

ATTACHMENT 4: MATHER AIRPORT - MATRIX OF POTENTIAL NOISE ABATEMENT MEASURES as of 7/07/03

| No. | Proposed Measure | Implementation Actions and Responsible Parties | Anticipated Costs/Funding Sources | Anticipated Schedule/Duration | Options |
|-----|---|--|---|--|---|
| 1 | None. | None. | None. | None. | No recommendation. |
| 2 | To get aircraft higher on approach, promote the use of the 3-degree ILS approach, when conditions permit. | FAA implements new approach plate, County informs airlines, monitors performance, and reports on progress. | None. | Dec. 27, 2002/ Ongoing | Recommended. |
| 3 | Encourage delay of the extension of the flaps and landing gear, when conditions permit. | If the Group recommends this measure; County informs airlines and periodically monitors performance. | None. | Nov. 2002/ Ongoing | Recommended. |
| 4 | Encourage all aircraft (including VFR) to fly a 3-degree or higher approach. | The Group recommended this measure. The County requested FAA to modify the Airfield Facilities Directory to encourage all aircraft (including VFR) to fly a 3-degree or higher approach. | None. | Request made Spring 2003. | Recommended. FAA responded to SCAS request to modify the AFD language and requested that it be shortened or that the original language be retained. The Group decided to retain the AFD original language. Pilots indicated that the recommended measure would be operationally difficult to fly. |
| 5 | Encourage all air cargo aircraft to fly the ILS approach. | If the Group recommends this measure; County requests FAA to review and implement. | Unknown additional fuel cost to aircraft arriving from west, north, and south. | TBD. | Concentrates noise on residents under the extended centerline to Runway 22L. Not recommended. |
| 6 | Establish charted visual approach to reduce noise from non-ILS approaches. | If the Group recommends approach, County requests FAA implement procedure. FAA reviews, approves or disapproves, and, if approved, implements. | Unknown. | TBD. | Shifts noise to residents not under the extended centerline to Runway 22L. Not recommended. |
| 7 | Utilize GPS, FMS, or RNAV technology and develop approach procedures. | If the Group recommends this measure; County develops new approach procedures and requests FAA to review and implement them. | Unknown. | Tied to the timing of the Mather Master Plan. | Shifts noise to residents living under the new approach. Recommended. |
| 8 | Encourage use of the existing VOR/DME approach. | If the Group recommends this measure; County requests FAA to test the procedure for 120 days. FAA reviews, approves or disapproves, and, if approved, implements test. | Unknown. | Requested by the County on Dec. 10, 2002/Ongoing | Shifts noise to residents living under the VOR/DME approach. FAA's Sacramento Flight Standards Office is opposed to the increased use VORDME approach on the basis of safety and national FAA policy. Recommended. |
| 9 | Develop an omni directional approach using the VOR DME. | If the Group recommends approach, County requests FAA implement procedure. FAA reviews, approves or disapproves, and, if approved, implements. | Unknown. | Discussed at the Dec. 4 Chief Pilot's meeting. | Shifts noise to residents not under the extended centerline to Runway 22L Not recommended. |
| 10 | Prepare STARS for the desired noise abatement approaches. | If the Group recommends approach, County requests FAA implement procedure in conjunction with CDA. FAA reviews, approves or disapproves, and, if approved, implements. | Unknown. | | Shifts noise to residents not under the extended centerline to Runway 22L Recommended. |
| 11 | Have nighttime east arrivals turn onto their base leg south of GADBE similar to the arrivals from the south | If the Group recommends approach, County requests FAA implement procedure. FAA reviews, approves or disapproves, and, if approved, implements. | Unknown additional fuel cost to aircraft arriving from the east. | TBD. | Shifts noise to residents living under the flight tracks that come in from the south. Not recommended. |
| 12 | Provide financial incentives to airlines to replace noisy aircraft with quieter aircraft. | If the Group recommends this measure; County develops and implements incentive program. | Unknown. | TBD. | Not recommended. |
| 13 | Undertake Part 150 study to evaluate the potential benefits of airport use restrictions. | If the Group recommends this measure; County undertakes FAR Part 150 study. If there are benefits, FAA reviews, approves or disapproves, and, if approved, implements. | >\$300,000/SCAS. | TBD./ 2-3 years | FAR Part 150 is designed to reduce or prevent incompatible land uses. Since there are no incompatible land uses, an FAR Part 150 is not warranted. Not recommended. |
| 14 | Restrict aircraft and/or engine types. | If the Group recommends this measure; County undertakes FAR Part 161 study. If there is a benefit, FAA reviews, approves or disapproves, and, if approved, implements. | >\$500,000/SCAS. | TBD./ 2-3 years | FAR Part 161 is designed to evaluate use restrictions that reduce incompatible land uses. Since there are no incompatible land uses, an FAR Part 161 study is not warranted. Recommended. |

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| 15 | Place a curfew on the hours of operations. | If the Group recommends this measure; County undertakes FAR Part 161 study. If there is a benefit, FAA reviews, approves or disapproves, and, if approved, implements. | >\$500,000/SCAS. | TBD./ 2-3 years | FAR Part 161 is designed to evaluate use restrictions that reduce incompatible land uses. Since there are no incompatible land uses, an FAR Part 161 study is not warranted. Not recommended. |
| 16 | No additional runway at Mather Airport. | If the Group recommends this measure; County may consider it in the Mather Master Plan process. | Unknown. | Tied to the timing of the Mather Master Plan. | Not recommended. |
| 17 | Conditional extension of Runway 22R at Mather. | The Group recommends this measure if the County agrees that the extension of Runway 22R at Mather Airport will be tied to restrictions on the runway as a redundant runway and that the SCAS has made progress toward implementing the recommended measures. | Unknown. | Tied to the timing of the Mather Master Plan. | Recommended. |
| 18 | County purchases an approach corridor east of Mather. | If the Group recommends this measure; County may consider it in the Mather Master Plan process. | Costs could be significant/ Unknown. | Tied to the timing of the Mather Master Plan and EIS. | Not recommended. |
| 19 | County provides financial incentive to homeowner for sound insulation or to offset loss of value. | If the Group recommends this measure; County assesses the benefit of sound insulation and/or reduction in home values | Costs could be significant/ Unknown. | TDB. | Interior noise levels are likely below the state and federal criteria for sound insulation. Not recommended. |
| 20 | Have CEQA/NEPA process for Mather Master Plan include Folsom, Eldorado Hills, Elk Grove, Silver Springs and Rancho Murrieta. | If the Group recommends this measure; Group provides comments on scope of the environmental document. County considers the comments in the scope of work for the Mather Master Plan <i>EIR</i> . | Costs could be significant/ Unknown. | Tied to the timing of the Mather Master Plan and <i>EIR</i> . | Recommended. |
| 21 | Prepare Jeppesen insert on Mather noise abatement procedures with graphics | If the Group recommends this measure; County prepares and disseminates the inserts. | \$5,000 - \$10,000/ SCAS. | TBD. | Recommended. |
| 22 | Hold pilots accountable for not following the noise abatement procedures. | FAA FSDO has enforcement capability related to safety only. | None. | Not implementable. Federal law preempts County action. | Not recommended. |
| 23 | Monitor aircraft noise before and after implementation of the new approach plate. | County undertakes noise measurement program. | \$20,000 - \$40,000/ SCAS. | First set completed 10/30/02. Second set completed 2/19/03. | Recommended. |
| 24 | Conduct/participate in chief pilot meetings to review current noise abatement measures and airline performance. | County organizes and participates in the chief pilot's meeting. | Minimal/ SCAS. | First meeting was on 4 December 2002. | Recommended. |
| 25 | Update airfield facilities directory to reflect noise abatement procedures. | County updates the airfield facility directory. | Minimal/ SCAS. | Immediately. | Recommended. |
| 26 | Update other listings of noise abatement procedures: Boeing, NBAA, ALPA, ATA, etc. | County updates the airfield facility directory. | Minimal. SCAS. | Immediately. | Recommended. |
| 27 | Regularly disseminate noise abatement procedures to aircraft operators with positive follow-up. | County regularly disseminates noise abatement procedures and follows up with aircraft operator contacts. | Minimal/ SCAS. | TBD. | Recommended. |

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| 28 | Establish a "Web Accessible" flight track display system to allow the public to more easily access flight track data. | County purchases web accessible software and disseminates web site to the public. | \$50,000/ SCAS. | May 2003 | Recommended. |
| 29 | Use ANOMS to monitor aircraft performance relative to noise abatement measures. | County monitors and reports on aircraft operator performance. | Minimal/ SCAS. | Ongoing. | Recommended. |
| 30 | County should hire an aviation noise consultant to review all potential noise abatement measures for Mather Airport. | County hires an aviation noise consultant, holds public meetings, distributes study results, and implements appropriate measures. | ~\$300,000/ Unknown. | TBD. | County undertakes a study similar to a Part 150 study, but without FAA review or submission. Not recommended. |
| 31 | FAA Flight checks and certifies glide slope out to CAMRR. | County submits written request to FAA to flight checks and certify glide slope out to CAMRR. | Minimal/ FAA. | Immediately | Recommended. |
| 32 | Implement voluntary agreements with the carriers to control noise. | County and air cargo carriers discuss and agree on possible ways to voluntarily limit noise exposure. | Unknown SCAS. | TBD. | Recommended. |
| 33 | Study departure tracks to reduce departure noise south of Mather. | If the Group recommends this measure; County requests FAA to test new departure tracks for 120 days. FAA reviews, approves or disapproves, and, if approved, implements test. | Unknown. | TBD. | Recommended. |
| 34 | Utilize "stabilized" (Continuous Descent Approach) approach or approaches. | If the Group recommends this measure, County and air carriers develop approach procedures and submit to FAA. FAA reviews, approves or disapproves, and, if approved implements on a test basis. | Unknown. There may be potential fuel savings. | TBD. | May benefit people living more than seven (7) nautical miles from Mather. See Measure #49 also. Recommended. |
| 35 | Conduct noise monitoring under Mather departure flight tracks. | County undertakes noise measurement program. | \$20,000 - \$40,000/ County. | Completed on April 15, 2003. | Recommended. |
| 36 | Analyze departure flight tracks to identify the changes, if any, in Mather departure activity. | County analyzes historical flight tracks identifies the changes, if any, in departure activity and reports to the Group. | Unknown. | Completed on March 26, 2003. | Recommended. |
| 37 | Undertake a Part 150 "lite" to identify the range of noise control options available. | County assembles a range of potential options for the Group to consider. | Unknown. | TBD. | Not recommended. |
| 38 | Identify flights that are performing well and encourage the good behavior. | County evaluate complaints/noise levels to see if certain procedures should be encouraged. | Unknown. | TBD. | Recommended. |
| 39 | Protect the departure corridor south of Mather with zoning, easements, or other land use planning techniques. | If the Group recommends this measure; County may consider it in the Mather Master Plan process. | Costs could be significant/ Unknown. | Tied to the timing of the Mather Master Plan and EIS. | Recommended. |
| 40 | Require aircraft departing Runways 22L/R to turn to a 090 degree heading and reach 4,000' MSL before turning south 24 hours a day. | If the Group recommends this measure, County requests FAA implement procedure. FAA reviews, approves or disapproves, and, if approved, implements. | Unknown. | TBD. | Concentrates noise over compatible land uses. May shift noise to new areas. Recommended. |
| 41 | Develop an Instrument Departure Procedure (IDP) that places aircraft on the preferred noise abatement flight tracks. | County develops concept for the IDP with participation of FAA and aircraft operators. Requests FAA to develop the noise abatement IDP for Mather. | Unknown. | TBD. | Concentrates noise over compatible land uses. May shift noise to new areas. Recommended. |

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| 42 | Provide noise notices to residents moving into aircraft overflight areas. | County develops a noise notice and distributes it to real estate sellers in the aircraft overflight zone. | Minimal/County. | TBD. | Not recommended. |
| 43 | Provide purchases assurance to residents wishing to move out of noise impact areas. | County establishes a policy and funding mechanism for purchasing noise-impacted homes. | Unknown, but potentially high/Unknown. | TBD. | An approved FAR Part 150 could fund a purchase assurance program for homes in CNEL 65 db and higher. Not recommended. |
| 44 | Utilize the optimum NADP for minimizing departure noise impacts. | If the Group recommends this measure; County works cooperatively with each aircraft operator to choose the optimum NADP to minimize departure noise impact from their aircraft. | Unknown. There may be potential fuel savings. | TBD. | Recommended. |
| 45 | Implement NADP for Mather departures including signage near the start of takeoff roll. | County requests the use of the optimum NADP for Mather departures. Works cooperatively with aircraft operators to choose the appropriate NADP for their aircraft at Mather. | Minimal/SCAS. | TBD. | Not recommended. |
| 46 | Install permanent noise monitors to measure and report aircraft noise levels | County identifies sites for the permanent noise monitors, hires a vendor to install noise monitors, and to integrate the noise data into the SCAS's ANOMS | High/SCAS. | TBD. | Recommended. |
| 47 | Develop and implement a "Fly Quiet" type of program to monitor aircraft operator compliance with Mather's noise abatement procedures and to reward high levels of compliance | County develops and implements a "Fly Quiet" program at Mather using the SCAS ANOMS to evaluate aircraft operator compliance | Unknown/SCAS. | Would follow the completion of Mather Noise Group's work and County's implementation of all noise abatement measures | Recommended. |
| 48 | Depict airport approach and takeoff paths on all official zoning maps. | If the Group recommends this measure; County considers it when updating the Mather Compatible Land Use Plan (CLUP) and encourages other counties to do the same. | Minimal/County. | Tied to the timing of the update of the CLUP for Mather. | Recommended. |
| 49 | Solicit UPS's assistance in implementing CDA at Mather as soon as possible | County writes a letter to UPS referring to the CDA report and requesting that Mather be one of UPS's first CDA implementation airports | Unknown. | Immediately. | May benefit people living more than seven (7) nautical miles from Mather. See Measure #34 also. Recommended. |
| 50 | Update the Mather CLUP as a follow on to the Master Plan process. Investigate the potential for including provisions for easements. | If the Group recommends this measure; County considers it when updating the Mather CLUP. | Minimal/County. | Tied to the timing of the update of the CLUP for Mather | Recommended. |

The potential noise abatement, land use, and implementation measures listed above have been proposed by members of the Mather Airport Aircraft Overflight Noise Group and represent their individual views, which may not be shared by the Sacramento County Airport System or Federal Aviation Administration. Information in the "Options" column represents concepts that have been discussed as of this date and do not necessarily represent the consensus of the Group. To date, there has been general agreement on six concepts:

- Reduce the overall aircraft noise
- Do a better job at informing the pilots about Mather's Noise Abatement Procedures
- Regularly review the flight track/altitude data from ANOMS
- Install web-accessible flight track system
- Update the airport facilities directory with more informative noise abatement language
- Conduct noise measurements before and after the approach plate is changed

Note: New or revised text is in italics