

2.2.6 LETTER A6 – SACRAMENTO COUNTY, DEPARTMENT OF AIRPORTS

**Letter A6**

Department of Airports  
Cynthia A. Nichol  
Director of Airports



County Executive  
Navdeep S. Gill

**County of Sacramento**

December 27, 2018

Ms. Jen Mellor  
Planning Technician, Facilities & Strategic Planning  
Natomas Unified School District  
1901 Arena Boulevard  
Sacramento, CA 95834

Subject: Notice of Availability of a Draft Environmental Impact Report for the Paso Verde School Project

Dear Ms. Mellor,

This is a letter in response to the Notice of Availability of a Draft Environmental Impact Report (DEIR) for the Paso Verde School Project. The Sacramento County Department of Airports (Department) appreciates the opportunity to participate in providing comments in regards to consistency with the Sacramento International (SMF) Airport Land Use Compatibility Plan (ALUCP), anticipated aircraft overflight and noise conditions, and potential wildlife hazard concerns.

A6-1

The Department recognizes that the DEIR has determined the site to be consistent with the SMF ALUCP and has determined that current and future impacts on the site related to Sacramento International Airport will be less than significant or mitigated to be less than significant as defined by California Environmental Quality Act (CEQA).

That said, the Department is in the unique position of regularly hearing from the public concerns about those same impacts upon residential land uses and the residents that the Paso Verde School will also serve. Despite these impacts being below federal and State thresholds of significance, the amount of community concern regarding overflight impacts on the residential areas near the project site is substantial. The Department therefore recommends the NUSD consider and implement additional measures to ensure that full disclosure of the potential for noticeable effects from aircraft overflight noise will be regularly communicated to prospective staff, students and parents and that additional investigation and mitigation (to the extent possible) will be implemented by NUSD.

A6-2

The Department also recommends that the DEIR be revised to include a robust analysis of alternative sites B and C. The DEIR states that alternative "Sites A through H would likely have similar or greater environmental impacts than the proposed project", but makes no attempt to quantify these impacts in the case of sites B and C. Given the known level of public awareness and concern regarding aircraft overflight impacts in the area, the Department recommends the public be given a full accounting of all of the known and anticipated impacts at all three sites in order that an informed final recommendation for the optimum school site can be considered.

A6-3

**ALUCP**

The Department recognizes that the DEIR states that the Paso Verde School project has been determined to be compatible or conditionally compatible with the SMF ALUCP by SACOG, the jurisdictional ALUC for the project area. The Paso Verde School project is subject to various compliance regulations such as building restrictions and Federal aviation Administration (FAA) notification requirements as it falls within the Airport Influence Area of the ALUCP. The Department recognizes that NUSD's proposed site plan for placing buildings in Safety Zone 6, rather than Safety Zone 4, makes them safety compatible with SMF per the ALUCP. The proposed project parcel is partially located within the Community Noise Equivalent Level 60-65 decibel contour, although the classrooms are sited outside of the contour. NUSD is responsible for notifying the FAA for any proposed construction as stated in Title 14 Code of Federal Regulations Part 77 for all construction that has potential to affect navigable airspace.

A6-4

**Safety**

As previously noted, the location of the school facilities (buildings, classrooms) inside of Safety Zone 6 is compatible as determined by the ALUCP. SACOG, as the Airport Land Use Commission (ALUC), considers the playing fields as "Group Recreation," and the ALUCP conditionally allows athletic fields in Safety Zone 4 under this land use category. In land use planning, a "conditionally allowed" use is one that is normally not permitted but with the application of conditions that address special circumstances, would be acceptable. While the ALUC has determined the fields to be conditionally compatible for recreational purposes, since educational facilities and activities cannot be made conditionally compatible in Safety Zone 4, we recommend the NUSD seek further clarification from the ALUC as to whether their use as part of a formal educational academic curriculum, such as Physical Education classes or classroom recess, is acceptable or should be prohibited. The Department recommends the latter.

A6-5

**Aircraft Overflights and Noise**

While the Department recognizes the DEIR determines current and future aircraft overflight and noise impacts are less than significant, recent concerns raised by residents of the Westlake, Westshore, and Sundance communities the school is nearest to and intended to serve, warrant additional consideration by the NUSD and regularly issued disclosure to the community.

A6-6

To expand on the analysis provided in the DEIR and provide a more complete understanding of the number of overflights that will occur over the Paso Verde School area, please refer to the enclosed Paso Verde School Flight Track Analysis representing actual overflights occurring in a 24-hour period on May 31, 2018. For the purpose of site specific analysis, the Department established an arbitrary penetration gate that spans the project location for two miles, one mile to the north and one mile to the south of the center, and is oriented to capture flights that directly overfly or are in close proximity to the project area. A total of 181 departure flight tracks were recorded on May 31, 2018, of which 145 penetrated the gate. These flights passed over the site at altitudes between 1,317 feet mean sea level (MSL) and 4,450 feet MSL. Please refer to page 2 of the Flight Track Analysis for more information.

A6-7

Additional analysis was performed to identify the number of overflights that have occurred at the project site during school hours (7AM-5PM) on May 31, 2018. A total of 101 departure flight tracks were recorded from 7AM to 5PM, of which 86 penetrated the Paso Verde penetration gate. These flights passed over the site at altitudes between 1,462 feet MSL and 4,304 feet

A6-8

MSL. Please refer to page 3 of the Flight Track Analysis for more information. The discussed Flight Track Analysis is representative of the actual number of overflights that NUSD should anticipate occurring at Paso Verde School. While these overflights average approximately one every seven minutes, the Department notes the frequency of overflights can peak at a much higher rate during specific periods, currently this includes mornings between 6-8 AM and 2-4 PM. Note that FAA regulations effectively prohibit airport operators from implementing operational restrictions or limitations such as curfews or limits on the number of flights. This is especially true in the case of land uses determined to be compatible by a local ALUC.

A6-8  
(Cont)

The single event noise measurements presented in the DEIR are characteristic of the loudness of aircraft overflights which can be anticipated to occur on a nearly daily basis (except on the occasions when airport operations are conducted in a north flow configuration). The reported single event noise levels (SELs) range from 61.8 to 88.6 A-weighted decibels – similar to a diesel truck at 50 feet at 50 miles per hour. It is additionally noted that the degree to which noise results in annoyance and interference with activities is highly subjective. Based on our recent experience, there will undoubtedly be children, parents and staff who are annoyed by the SELs experienced in the outdoor activity areas of the school. It is quite plausible that some parents will complain to school officials and demand the airport and the FAA adjust flight paths or implement restrictions out of consideration for their children. Given that airspace is solely within the FAA's jurisdiction, and that the school is knowingly being built by NUSD under existing flight paths forecast to increase in activity, the Department cautions the NUSD not to expect the Department to advocate, nor the FAA, to mitigate impacts the NUSD could avoid or lessen by choosing another site.

A6-9

The most recently adopted airport master plan's passenger and flight activity forecasts for SMF indicate a steady increase in activity through at least 2020, and the FAA's current Terminal Area Forecast for SMF projects continued steady growth in activity through 2045. The DEIR acknowledges increased noise levels in the modified future contours presented under the heading of Exterior Noise from Aircraft. The Department concludes that NUSD, by certifying the EIR for a school site under an existing flight path, recognizes and accepts that future impacts from growth of air traffic at SMF will be unavoidable and acceptable.

A6-10

#### **Hazardous Wildlife Attractants**

The Paso Verde School Project is considered a development project near SMF having characteristics the FAA regards as potential attractants for wildlife hazardous to aircraft operations and falls within the 10,000-foot FAA Separation Area for Wildlife Attractants. The Department recommends the review of current FAA regulations in regard to hazardous wildlife attractants in FAA Advisory Circular 150/5200-33B. This document is available on the FAA's website and we are happy to provide assistance in locating it if necessary. We recommend that the school curriculum not include the establishment of features (water features) or practices (agriculture) that would constitute wildlife attractants. Airport wildlife biologists can be made available to consult with NUSD on the appropriateness of specific proposed features and activities, including steps that can be taken to reduce the attractant nature of the proposed detention basin. Though designed to drain within 48 hours, the water in the basin during those 48 hours may still serve as an attractant to hazardous wildlife.

A6-11

**Recommendations**

The Department recognizes that the site may be made compatible with SMF by the letter of the law. However, in recognition of ongoing concern (expressed by numerous members of the communities the school will serve) that overflight impacts in the area are objectionable (even though their residences are similarly compatible), the Department recommends NUSD explore and document all alternatives to locate the school further away from SMF.

A6-12

Specifically, the Department recommends that alternative sites B and C be fully investigated and reported on in a revised DEIR.

Given that NUSD has already acquired, at significant cost to NUSD, the land for the proposed project site without a robust alternatives analysis, in the event NUSD proceeds with development of the site as proposed, the Department recommends the following mitigation steps:

NUSD perform a classroom disruption analyses for the project location to better understand and communicate anticipated noise levels at the site and their potential impact on the educational process;

NUSD provide regular written notice to prospective staff and parents/guardians of all prospective students in regards to level of aircraft activity at the school location based on proximity to SMF;

A6-13

NUSD grant and execute an avigation easement on the parcel for the County Department of Airports in recognition of the district's choice to build a school under existing and regularly used flight paths associated with SMF;

NUSD restrict the use of the recreational fields to strictly recreational purposes and prohibit their use as part of any formal educational academic curriculum, such as Physical Education classes or classroom recess;

NUSD restrict curriculum to exclude the establishment of features (water features) or practices (agriculture) that would constitute wildlife attractants anywhere on the proposed Paso Verde school site.

Thank you for the opportunity to comment on the Notice of Availability of a Draft Environmental Impact Report for the Paso Verde School Project. We look forward to assisting in any way possible that works in cooperation with SMF aircraft operations.

Sincerely,



**J. Glen Rickelton**  
Airport Manager of Planning and Environment  
Sacramento County Department of Airports

**Attachments**

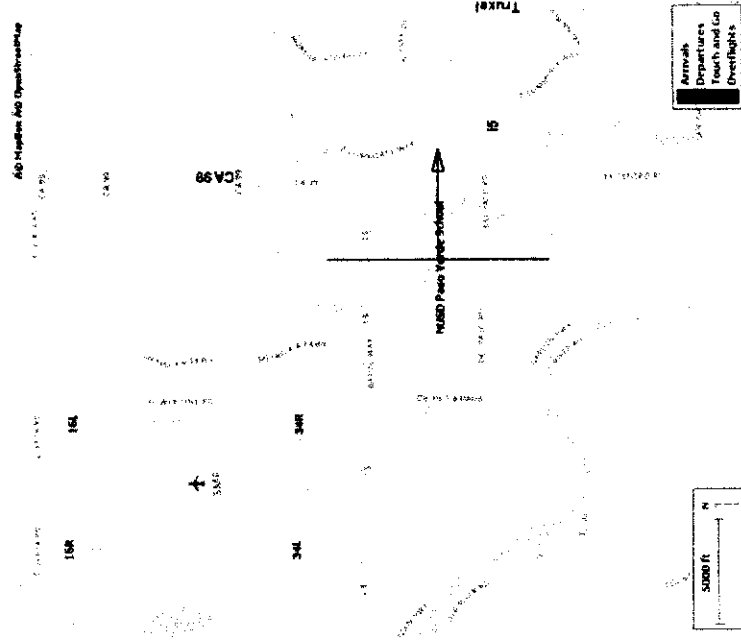
- Paso Verde School Flight Track Analysis

Attachment 1

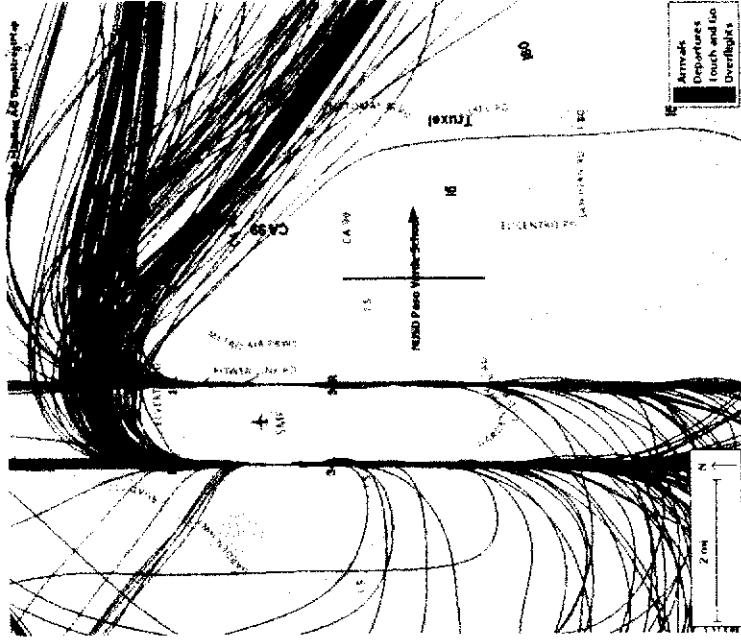
Sacramento County Airport System  
Noise Information Office



Sacramento International Airport Flight Altitudes Near Paso Verde School Project Location  
Flight Track Analysis



The penetration gate is centered over the project location spanning the site for approximately two miles; one mile to the south and one mile to the north of the center. The center is placed over the midpoint of the parcels to best capture the site.

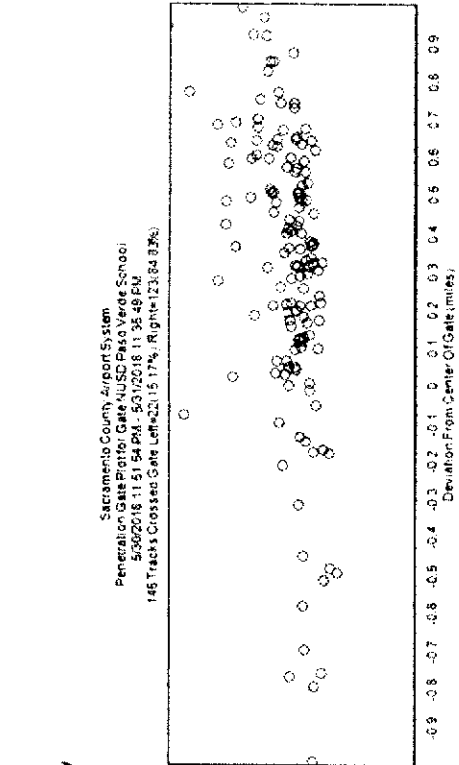
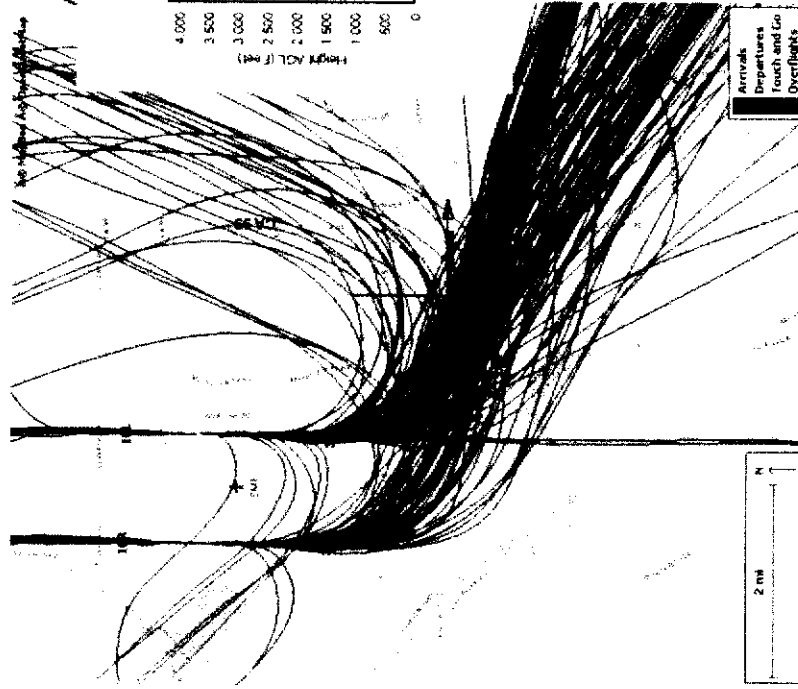


When the Airport is in North Flow conditions, the site may experience few to no overflights but will still be impacted by aircraft operations taking place fewer than two miles to the west. North Flow takes place approximately 30% of the year, especially during transitional seasons such as spring and autumn.

Attachment 1  
 Sacramento County Airport System  
 Noise Information Office



Sacramento International Airport Flight Altitudes Near Paso Verde School Project Location  
 Flight Track Analysis



The above graph depicts altitudes of 145 aircraft operations for a 24-hour day, departing on May 31, 2018, relative to the center of the gate being analyzed. The lowest aircraft overflew the site at 1,317 feet above ground level and the highest aircraft overflew the site at 4,450 feet above ground level. The average altitude of any aircraft that overflew this site was 2,141 feet above ground level.

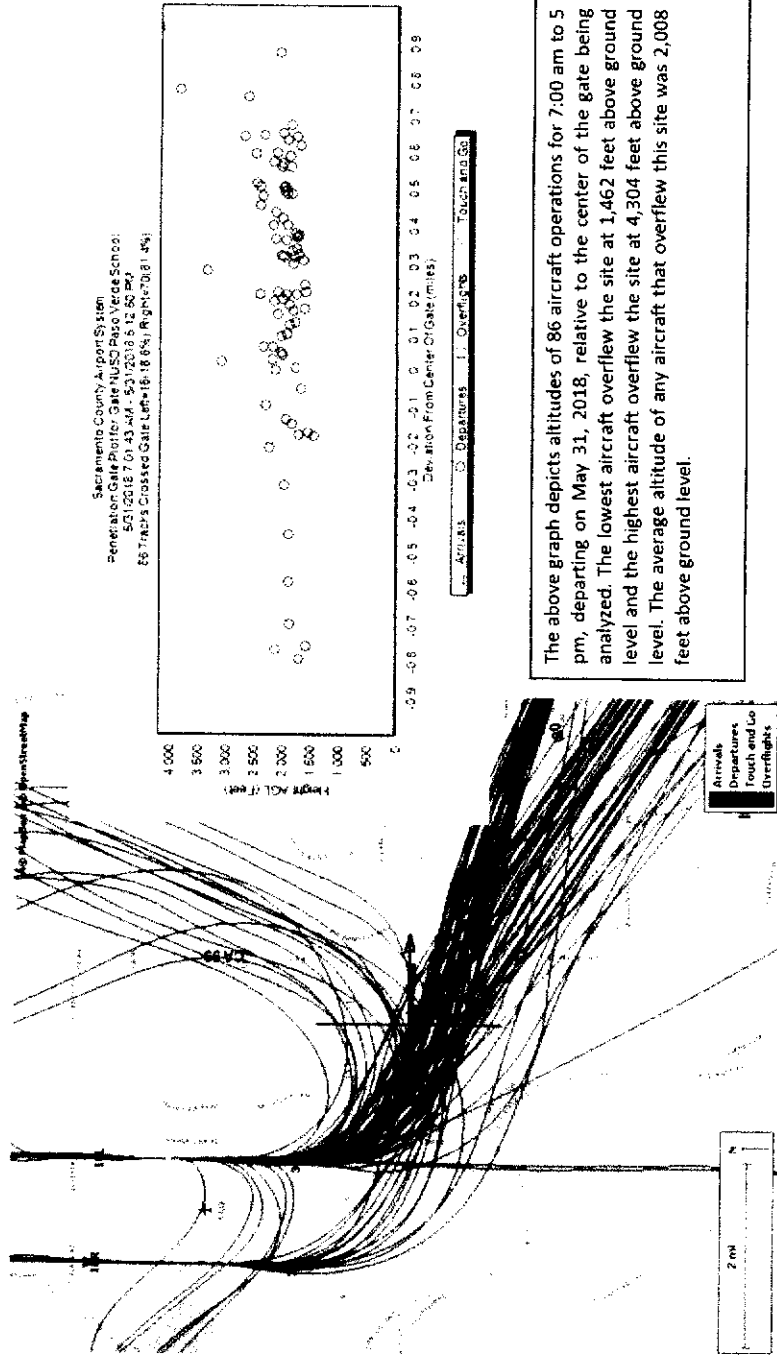
When the Airport is in South Flow conditions, the site will experience consistent overflights as aircraft climb under power from the departure runway to their cruising altitude. South Flow takes place approximately 70% of the year.

Attachment 1

Sacramento County Airport System  
Noise Information Office



Sacramento International Airport Flight Altitudes Near Paso Verde School Project Location  
Flight Track Analysis



The above graph depicts altitudes of 86 aircraft operations for 7:00 am to 5 pm, departing on May 31, 2018, relative to the center of the gate being analyzed. The lowest aircraft overflew the site at 1,462 feet above ground level and the highest aircraft overflew the site at 4,304 feet above ground level. The average altitude of any aircraft that overflew this site was 2,008 feet above ground level.

The graphic above depicts South Flow operations during typical school hours, 7:00 am to 5 pm.





## 2.2.15 LETTER I4 – BENJAMIN FRIES

**Letter I4**

### Comment on the Environmental Impact Report of the Proposed Paso Verde School Location

Submitted December 26, 2019 by Benjamin J. Fries

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C/O Jen Mellor  
Natomas Unified School District  
1901 Arena Boulevard  
Sacramento, CA 95834

### Comment on the Environmental Impact Report of the Proposed Paso Verde School Location

The proposed location is a very bad site for the proposed Paso Verde School (PVS) for several reasons. The proposed location is adverse to the economic potential of Sacramento International Airport (SMF). The site is also dangerous because of high risk over the long term of an airliner crash landing into the school. The learning and health of students could also be impacted by the aircraft noise.

14-1

#### Summary of 4 Reasons

**Reason 1: Major adverse economic impact** on the long-term economic promise and potential of SMF. Constructing PVS at the proposed site would have adverse economic impact on SMF flight operations. That would result in adverse economic impact on Sacramento and northern California.

14-2

**Reason 2: Safety hazard to students, teachers, and others** at the school because of the risk of an airliner crash-landing into the school.

14-3

**Reason 3: Adverse health and learning impact** on students, teachers, and others at the school would occur. That is because of the long-term, incessant noise from low-flying overhead aircraft during scheduled aircraft take-off from SMF. The website <https://thequietcoalition.org/airplane-noise-health-hazard/> has details. Google for "airport noise and health" and "airport noise and learning" to get a listing of abundant online evidence of this adverse impact.

14-4

**Reason 4: Long-term failure of the PVS school** because concerned parents would relocate their children to some other school because of concern about student health, learning, and safety. Also because of the obvious and pressing need for future SMF expansion and constructing additional future runways, could result in SMF purchasing the school and its land, then relocating the school and its students.

14-5

#### **Reason 1: Adverse Immediate Economic Impact Upon SMF Operations**

1. If Paso Verde School is constructed there, the proposed site of PVS would have serious adverse economic impact on short-term and long-term SMF commercial airliner operations.
2. The public outcry from concerned parents and teachers of low flying aircraft noise disturbance over the school would force severe curtailment of southbound SMF takeoffs during weekday school hours.

14-6

14-7

**Comment on the Environmental Impact Report of the Proposed Paso Verde School Location**

**Submitted December 26, 2019 by Benjamin J. Fries**

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**Reason 1 continued: Adverse long-term economic impact on future SMF expansion of flights schedule**

- 3. To best serve Sacramento and northern California, SMF must be free to construct additional runways and grow into the 21<sup>st</sup> century as an airline hub for all of northern California. The proposed new PVS location would severely hobble the ability of SMF to expand and pursue that maximum economic potential. | 14-8
- 4. Additionally, because of noise and safety issues, SMF would surely be prevented from expanding air service operations for flights that would occur during school hours. | 14-9
- 5. If PVS were poorly located at that site which is under the southbound takeoff pattern of the SMF east runway, the environmental impact of overhead air traffic upon the school would seriously diminish SMF prospects of getting CEQA approval in future years. That would damage the opportunity for SMF to expand commercial airline flights for passenger and cargo air traffic. | 14-10

**Reason 2: Safety issues include the risk of an airliner crashing into the school:**

- 6. The proposed school site would be a grave danger to students, teachers, and others. That existing open agricultural field would be a very dangerous place to locate and build a school, homes, or work place. That is because an airliner could crash into the school during take-off, killing hundreds of students and faculty in the school. | 14-11
- 7. The site is nearby the take-off path of a SMF airport runway. That makes the site a very dangerous place to have a school. Prominent causes and examples of airliner crashes during take-off are listed below. | 14-12
- 8. **Wind shear** -- a sudden change in wind speed or direction over a short distance -- has been a factor in many air disasters during take-off because there is insufficient altitude for the pilot to correct the disturbance. Prominent examples of wind shear crashes can be found online. | 14-13
- 9. **Crashes can occur during takeoff because of aircraft structural failure** when the airframe is under maximum stress due to maximum lift loading and maximum engine thrust. On **May 25, 1979, a DC-10 crashed just moments after takeoff from Chicago** when an engine completely broke off from the wing. In **March 1974 a Turkish Airlines DC-10 crashed in Paris** when a rear cargo door which was improperly closed blew out. In **September 1985 a DC-9 crashed in Milwaukee WI** when an engine exploded during takeoff. | 14-14

10. In February 2000 shortly after takeoff at Mather Airport Sacramento CA, a DC-8 airfreighter crashed into an auto salvage yard (fortunately not a school) because of "a loss of pitch control resulting from the disconnection of the right elevator control tab." 14-15
11. Listed below are more examples, including pilot error, crashes on takeoff, and extreme maneuvers causing the airframe to rupture or causing the aircraft slipping sideways. Numerous other examples can be found online, of takeoff crashes and other crashes from low altitude:
- a. French supersonic Concorde airliner crashed on takeoff from Paris in 2000, when its left tires were fragmented by metal debris on the runway, causing a left-side engine fire and crash.
  - b. Soviet Russian supersonic TU144 airliner crashed when its left wing broke off during tight low-level maneuvers at the 1973 Paris Air Show, while 350,000 attendees watched in horror. Caused by rupture of the airframe that was overstressed by the tight maneuvers.
  - c. While trying to extinguish a wild fire, a C-130 tanker loses both wings mid-air and crashes. (2006) The firefighting aircraft was doing tight maneuvers while fully loaded with firefighting liquid, resulting in rupture of both wings and crashing. Both wings breaking off mean it was too much G-force, and not because of the aircraft being "too old." It exceeded its low altitude stress capacity.
  - d. On Friday, 24 June 1994, a United States Air Force Boeing B-52 Stratofortress crashed near Fairchild Air Force Base in Washington state after its pilot maneuvered the bomber beyond its operational limits and lost control. The crash occurred because the tight turn caused the aircraft to slip sideways and stall. The pilot did not have sufficient altitude to recover from the side slip, so that the bomber fell sideways and crashed into the ground. 14-16
  - e. Japanese Air Lines airliner crashed into San Francisco Bay while attempting to land at SFO. Pilot error misjudged the location of the runway in the foggy weather. Japan Airlines Flight 2 was a flight piloted by Captain Kohei Asoh on November 22, 1968.<sup>13</sup> The plane was a new Douglas DC-8 named "Shiga", flying from Tokyo International Airport (Haneda) to San Francisco International Airport. Due to heavy fog and other factors, Asoh mistakenly landed the plane near Coyote Point in the shallow waters of San Francisco Bay, two and a half miles short of the runway.
  - f. A US Airways plane crashed into the Hudson River in New York January 15, 2009 as a water crash landing of US Airways Flight 1549 on the Hudson River off Manhattan after the both engines were disabled by striking a flock of Canada geese immediately after takeoff.

The danger zone includes the vicinity adjacent to the takeoff flight path. The vicinity is dangerous because when an aircraft crashes on takeoff, often it will veer to the right or left depending upon which side of the aircraft the disruption occurred, or which direction(s) the wind shear came from.

**Aircraft Design Safety Margin:** To prevent airframe rupture and side slip, commercial pilots (and their computer surrogates) are trained to maintain smooth steady flight. That is because a commercial aircraft is designed with very little safety margin. The safety margin is minimized to maximize the aircraft payload, which means the aircraft design must minimize airframe weight.

**Comment on the Environmental Impact Report of the Proposed Paso Verde School Location**

**Submitted December 26, 2019 by Benjamin J. Fries**

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12. **A bird strike** can also cause a takeoff to result in a crash. Abovestated is the January 2009 crash at New York City. A safe crash landing occurred after striking a flock of Canada geese. That bid strike occurred after take-off, fortunately the pilot had the Hudson River as a safe place to crash-land the A-320 Airbus airliner. SMF commonly has Canada geese flocks in its take-off flight paths, and very high rate of bird strikes compared to other airports. | 14-17
13. If any of these mishaps occur during aircraft take-offs at SMF, **the aircraft pilot can minimize loss of life if he/she has a clear open path for an emergency crash landing.** | 14-18
14. **Currently, SMF does have a clear path for an aircraft crash landing** because of a failed takeoff. That includes the flight paths southbound from the east and west runways of SMF, which both have a clear open agricultural field for an emergency crash landing. | 14-19
15. **However in the proposed location, the PVS school would be in the path of an emergency crash landing.** That could cause hundreds of students, teachers, and airliner passengers to lose their lives. | 14-20
16. Accordingly, the **proposed PVS school site would have serious adverse environmental impacts upon the safety of students and teachers** that would attend the school. | 14-21
17. Safety Concern by Parents: **If the school were to be built there, just one near-miss that could have been a crash into the school would motivate many parents to take their kids out of the school and demand that the school be closed and a new school be built somewhere else. Or, a headline news report of an airliner crashing into a school during takeoff somewhere else in the world would alarm NUSD parents.** | 14-22
18. If a school were to be built on that site, **it would be a catastrophe waiting to happen.** | 14-23

**Reason 3: Adverse Impact upon Student Health and Learning:**

19. There would be adverse health impacts upon students and teachers from incessant noise of low overhead aircraft taking off from SMF at full power. Abundant evidence is available online. | 14-24
20. **Natomas Unified School District (NUSD) currently proposes the Paso Verde School site which is nearby the southbound takeoff pattern for the east runway at SMF.** For the proposed school site, the noise disturbance of very frequent low-flying aircraft under full power while taking off from SMF would have overwhelming adverse impact upon student learning and student health. **Often the aircraft takeoff frequency is less than a minute apart, for several take-offs in a row.** | 14-25

21. While waiting for the airliner crash catastrophe to occur, **the incessant overhead aircraft noise would be stressful to the health of students and teachers**, ruin the teaching environment for the teachers, and cause failing grades for some students. Students struggling with Attention Deficit Disorder (ADD) and other learning disorders could be adversely impacted by the distraction and disruption of incessant aircraft noise. 14-26

22. Learning disorders are often genetic and reflect underlying brain dysfunction. However, **ADD will certainly be exacerbated by exposure to noise as these children are more distractible and will interfere with their ability to get their work done and pay attention to what the teacher is saying.** So children in the school with learning disabilities of this sort will not progress as well which will be unfortunate. 14-27

**Reason 4: Long-term failure of the PVS school because of the impact on students**

23. **Adverse impact upon student occupancy: Parents concerned about safety, learning, and student health would take their kids out of PVS school and enroll their kids in some other school.** 14-28

24. **The better teachers frustrated by the noise would leave and teach at some other school, resulting in a substandard PVS school.** 14-29

**Reason 4 continued: Long-term failure of the PVS school because of need for future SMF expansion**

25. **Future expansion could result in SMF purchasing the school and its land, then relocating the students to a school somewhere else, and removing the school so the SMF flight pattern would no longer be impaired by safety and noise complaints from the school.** 14-30

26. **If PVS school were built on the proposed site, NUSD would surely oppose any future SMF expansion of flights because of the adverse impact on student learning and health.** 14-31

27. **That NUSD opposition might make it necessary for SMF to buy out and close the school so that SMF can expand its flights and become a northern California hub for passenger air travel and cargo flights. To do that, SMF might need to pay to close and relocate the school, so that SMF can accommodate unopposed and unencumbered expansion of its long-term operations.** 14-32

**Conclusion**

**We all love our beautiful SMF International Airport, and we all must protect the long-term future opportunities of SMF to freely grow its air traffic as Sacramento grows, without having the school or other obstacles as barriers to SMF air traffic growth.**

14-33

Surely Sacramento International Airport (SMF) would be concerned about the proposed PVS school location near the flight path of south-bound takes-offs from the east SMF runway.

**A dedicated air corridor is needed for SMF.** To protect the future of our SMF to serve us by expanding with many more flights with more runways, we must all support and establish a dedicated corridor of open unbuilt land zoned for agriculture. That would include an air corridor for southbound SMF takeoffs under which no homes, hotels, schools, nor other facilities can be constructed. All of that open unbuilt agricultural landspace currently exists, and is available to be set aside to accommodate the long-term economic promise and potential of SMF to become a major regional hub for northern California.

14-34

With a dedicated SMF corridor we could all welcome more SMF domestic flights any time of day or night.

With a dedicated SMF corridor, we could all welcome more international flights at all hours of the night.

With a dedicated SMF corridor, we could all welcome more cargo flights at all hours of the night.

A dedicated air corridor would allow SMF to become a great air service hub for northern California.

**Surely most of us welcome a new school for NUSD. However the school should find a good location that is good for teaching and learning.** The proposed PVS school site is a poor location because of safety, learning, and student health reasons. The school should find a good location that does not interfere with the long-term future of SMF commercial airliner operations.

14-35

If you have questions, please email me at [bfries@dtsc.ca.gov](mailto:bfries@dtsc.ca.gov) or phone me at 916-255-3667.

Respectfully,

Benjamin J. Fries, P. E., M.B.A.