 416 (1971)).

²¹ *Westphal*, 230 F.3d at 174.

Because the Air Force's analysis complied with NEPA, the FAA's adoption of this portion of the EIS did not violate its obligations under that statute.²²

B. *Economic Effects*

Petitioners' second challenge to the EIS's adequacy concerns its analysis of the RBTI's economic impacts. Specifically, petitioners fault the Air Force and FAA for failing to analyze in depth the effect that the RBTI will have on the values of underlying land for ranching, eco-tourism, and hunting lease income.²³ As studies regarding the effects of low level overflights on rural land values were unavailable, 40 C.F.R. § 1502.22 governed the Air Force's duty to obtain this information. That section provides: "[w]hen an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking." *Id.* It also mandates certain procedures, but only where adverse effects are "reasonably foreseeable." *Id.*

²² 40 C.F.R. § 1506.3(a) (stating that cooperating agency may adopt lead agency's EIS if it concludes that its NEPA requirements have been satisfied).

²³ *See* 42 U.S.C. § 4332(C)(ii) (stating that EIS must discuss environmental effects of proposed action); 40 C.F.R. § 1508.8 (defining "effects" to include economic impacts).

In response to facts similar to the present case, two courts have held that impacts of overflights on land values are not reasonably foreseeable and thus do not require detailed analysis.²⁴ We find the reasoning of these courts persuasive. As in *Lee v. U.S. Air Force*, the flights in the present case will take place along a corridor miles wide, and primarily over areas that have been overflown for years, and potential noise increases experienced by owners of land underlying the RBTI are not significant.²⁵ In addition, the Air Force examined available studies indicating that aircraft overflights near air bases and airports did not cause significant economic impacts. We find the Air Force's consideration of economic impacts adequate. Accordingly, neither the Air Force's nor the FAA's determination that economic impacts were unlikely was arbitrary or capricious.

C. *Wake Vortex Effects*

Petitioners also allege that the Air Force and FAA failed to take a "hard look" at the effects of wake vortices (trails of disturbed air) that would be

²⁴ *Lee v. U.S. Air Force*, 354 F.3d 1229, 1241-42 (10th Cir. 2004) (holding Air Force's conclusion that decreased land values were not reasonably foreseeable and would be minimal based on prior airspace use and dispersion of flight paths reasonable); *Citizens Concerned About Jet Noise, Inc. v. Dalton*, 48 F. Supp. 2d 582, 598 (E.D. Va. 1999), *aff'd without opinion*, 217 F.3d 838 (4th Cir. 2000); *see also Norfolk v. U.S. EPA*, 761 F. Supp. 867, 887-88 (D. Mass. 1991) (upholding EIS that did not quantify property value decline due to proposed action where EIS stated that such decline was unquantifiable), *aff'd without opinion*, 960 F.2d 143 (1st Cir. 1992).

²⁵ *See* 354 F.3d at 1241-42.

generated by aircraft training in the RBTI. Petitioners argue that wake vortices damage ground structures like the windmills used by ranchers to provide water to livestock and wildlife. The Air Force responds that the EIS's discussion of wake vortex effects is adequate, because it "provides a narrative description of what causes vortices and points out that actual, not modeled, B-52 aircraft flying as low as 300 feet [above ground level] ... would generate a surface wind speed of less than 4 mph." Although CEQ regulations require agencies to "make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement,"²⁶ the EIS does not reveal the source of this data. Petitioners point out that the information came from an e-mail from the Boeing Company, stating that tests conducted between 1970 and 1986 "at flight level 300" resulted in "[n]o effect on the ground from the B-52 vortexes."

The Air Force presumably contends that "flight level 300" refers to 300 feet above ground level. In fact, it refers to 30,000 feet above ground level.²⁷ It is not clear whether the Boeing e-mail was a miscommunication, because the Air

²⁶ 40 C.F.R. § 1502.24.

²⁷ Petitioners note that "flight level" is defined at 14 C.F.R. § 1.1 as "three digits that represents hundreds of feet. For example, flight level 250 represents a barometric altimeter indication of 25,000 feet ..." This court also found the term's definition through a simple internet search. See <http://encyclopedia.thefreedictionary.com/Flight%20level>.

Force did not include the actual Boeing study in the administrative record. Therefore, the e-mail alone cannot provide an adequate basis for the Air Force's conclusion that flights at 300 feet above ground level would generate low surface winds. To uphold that conclusion, we must find a more satisfactory basis than the Boeing e-mail.

The Air Force also relied on a graph providing a "rough estimate" of B1-B wake vortex effects at low altitudes. The administrative record shows that the equation used to generate the chart came from a 1949 aerodynamics text by James Dwinnell, but the Air Force did not include the equation or its inputs in the EIS or administrative record.²⁸ Petitioners urge this court to consider two extra-record documents - excerpts from the Dwinnell text and its expert's declaration - to determine whether the Air Force's chart was reliable and thus constituted a hard look at wake vortex effects.

Generally, the "record rule" limits judicial review of agency action to the administrative record before the agency at the time of its decision.²⁹ This court

²⁸ 40 C.F.R. § 1502.24 states: "Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements. They shall identify any methodologies used ... for conclusions in the statement."

²⁹ *Fla. Power & Light v. Lorion*, 470 U.S. 729, 743-44 (1985).

has recognized an exception to the general rule, however, where examination of extra-record materials is necessary to determine whether an agency has adequately considered environmental impacts under NEPA.³⁰ In the present case we find it necessary to look at the Dwinnell text to determine whether the Air Force's use of the equation therein was sound. Because we lack technical expertise in aerodynamics, we also consider extra-record materials to aid our understanding of the science involved.³¹

Our review of the Dwinnell text and the declarations of petitioners' and the Air Force's experts reveal that the Air Force failed to take a hard look at the possible effects of wake turbulence on ground structures. Although an illustration in the EIS shows that the wake turbulence of an airplane at 300 feet above ground would generate wind speed around two mph at thirty-five feet (the height of a windmill as depicted on the illustration), the Air Force's own expert, Dr. Ojars Skujins, admits that a B1-B at this altitude could generate wind speeds

³⁰ *Sierra Club v. Peterson*, 185 F.3d 349, 369-70 (5th Cir. 1999), *vacated on other grounds on reh'g*, 228 F.3d 559 (5th Cir. 2000); *Sabine River Auth. v. Dep't of Interior*, 951 F.2d 669, 678 (5th Cir. 1992); *accord Nat'l Audubon Soc'y v. Hoffman*, 132 F.3d 7, 14-15 (2d Cir. 1997).

³¹ *Friends of Payette v. Horseshoe Bend Hydroelectric Co.*, 988 F.2d 989, 997 (9th Cir. 1993) (stating that courts may consider extra-record evidence when "necessary to explain technical terms or complex subject matter.").

as high as forty-seven mph just twenty-two feet above ground. Dr. Skujins also declares that the chart generated by the Air Force based on the Dwinnell equation is “oversimplified” and “does tend to underestimate the maximum vortex strength.” Dr. Skujins concludes, however, that the Air Force was correct in finding that vortices would not create a significant impact, because average wind speeds in the RBTI area are similar to wind speeds generated by wake vortices.

The Air Force is entitled to rely on its own qualified experts’ reasonable opinions in determining the significance of impacts.³² The Air Force did not rely on Dr. Skujins’s opinion, however, in addressing the wake vortex issue in the EIS process, but rather relied on the Boeing e-mail and the chart generated from the Dwinnell equation. As discussed above, neither document presents a reliable picture of the impact of wake vortices on surface structures, misinforming both public participation and the Air Force’s conclusion.³³ The Air Force’s reliance

³² *Sabine River Auth.*, 951 F.2d at 678.

³³ *See Methow Valley*, 490 U.S. at 349. Although the Air Force now argues that wake vortex effects would be speculative and thus need not be discussed in the EIS, during the NEPA process they took the position that wake vortex effects would not be significant based on the two pieces of evidence discussed. Courts may only uphold agency action on the bases articulated by the agency at the time of the action, and may not consider appellate counsel’s “post hoc rationalizations.” *Motor Vehicle Mfrs. Ass’n*, 463 U.S. at 49-50.

on this data cannot satisfy the hard look requirement of NEPA and thus this portion of the EIS is inadequate.³⁴ This determination applies equally to the FAA, which, as an adopting agency, was required to satisfy itself that the wake vortex discussion in the EIS complied with NEPA.³⁵

D. *Effects on Civil and Commercial Aviation*

Petitioners' final challenge to the EIS's analysis of environmental effects concerns potential conflicts between training flights in IR-178 and Lancer MOA and civil and commercial aviation in western Texas. Petitioners contend that the Air Force's conclusion in the EIS that the RBTI would have little effect on airspace management is contradicted by an FAA study in the administrative record. In addition, petitioners claim that the Air Force violated its own regulations by failing to adequately address mitigation measures proposed by the FAA study in the EIS.

The Air Force argues that effects on aviation are "aeronautical" rather than "environmental," and thus do not require discussion in an EIS. Counsel for the Air Force acknowledged in oral argument, however, the difficulty involved in

³⁴ See *Westphal*, 230 F.3d at 174-75 (stating that "the conclusions upon which an [EIS] is based must be supported by evidence in the administrative record.")

³⁵ 40 C.F.R. § 1506.3(a); Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, question 30, 46 Fed. Reg. 18026 (Mar. 23, 1981).

drawing a bright line between effects that are purely “aeronautical” and those that are “environmental.” Because “[e]nvironment’ means something more than rocks, trees, and streams, or the amount of air pollution [- i]t encompasses all the factors that affect the quality of life,”³⁶ we are reluctant to draw such a line.

Civil and commercial aviation are part of the modern human environment broadly defined, and because the RBTI would impact aviation, NEPA required the Air Force to address that impact in the EIS.³⁷

“It is a familiar rule of administrative law that an agency must abide by its own regulations.”³⁸ The Air Force regulations implementing NEPA provide that an EIS must include “responses to comments on the Draft EIS by modifying the text and referring in the appendix to where the comment is addressed or providing a written explanation in the comments section, or both.”³⁹ In the present case the Air Force responded to the FAA solely by modifying the text. It did not refer in the appendix to where the FAA’s comments were addressed or provide any written explanation, neglecting much of its responsibilities under the

³⁶ *Jones v. U.S. Dep’t of Hous. and Urban Dev.*, 390 F. Supp. 579, 591 (E.D. La. 1974).

³⁷ 42 U.S.C. § 4332(C)(i).

³⁸ *Fort Stewart Sch. v. Fed. Labor Relations Auth.*, 495 U.S. 641, 654 (1990).

³⁹ 32 C.F.R. § 989.19(d).

regulation. We therefore conclude that this portion of the EIS is also inadequate.

V. Mitigation

A. *Omission of Mitigation Discussion in Draft EIS*

In addition to their complaints regarding the EIS's environmental inadequacies, petitioners take issue with several aspects of the EIS's discussion of mitigation measures. First, they argue that the Air Force and FAA violated NEPA by failing to discuss mitigation measures in the draft EIS. CEQ regulations require agencies to prepare a draft EIS prior to issuance of a final EIS.⁴⁰ The draft "must fulfill and satisfy to the fullest extent possible the requirements established for final statements."⁴¹ A final EIS must contain a discussion of possible mitigation measures.⁴² Whether the draft EIS must also contain a discussion of mitigation measures is a question of first impression in this circuit.⁴³

⁴⁰ 40 C.F.R. § 1502.9(a).

⁴¹ *Id.*

⁴² *Methow Valley*, 490 U.S. at 351-52.

⁴³ As yet, the issue appears to have been directly addressed by only the Eastern District of California, in *Westlands Water District v. U.S. Dep't of the Interior*, 275 F. Supp 2d 1157, 1187-89 (E.D. Cal. 2002). In that case, the Department of the Interior

The Supreme Court has stated that, absent a discussion of possible mitigation measures, “neither the agency nor other interested individuals can properly evaluate the severity of the adverse effects.”⁴⁴ Although the Court there referred to inclusion of a mitigation discussion in a final EIS, the same reasoning can apply to the draft. Under the structure created by the CEQ regulations, the lead agency must request comments from other agencies and the public on the draft EIS before preparing the final EIS.⁴⁵ Following that structure in the present case, the Air Force provided a public comment period on the draft which closed before the Air Force issued the final EIS. Thus, by excluding mitigation measures from the draft, the Air Force prevented the public from commenting on those measures during the comment period.

On the other hand, even if the agency omits the mitigation discussion from the draft, nothing prevents the public from commenting on the mitigation measures once the agency issues the final EIS, and petitioners do not argue that

prepared a draft EIS without a discussion of mitigation measures that were later included in the final EIS. The court found the EIS inadequate under NEPA. The Ninth Circuit later reversed the district court, finding that the Department’s draft EIS did contain a discussion of mitigation measures. 376 F.3d 853, 872-75 (9th Cir. 2004). Thus, the court of appeals did not address the question of whether the final EIS would have been adequate had the draft not contained such a discussion.

⁴⁴ *Methow Valley*, 490 U.S. at 352.

⁴⁵ 40 C.F.R. § 1503.1.

they were prevented from commenting during the two months between the issuance of the final EIS and the Air Force's ROD.⁴⁶ Given these considerations, we find it unnecessary in the present case to adopt a rigid rule that a draft EIS *must* contain a mitigation discussion, although we note that inclusion of such a discussion is ideal.

B. *Adequacy of Mitigation Discussion in Final EIS*

Petitioners also attack the discussion of mitigation measures in the final EIS and those adopted by the Air Force in its ROD.⁴⁷ First, petitioners argue that the final EIS does not adequately discuss measures to mitigate potential adverse effects on underlying livestock operations. Contrary to petitioners' assertions, however, the final EIS does recognize that overflights may injure livestock and provides mitigation in the form of a claims process for ranchers whose livestock suffer injury. In light of the Air Force's non-arbitrary

⁴⁶ See 40 C.F.R. § 1503.1(b) ("An agency may request comments on a final environmental impact statement before the decision is finally made. In any case other agencies or persons may make comments before the final decision"). The public can access the final EIS under the Freedom of Information Act. 42 U.S.C. § 4332(C). The agency may not issue its decision until thirty days after publication of notice of the final EIS in the Federal Register. 40 C.F.R. § 1506.10(b)(2). Thus, the public can obtain and comment on the final EIS during that period.

⁴⁷ CEQ regulations require a discussion of possible mitigation measures in an EIS. 40 C.F.R. §§ 1502.14(f), 1502.16(h).

conclusion that adverse effects on livestock were unlikely, we find the Air Force's limited discussion of measures to mitigate those effects reasonable.⁴⁸

Petitioners also argue that reducing the annual number of sorties from the proposed 2,600 to 1,560 and utilizing existing military airspace to the maximum extent possible in creating Lancer MOA did not provide any mitigation because the RBTI would still impose more overflights on certain areas than they had experienced before implementation of the RBTI. This argument is premised on a misunderstanding of the term "mitigation." The CEQ regulations define "mitigation" as "[a]voiding the impact altogether by not taking a certain action or parts of an action" or "[m]inimizing impacts by limiting the degree or magnitude of the action and its implementation."⁴⁹ By reducing the number of sorties proposed for Alternative B by over 1,000 and avoiding creation of new airspace, the Air Force limited the magnitude of the RBTI. Thus, petitioners' argument that these measures did not truly "mitigate" is without merit, and the EIS is not invalid for failure to adequately address mitigation measures.

⁴⁸ See *Izaak Walton League of Am. v. Marsh*, 655 F.2d 346, 377 (D.C. Cir. 1981) ("NEPA does not require federal agencies to examine every possible environmental consequence. Detailed analysis is required only where impacts are likely.")

⁴⁹ 40 C.F.R. § 1508.20.

VI. Extra-Record Materials

In addition to the evidence pertaining to wake vortex effects, petitioners sought in the Air Force cases to introduce extra-record evidence regarding livestock, socioeconomic, and noise effects. The district court excluded all extra-record submissions. Petitioners argue that, by not considering the extra-record evidence, the district court could not adequately review the Air Force's NEPA compliance.

Because district courts have discretion to consider extra-record evidence, we review the district court's decision not to consider such evidence for abuse of discretion.⁵⁰ "A district court abuses its discretion if it: (1) relies on clearly erroneous factual findings; (2) relies on erroneous conclusions of law; or (3) misapplies the law to the facts."⁵¹ In the present case, the district court correctly stated the law regarding extra-record evidence in NEPA cases.⁵² Without

⁵⁰ *Northcoast Env'tl. Ctr. v. Glickman*, 136 F.3d 660, 665 (9th Cir. 1998); *Hoffman*, 132 F.3d at 16; see *Davidson Country Oil Supply Co. Inc. v. Klockner, Inc.*, 908 F.2d 1238, 1245 (5th Cir. 1990) (stating that "[t]he trial court's discretion to admit or exclude evidence is generally broad").

⁵¹ *McClure v. Ashcroft*, 335 F.3d 404, 408 (5th Cir. 2003).

⁵² *Davis Mountains*, 249 F. Supp. 2d at 775-76; *Welch*, 249 F. Supp. 2d at 809-10; see *supra* section IV.C.

discussing its rationale, however, it excluded all of petitioners' proffered extra-record evidence.

As discussed in section IV.C., consideration of the Dwinnell text and expert declarations is necessary to determine whether the Air Force took a hard look at wake vortex effects. Thus, by excluding that evidence, the district court "misapplie[d] the law to the facts." Because this court has reviewed the extra-record submissions in its *de novo* review, however, we need not remand to the district court, but instead dispose of this issue by remanding to the Air Force to prepare an adequate supplemental EIS.

The remaining items of evidence consist of declarations of DMTPHA members and experts on livestock, economic, and noise effects of the RBTI. We conclude that the district court did not abuse its discretion in excluding this evidence. The DMTPHA members' declarations are largely cumulative of evidence already in the administrative record. In addition, the Air Force was entitled to rely on the reasonable opinions of its own experts regarding livestock, economic, and noise effects.⁵³ None of petitioners' proffered evidence on these issues shows that those experts' opinions were unreasonable, but instead

⁵³ *Sabine River Auth.*, 951 F.2d at 678.

presents opposing expert opinions. Because the Air Force's reliance on its own experts does not render its decisions arbitrary and capricious, admission of petitioners' opposing expert opinions would not show that the Air Force failed to take a hard look at these effects. Thus, admission of petitioners' extra-record evidence on all issues other than wake vortex was unnecessary to determine whether the Air Force adequately considered environmental impacts of the RBTI⁵⁴, and the district court's exclusion of that evidence was not an abuse of discretion.

VII. NEPA Documentation for Existing IR-178

Petitioners also claim that the Air Force failed to prepare necessary supplemental EIS's for IR-178 due to changes in the route and underlying land since the route's creation in 1985. CEQ regulations require agencies to supplement an EIS if the agency makes substantial changes to the proposed action or significant new circumstances or information arise bearing on the proposed action or its impacts.⁵⁵ A claim asserting that NEPA documentation must be supplemented has three elements: (1) ongoing or remaining federal

⁵⁴ See *Sierra Club v. Peterson*, 185 F.3d 349, 369-70 (5th Cir. 1999), *vacated on other grounds on reh'g*, 228 F.3d 559 (5th Cir. 2000); *Sabine River*, 951 F.2d at 678; *accord Nat'l Audubon Soc'y v. Hoffman*, 132 F.3d 7, 14-15 (2d Cir. 1997).

⁵⁵ 40 C.F.R. § 1502.9(c)(1).

action and (2) new circumstances or information relevant to the environmental impact of the proposed action that are (3) significant enough to warrant supplementation of existing NEPA documents.⁵⁶

The district court held this claim time-barred, finding that the Air Force's alleged NEPA failures occurred more than six years before petitioners filed suit.⁵⁷ Although NEPA and the APA do not contain limitations periods, this court has held that claims under the APA are subject to the general six-year statute of limitations for claims against the government.⁵⁸ The limitations period begins to run when the right of action first accrues.⁵⁹ Because petitioners allege

⁵⁶ *Marsh*, 490 U.S. at 374.

⁵⁷ *Davis Mountains*, 249 F. Supp. 2d at 794-96. A short history of IR-178 is necessary to understand petitioners' complaint. The Air Force completed an Environmental Assessment (EA) and established the route in 1985 as IR-165. When the Air Force combined IR-165 with IR-128/180 in 1991, it changed the route name to IR-178. In 1994 an alternate exit was added to the route, taken from IR-144. The Air Force has no NEPA documentation for IR-144. Petitioners contend that these changes, in addition to changes in underlying land use, necessitated preparation of some kind of NEPA documentation - either a supplemental EA or EIS.

⁵⁸ 28 U.S.C. § 2401(a) (“[E]very civil action commenced against the United States shall be barred unless the complaint is filed within six years after the right of action first accrues.”); *Geyen v. Marsh*, 775 F.2d 1303, 1306-07 (5th Cir. 1985); *see also Jersey Heights Neighborhood Ass’n v. Glendening*, 174 F.3d 180, 186 (4th Cir. 1999).

⁵⁹ 28 U.S.C. § 2401(a); 5 U.S.C. § 704; *Glendening*, 174 F.3d at 186.

agency inaction or delay under 5 U.S.C. § 706(1), we must determine whether this cause of action accrued more than six years before petitioners brought suit.

Petitioners argue that the limitations period does not apply to its IR-178 claim, because the Air Force's actions regarding IR-178 are ongoing. At least one court has concluded that the six-year limitations period does not apply to claims of unlawful delay under § 706(1), reasoning that unlawful delay of a statutory duty is a continuing violation of the statute.⁶⁰ Applying this line of reasoning in the present case would effectively remove the limitations period from claims that an agency has unlawfully delayed supplementation of NEPA documents, because a necessary element of such a claim is ongoing agency action.

We find the better view to be that a claim for agency delay in supplementing NEPA documents accrues when circumstances requiring supplementation first arise. Such a view prevents plaintiffs from circumventing the limitations period by phrasing their complaints against agencies as continuous delay (from the moment they failed to do something required by NEPA) rather

⁶⁰ *Am. Canoe Ass'n v. U.S. EPA*, 30 F. Supp. 2d 908, 925-26 (E.D. Va. 1998) (stating that applying limitations period to claim of unlawful delay would be "grossly inappropriate, in that it would mean that [the agency] could immunize its allegedly unreasonable delay from judicial review simply by extending that delay for six years.")

than a failure to act at a discrete point in time. Petitioners argue that certain modifications to IR-178 required supplemental NEPA documentation and that the Air Force did not prepare it. That cause of action accrued when the modifications were implemented without the required documentation. Because all modifications that may have warranted supplementation occurred more than six years before petitioners filed suit, petitioners' supplementation claim is barred.⁶¹

VIII. FAA's Procedure on Limited Remand

As published in the National Flight Data Digest, modified IR-178 included eleven segments with floor altitudes lower than those evaluated in the EIS. The FAA claimed this was an inadvertent error and this court granted a limited remand to correct it. Petitioners now argue that the FAA failed to follow its own regulations in making the correction.⁶²

⁶¹ Petitioners also assert that the original EA for IR-165 was insufficient under NEPA. This claim concerns past, rather than continuing, agency action (the Air Force's adoption of the EA). Because this past action occurred in 1985, the claim is barred by 28 U.S.C. § 2401(a).

⁶² Regardless of whether the FAA followed its own procedures on the limited remand, petitioners do not contest that the RBTI altitudes now conform to those evaluated in the EIS. Thus, their original argument that implementation of unevaluated adverse effects (lower altitudes) invalidates the EIS is now moot.

The FAA's Order on Special Military Operations, FAA Order 7610.4J, provides certain procedures for establishing or modifying a MTR. Order 7610.4J requires, *inter alia*, a certain form, coordination with the Regional Air Traffic Control Center and others, and consideration of minimization of disturbance to persons and property on the ground. The FAA did not follow these procedures on remand, and argues that Order 7610.4J does not apply to corrections like those at issue, which originate within the FAA. We find the FAA's argument persuasive. Order 7610.4J speaks of route revisions sought by "military unit[s]," not ministerial revisions to correct internal error. Moreover, the FAA sought the remand to correct the altitudes to conform to those in the EIS, which had already considered minimization of ground disturbance. Because the result would be the same—modification of the altitudes to conform to the EIS—whether the FAA followed the procedure of Order 7610.4J or not, petitioners have not been prejudiced by the FAA's chosen procedure on remand, and we see no reason to invalidate the correction.⁶³

⁶³ *Pacific Molasses Co. v. FTC*, 356 F.2d 386, 390 (5th Cir. 1966). Petitioners also argue that the FAA exceeded the scope of the limited remand by issuing an Addendum to the Lancer MOA NRDD. Petitioners contend that the FAA issued this document to shore up its assertion that the NRDD served as the ROD for both the Lancer MOA and modified IR-178 (see discussion below). As discussed in the next section, we find the NRDD as it existed before the FAA added the Addendum adequate as a ROD for the entire RBTI. Thus the FAA did not exceed the scope of the limited remand by issuing

IX. ROD for IR-178 Modifications

Lastly, petitioners argue that the FAA failed to issue a ROD for the IR-178 modifications.⁶⁴ The FAA responds that, because IR-178 and Lancer MOA are “environmentally and aeronautically linked,” its Non-Rulemaking Decision Document (NRDD) of December 11, 2001 for Lancer MOA serves as the ROD for both Lancer MOA and modified IR-178. Because we find the EIS inadequate and therefore must set aside both the Air Force’s and FAA’s RODs approving the RBTI, we need not address this issue.

X. Conclusion

For the foregoing reasons we vacate the decisions of the district court, the Air Force ROD and the FAA orders approving the RBTI. We remand to the Air Force and FAA to prepare a supplemental EIS which adequately addresses wake

the Addendum, which states: “[b]eyond describing these inadvertent altitude discrepancies and documenting their correction, this addendum does not otherwise reopen the [] NRDD.”

⁶⁴ Petitioners’ additional argument that the FAA failed to evaluate environmental factors within the NEPA process is without merit. Petitioners argue that the FAA violated NEPA by conducting studies after the Air Force published the final EIS. NEPA, however, allows a cooperating agency to adopt a lead agency’s EIS after its own review. 40 C.F.R. § 1506.3. Thus, in order for a cooperating agency to adopt the lead agency’s EIS, the NEPA process actually requires the cooperating agency to do some independent study *after* the final EIS has been prepared. Petitioners do not offer any support for the notion that the “NEPA process” concludes once the lead agency issues the final EIS.

vortex impacts and FAA comments as required by CEQ and Air Force regulations.

Appendix

1. APA - Administrative Procedure Act
2. CEQ - Council on Environmental Quality
3. DMTPHA - Davis Mountains Trans-Pecos Heritage Association
4. EIS - Environmental Impact Statement
5. FAA - Federal Aviation Administration
6. IR - Instrument Route
7. MOA - Military Operations Area
8. MTR - Military Training Route
9. NEPA - National Environmental Policy Act
10. NRDD - Non-Rulemaking Decision Document
11. RBTI - Realistic Bomber Training Initiative
11. ROD - Record of Decision

IN THE UNITED STATES COURT OF APPEALS

FOR THE FIFTH CIRCUIT

No. 02-60288

DAVIS MOUNTAINS TRANS-PECOS HERITAGE
ASSOCIATION, a Texas non-profit corporation,

Petitioner,

versus

FEDERAL AVIATION ADMINISTRATION;
MARION C. BLAKEY, Administrator, FEDERAL
AVIATION ADMINISTRATION; NORMAN Y.
MINETA, SECRETARY, DEPARTMENT OF
TRANSPORTATION,

Respondents.

No. 03-10506

DAVIS MOUNTAINS TRANS-PECOS HERITAGE
ASSOCIATION; DALE TOONE; SUSAN TOONE;
TIM LEARY; REXANN LEARY; EARL BAKER;
SYLVIA BAKER; MARK DAUGHERTY; ANN
DAUGHERTY; DICK R. HOLLAND; J. P. BRYAN;
JACKSON BEN LOVE, JR.; KAARE J. REEME,

Plaintiffs-Appellants,

versus

UNITED STATES AIR FORCE; JAMES G. ROCHE;
Secretary United States Air Force; UNITED STATES
DEPARTMENT OF DEFENSE; DONALD H. RUMSFIELD,
Secretary of Defense,

Defendants-Appellees.

No. 03-10528

BUSTER WELCH; JOHN F. OUDT; LESA OUDT;
JOHN DIRK OUDT; CINDY ANN SPIRES, ET AL,

Plaintiffs-Appellants,

versus

UNITED STATES AIR FORCE; F. WHITTEN
PETERS, Secretary of the United States Air Force;
WENDELL L. GRIFFIN, Colonel, Commander,
7th Bomb Wing, Dyess Holloman Air Force Base;
CURTIS M. BEDKE, Brigadier General, Commander,
2nd Bomb Wing, Barksdale Air Force Base; UNITED
STATES DEPARTMENT OF DEFENSE; DONALD H.
RUMSFIELD, SECRETARY DEPARTMENT OF
DEFENSE,

Defendants-Appellees.

Petitions for Review of an Order

of the Federal Aviation Administration

ON PETITIONS FOR REHEARING

Before REAVLEY, JONES and DENNIS, Circuit Judges.

PER CURIAM: *

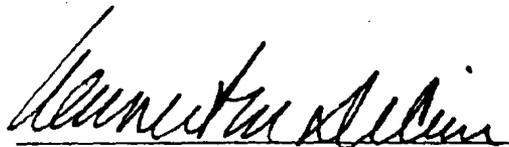
The petition for rehearing of The Air force is granted to this extent: The operation of the Realistic Bomber Training Initiative may continue pending outcome of the supplemental environmental impact statement under conditions of operation set by the district court. The case is remanded to that court for that purpose.

The petitions for rehearing are otherwise denied.

*Pursuant to 5TH CIR. R. 47.5, the Court has determined that this opinion should not be published and is not precedent except under the limited circumstances set forth in 5TH CIR. R. 47.5.4.

not, in my opinion, allow aircrews to fully meet necessary realistic training objectives. However, should the Court allow these temporary measures, our aircrews will adhere to them in the interim to preserve the opportunity to continue training as realistically as possible.

I declare under penalty of perjury that the foregoing is true and correct. Executed on 5 JANUARY, 2005.


KENNETH M. DECUIR, Major General
Air Combat Command
Director of Air and Space Operations
Langley Air Force Base, VA 23665-2789

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- (4) Defendants' Corrected Brief on Remand, filed April 27, 2005;¹
- (5) Plaintiffs' (DMTPHA) Reply Brief Addressing Operating Conditions for RBTI Pending Completion of SEIS and Issuance of Agency Decisions on Remand, filed April 15, 2005; and
- (6) Defendants' Post-Remand Reply Brief, filed April 15, 2005.

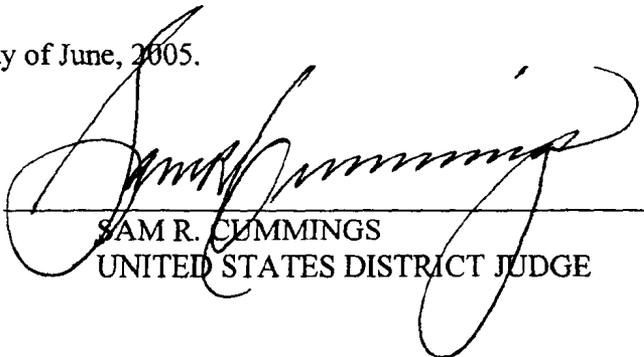
After considering all the relevant arguments and evidence, this Court finds as follows:

- (1) Plaintiffs' Motion for Hearing on Operating Conditions for RBTI Pending Completion of SEIS and Issuance of Agency Decisions on Remand is **DENIED** for the reason that adequate briefing on the issues has been completed by the parties;
- (2) The Fifth Circuit Court of Appeals Order issued January 31, 2005 On Petition for Rehearing allowed the operation of the RBTI to continue pending the outcome of the supplemental environmental impact statement. The Fifth Circuit directed this Court to set the conditions under which the RBTI may continue;
- (3) On January 12, 2005, the Air Force issued Flight Control Information File A05-01 ("FCIF A05-01"), titled "IR-178 and LANCER MOA Procedures," to Air Combat Command, Air National Guard, and Air Force Reserve Command units;

¹Defendants filed Defendants' Brief on Remand on March 10, 2005. Defendants filed their Corrected Brief on Remand because the declarations and exhibits filed in support of Defendants' post-remand brief did not conform to the appendix requirement of Local Rule 7.1(i).

- (4) FCIF A05-01 directs the following restrictions to be in effect until further notice: (a) Aircrews utilizing IR-178 will fly no lower than 500 ft. AGL, AP/1B altitude, or minimum altitudes set by the controlling airspace manager, whichever is higher, and (b) Aircrews utilizing the LANCER MOA will fly no lower than 12,000 MSL;
- (5) The RBTI may continue as previously conducted with the addition of the FCIF A05-01 restrictions, pending the completion of SEIS and issuance of agency decisions on remand;
- (6) The restrictions addressed by FCIF A05-01 adequately address the relevant issues until such time as the SEIS and agency decisions are completed; and
- (7) The RBTI is otherwise unchanged pending the SEIS and agency decisions on remand.

SO ORDERED this 29th day of June, 2005.



SAM R. CUMMINGS
UNITED STATES DISTRICT JUDGE