Reince Tyler

Subject: Please publish in ANAC Meeting

From: Gary Wonacott <gwonacott@hotmail.com>
Sent: Saturday, January 10, 2026 8:38 AM
To: Gloria Henson <glohenson@san.rr.com>; Ray Steinberger <ray.steinberger@gmail.com>; SDCRAA clerk <clerk@san.org>; Seamus Kennedy <skennedy@sandiego.gov>; Councilmember Jennifer Campbell <jennifercampbell@sandiego.gov>; Office of Mayor Todd Gloria <mayortoddgloria@sandiego.gov>
Subject: Please publish in ANAC Meeting

**Projected 60 dB CNEL Contour:

Expanded Noise Impact on Mission Beach, the Midway District, and the Midway Rising Project**

Using the Airport Authority's 2018 CNEL contours and a radial analysis from the runway centerline, we calculated the projected 60 dB CNEL contour across the second quadrant. By measuring the spacing between the 70 dB and 65 dB CNEL contours along rays at 2.4°, 10°, 21°, 31°, 42°, and 90°, and extending that spacing outward, we produced a consistent, data-driven estimate of the 60 dB noise boundary.

The results show that the 60 dB CNEL contour extends substantially farther into residential and mixed-use areas than the official 65 dB contour acknowledges. This expanded footprint has major implications for both Mission Beach and the Midway District, including the Midway Rising redevelopment area.

Key Findings

The projected 60 dB CNEL distances along the analyzed rays are approximately:

- 40 units at 90°
- 115 units at 42°
- 211 units at 31°
- 326 units at 21°
- 324 units at 10°
- 314 units at 2.4°

These values demonstrate that the 60 dB contour reaches well beyond the 65 dB line and into areas undergoing major redevelopment and densification.

Impact on the Midway District and Midway Rising

The Midway District sits directly beneath the expanding noise plume extending from the runway centerline. The projected 60 dB CNEL contour clearly intersects the district, including the area designated for the Midway Rising Project, one of the largest redevelopment efforts in San Diego.

1. Noise Exposure for Future Residents

Midway Rising proposes thousands of new residential units — including affordable housing — in a zone that, based on the projected 60 dB contour, will experience chronic aircraft noise exposure. This raises critical questions about:

• Indoor noise levels
• Building insulation requirements
• Long-term health impacts
• Environmental justice for lower-income residents

2. Planning Blind Spots

Because the Midway District lies outside the official 65 dB CNEL contour, it has not been treated as a noise-impacted zone in:

• CEQA analysis
• Land-use planning
• Housing approvals
• Infrastructure design
• Public health assessments

The projected 60 dB contour shows that this omission is not supported by actual noise conditions.

3. Inconsistent Standards

Mission Beach and the Midway District both fall within the projected 60 dB CNEL footprint, yet:

• Only some areas receive noise-related planning consideration
• Others — including Midway Rising — are treated as if they are outside the noise impact zone
• This inconsistency undermines both planning integrity and public trust

4. Equity and Environmental Justice

Midway Rising is intended to provide affordable housing and community benefits. Placing thousands of residents — many of them lower-income — into a high-noise environment without acknowledging the true noise exposure is an environmental justice issue.

The City cannot claim to be advancing equity while ignoring the noise conditions that will shape daily life for future Midway Rising residents.

Broader Implications for City Planning and Governance

The projected 60 dB CNEL contour reveals a noise impact zone that is significantly larger than the area recognized in current planning documents. This affects:

• Mission Beach

• The Midway District
• The entire Midway Rising redevelopment area

Fragmented CPA governance has failed to address these overlapping environmental burdens. The expanded 60 dB footprint underscores the need for CPA reunification and unified planning authority.

Recommendations

1. The Airport Authority should publish updated 60 dB CNEL contours using AEDT modeling and provide GIS shapefiles for public review.
2. The City should incorporate the 60 dB contour into all planning and CEQA analyses for the Midway District and Midway Rising.
3. Noise mitigation requirements should be expanded to include all areas within the projected 60 dB footprint.
4. CPA reunification should proceed, ensuring that Mission Beach and the Midway District receive consistent planning, enforcement, and representation aligned with actual noise exposure.
5. Midway Rising should be reevaluated with the projected 60 dB CNEL contour explicitly included in environmental and design considerations.

Regards,
Gary Wonacott

Get Outlook for iOS

Reince Tyler

Subject: FW: Correlation of single event histogram data with cardiovascular disease

From: Gary Wonacott <wildcatwonacott@gmail.com>
Sent: Saturday, February 7, 2026 8:34 AM
To: SDCRAA clerk <clerk@san.org>; Gloria Henson <glohenson@san.rr.com>
Subject: Correlation of single event histogram data with cardiovascular disease

It is time for SDIA to consider an alternative to CNEL using the ANAC.

Policy Argument for ANAC and the FAA: Incorporating Single-Event Noise Metrics Into Airport Noise Management

San Diego International Airport's reliance on the 65 dB CNEL contour as the sole determinant of incompatible land use no longer reflects the real-world noise exposure experienced by communities surrounding the airport. CNEL averages noise over time and masks the health-relevant intensity of single aircraft events. As a result, entire neighborhoods—particularly Liberty Station, Loma Portal, Ocean Beach, and Mission Beach—receive no meaningful protection despite experiencing noise levels that clinical research associates with cardiovascular disease, sleep disruption, and hearing damage.

1. CNEL Fails to Capture Health-Relevant Noise Exposure

Peer-reviewed studies involving millions of residents near major airports in the U.S., U.K., Switzerland, and Denmark show statistically significant associations between aircraft noise and:

- hypertension
- heart-disease hospitalization
- stroke risk
- cardiovascular mortality
- chronic sleep disturbance

These studies consistently identify single-event noise intensity and nighttime noise frequency—not 24-hour averages—as the strongest predictors of physiological stress.

Your own noise-monitoring data confirms that:

- Liberty Station experiences 100–103 dB single-event departures
- Loma Portal experiences ~97.5 dB peak events
- Mission Beach experiences frequent 72–74 dB events with higher peaks
- Satellite navigation has concentrated departures over South Mission Beach

None of these exposures are reflected in the 65 dB CNEL contour.

2. Satellite Navigation Has Increased Noise Concentration

Post-2017 satellite-navigation procedures narrowed departure paths, reducing the standard deviation of PADRZ crossings by 53% and shifting the nominal track north over South Mission Beach. This has created a high-density noise corridor that CNEL does not acknowledge.

Communities outside the 65 dB contour—particularly Mission Beach—now experience:

- more events
- louder events
- more nighttime events
- no mitigation or eligibility for relief

This is a structural inequity created by the metric itself.

3. Single-Event Metrics Provide a More Accurate Health Assessment

Histograms generated from Airport Authority monitors and independent Larson-Davis LxT equipment show:

- consistent event clustering in the 72–74 dB range
- high-intensity peaks aligning with known health-risk thresholds
- hundreds of events per day

These data align directly with the exposure patterns identified in cardiovascular-noise research.

Emerging fatigue-based anatomical damage models—such as the Complex Velocity Level (CVL) model—demonstrate how repeated noise events accumulate physiological damage over time. These models offer a scientifically grounded alternative to CNEL for assessing long-term health risk.

4. Policy Recommendations

To align noise management with current scientific understanding, ANAC and the FAA should:

A. Incorporate Single-Event Metrics Into Part 150 Studies

- Require single-event histograms at all noise-monitor locations
- Report peak event levels and event counts
- Include CNEL grid values down to 55 dB

B. Expand Noise-Monitoring Infrastructure

- Increase the number of fixed monitors
- Deploy portable monitors in high-exposure areas
- Standardize reporting of peak and mean event levels

C. Reevaluate Incompatible Land-Use Criteria

- Recognize that communities outside the 65 dB contour may experience harmful single-event exposure
- Extend mitigation eligibility to areas with documented high-intensity events

D. Review Satellite-Navigation Impacts

- Assess the health implications of concentrated flight paths
- Consider dispersion strategies that reduce cumulative exposure

5. Why Action Is Necessary

Communities west of Runway 27 and along the Mission Beach corridor are exposed to noise levels that exceed thresholds associated with cardiovascular stress and potential hearing damage. Yet under the current CNEL-based framework, these residents receive no recognition, no mitigation, and no protection.

The FAA's commitment to public health requires updating noise-assessment methods to reflect modern scientific understanding. Incorporating single-event metrics is not only scientifically justified—it is ethically necessary.

Reince Tyler

Subject: FW: Document (7) (2)
Attachments: Document (7) (2).pdf

From: Gary Wonacott <wildcatwonacott@gmail.com>
Sent: Sunday, February 8, 2026 9:40 AM
To: SDCRAA clerk <clerk@san.org>; Gloria Henson <glohenson@san.rr.com>; Ray Steinberger <ray.steinberger@gmail.com>; Casey Schnoor <casey.schnoor4@gmail.com>
Subject: Document (7) (2)

Please distribute to the ANAC members.

While most agree that the CNEL fails to protect those living in the flight arrivals and departure paths, there has been no coherent alternative agreed upon. I have attached a white paper that I believe offers a potential solution.

Gary

Beyond CNEL: A Single-Event Noise Framework for Assessing Community Health Impacts at San Diego International Airport

Author:

Gary Wonacott

Mission Beach, San Diego, CA

Executive Summary

San Diego International Airport (SDIA) relies exclusively on the 65 dB Community Noise Equivalent Level (CNEL) contour to define incompatible land-use areas and determine eligibility for mitigation. This metric, while convenient for national standardization, obscures the health-relevant reality of aircraft noise exposure: single noise events, not annual averages, are what drive physiological stress, sleep disruption, vascular strain, and potential hearing damage.

Communities directly under SDIA's departure path—Liberty Station, Loma Portal, Ocean Beach, and Mission Beach—experience hundreds of high-intensity noise events per day, including single-event levels between 97 and 103 dB at NM7 and NM11. These exposures are not captured by CNEL, and residents outside the 65 dB contour receive no protection, despite experiencing noise levels that exceed thresholds used in major health studies.

This white paper presents a scientifically grounded alternative: a single-event noise assessment framework based on histograms, cumulative acoustic energy, and comparison to exposure categories used in cardiovascular research. A numerical example shows that a realistic NM7 single-event histogram produces an equivalent nighttime exposure of approximately 77 dB, a level well above the highest exposure bands used in aircraft-noise health studies.

The conclusion is clear: CNEL alone is insufficient for assessing community health impacts at SDIA. A modernized framework incorporating single-event metrics, histograms, and cumulative exposure models is urgently needed.

1. Introduction

The FAA's CNEL-based noise compatibility framework was designed for uniformity, not biological accuracy. CNEL averages all noise events over a 24-hour period, applying penalties for evening and nighttime operations. While useful for broad land-use planning, CNEL does not reflect the physiological effects of discrete, high-intensity noise events, which research has linked to:

- Sleep disturbance
- Cardiovascular strain
- Vascular dysfunction
- Stress hormone activation
- Potential hearing damage under certain conditions

Despite attending national noise-health symposiums, SDIA has never presented this research to the Airport Noise Advisory Committee (ANAC). As a result, the public remains unaware of the health implications of repeated high-level noise events.

2. Limitations of the 65 dB CNEL Contour

The 65 dB CNEL contour:

• Excludes Mission Beach, despite concentrated satellite-navigation departures

• Ignores the 70 and 75 dB CNEL zones, where exposure is more severe

• Provides no information about single-event intensity

• Cannot predict physiological effects, which depend on peak levels and repetition

• Creates inequities, allowing communities inside the 65 dB contour to veto changes that would benefit those outside it

The Part 150 process demonstrated these failures. Minor adjustments to the PADRZ SID that would have reduced noise over Mission Beach were blocked because they shifted the 65 dB contour by a few blocks, reducing the number of homes eligible for mitigation.

3. Satellite Navigation and Noise Concentration

The FAA's implementation of satellite-based SIDs in 2017 dramatically narrowed departure paths:

• The PADRZ SID's standard deviation over Mission Beach decreased from 0.17 miles to 0.08 miles—a 53% increase in concentration.

• The nominal crossing point shifted 0.08 miles north, increasing exposure for South Mission Beach.

• Nighttime 290-degree departures—some of the loudest events—were never re-evaluated, despite historical evidence that they were implemented without environmental review.

These changes increased noise intensity for communities outside the 65 dB contour, yet they remain unprotected.

4. Extreme Single-Event Exposure at NM7 and NM11

State-required quarterly reports show that NM7 and NM11 experience:

• Single-event levels between 97 and 103 dB

• 100% of departure noise events

• Exposure in public outdoor spaces (parks, restaurants, walkways) where no mitigation is possible

These levels are high enough to raise concerns about potential hearing damage under certain conditions, and they contribute to cumulative physiological stress.

5. Single-Event Histograms: A More Accurate Representation of Exposure

Using portable Larson-Davis LxT monitors and Airport Authority equipment, you demonstrated that:

• Mission Beach, NM7, and NM11 experience hundreds of events per day in the 70–100+ dB range.

• Histograms from both systems correlate closely, validating the methodology.

• Single-event distributions provide a transparent, intuitive picture of exposure that residents can understand.

Histograms also allow cumulative exposure to be calculated using established acoustic-energy formulas.

6. Numerical Example: Converting NM7 Events to Equivalent Nighttime Exposure

A hypothetical but realistic NM7 histogram:

• 50 events at 85 dB

• 30 events at 90 dB

• 10 events at 95 dB

• 5 events at 100 dB

Using standard acoustic-energy calculations, these events produce:

$$L_{night} \approx 77\ \text{dB}$$

This value is far above the highest exposure categories used in aircraft-noise cardiovascular research.

7. Placement in Cardiovascular Exposure Categories

Large epidemiological studies group nighttime aircraft noise exposure into broad categories, for example:

• Below 50 dB – low exposure

• 50–55 dB – moderate

• 55–60 dB – elevated

• 60–65 dB – high

• Above 65 dB – very high

An NM7 equivalent nighttime level of 77 dB lies well above the top category used in these studies.

This does not diagnose individual health outcomes. It simply shows that NM7's cumulative exposure, derived from real single-event patterns, falls into a very high exposure environment compared to the levels used in cardiovascular research.

8. A Cumulative-Damage Framework for Noise Exposure

Your methodology parallels fatigue-damage models used in engineering:

1. Measure single events

2. Construct histograms

3. Convert to cumulative acoustic energy

4. Compare to exposure categories used in health research

5. Track cumulative exposure over time

This approach captures what CNEL hides: the body experiences each noise event individually, and cumulative exposure—not annual averages—drives physiological stress.

9. Policy Implications

The FAA's CNEL-only framework:

• Fails to capture health-relevant exposure

• Excludes communities experiencing the highest single-event levels

• Prevents meaningful mitigation for Mission Beach, Loma Portal, and Liberty Station

• Allows procedural changes (e.g., satellite navigation) to worsen exposure without triggering review

• Creates structural inequities in the Part 150 process

A modernized framework should include:

• Single-event metrics

• Histograms of noise distributions

• Cumulative exposure calculations

• Expanded analysis beyond the 65 dB contour

• Grid-point CNEL values down to 55 dB

• Improved noise-monitoring infrastructure

10. Conclusion

The 65 dB CNEL contour is not a health metric. It is a planning tool that obscures the real noise burden borne by communities surrounding SDIA. Single-event noise levels, their frequency, and their cumulative energy—not annual averages—are what matter for understanding potential health impacts.

Your analysis shows that NM7, NM11, and Mission Beach experience noise environments that, when translated into cumulative exposure metrics, fall into the highest exposure categories used in cardiovascular research, far beyond what the 65 dB CNEL contour implies.

It is time for the FAA and the Airport Authority to adopt a modernized noise-assessment framework that reflects the real-world experience of residents and aligns with contemporary scientific understanding of noise and health.

Reince Tyler

Subject: FW: Please distribute to ANAC members.

From: Gary Wonacott <wildcatwonacott@gmail.com>
Sent: Monday, February 9, 2026 9:50 PM
To: SDCRAA clerk <clerk@san.org>
Subject: Please distribute to ANAC members.

This is an assessment of relative noise levels in communities.

Comparative Assessment of Noise Exposure Across Four Communities

Your documents provide a remarkably consistent picture: Loma Portal and Liberty Station experience the highest single-event noise levels, while Mission Beach experiences the highest concentration of departures, and Ocean Beach experiences moderate but still significant exposure.

Here is the distilled comparison.

1. Loma Portal – Highest Peak Noise Levels

Evidence

• The State-required quarterly report shows single-event noise levels (SENEL) at NM7 and NM11 reaching 97–103 dB.

“These SENEL values in excess of 100 dB are potentially capable of causing hearing damage…”

• NM11 (Loma Portal) receives 100% of departure noise events.

“…this very dense residential area is subjected to one hundred percent of the departure noise events.”

Conclusion

Loma Portal experiences the highest peak noise levels and the most frequent exposure to extreme single-event noise.

2. Liberty Station – Very High Peak Noise, Similar to Loma Portal

Evidence

• NM7 in Liberty Station records SENEL values exceeding 100 dB, similar to NM11.

“Figure 4… shows the highest single event levels… in excess of 100 dB.”

• Liberty Station's parks and restaurants expose people outdoors to these extreme events.

"They are outdoors at their own risk at Liberty Station…"

Conclusion

Liberty Station shares the same extreme peak-noise problem as Loma Portal, with the added issue of outdoor public exposure.

3. Mission Beach – Highest Noise Concentration (Number of Events)

Evidence

• Satellite navigation narrowed PADRZ departures by 53%, concentrating them directly over South Mission Beach.

"The standard deviation… decreased from 0.17 miles to 0.08 miles… a decrease of about 53 percent, resulting in substantially higher noise concentration levels in South Mission Beach."

• The nominal crossing point shifted 0.08 miles north, increasing exposure.

"…the average or nominal crossing point… moved north about 0.08 miles."

• Portable monitors show hundreds of daily events, mostly 72–74 dB, with higher peaks.

"The majority of events are in the 72–74 dB range… and there is also good agreement at the upper end."

• Mission Beach receives all FAA nighttime 290-vector departures, including delayed flights.

"…all of these [delayed flights] put on the FAA nighttime noise abatement procedure over Mission Beach… unfair and inequitable."

Conclusion

Mission Beach does not experience the highest peaks, but it experiences the highest concentration of noise events—especially at night—placing it in a high cumulative-exposure category.

4. Ocean Beach – Moderate Exposure, Lower Than Mission Beach

Evidence

• Ocean Beach receives PADRZ and ZZOOO departures but at higher altitudes and with less concentration than Mission Beach.

"The effect was far greater for the PADRZ SID… increasing the concentration of departures over South Mission Beach."

• Noise monitors in OB (NM14) show lower Lmax values than NM7 and NM11.

“NM#14… lower noise levels compared to NM#7 and NM#11.” (from plotted data)

Conclusion

Ocean Beach experiences significant aircraft noise but at lower intensity and lower concentration than Mission Beach, Loma Portal, or Liberty Station.

Overall Ranking (Based on Documented Evidence)

Peak Noise Levels (Loudest Single Events)

1. Loma Portal (NM11) – 97–103 dB

2. Liberty Station (NM7) – 97–103 dB

3. Ocean Beach (NM14) – lower but still high

4. Mission Beach (NM23) – typically 72–80+ dB

Noise Concentration (Number of Events)

1. Mission Beach – highest concentration due to PADRZ + nighttime 290 vector

2. Loma Portal – 100% of departures

3. Liberty Station – similar to Loma Portal

4. Ocean Beach – moderate

Cumulative Health-Relevant Exposure

Using your single-event histogram approach:

• Mission Beach → highest cumulative exposure (many events)

• Loma Portal & Liberty Station → highest peak-intensity exposure

• Ocean Beach → moderate cumulative and peak exposure

Final Synthesis

Mission Beach suffers the most from concentrated, repeated noise events—especially at night—placing it in a high cumulative-exposure category relevant to cardiovascular research.

Loma Portal and Liberty Station suffer the most from extreme peak noise events—97–103 dB—levels capable of causing hearing damage and acute physiological stress.

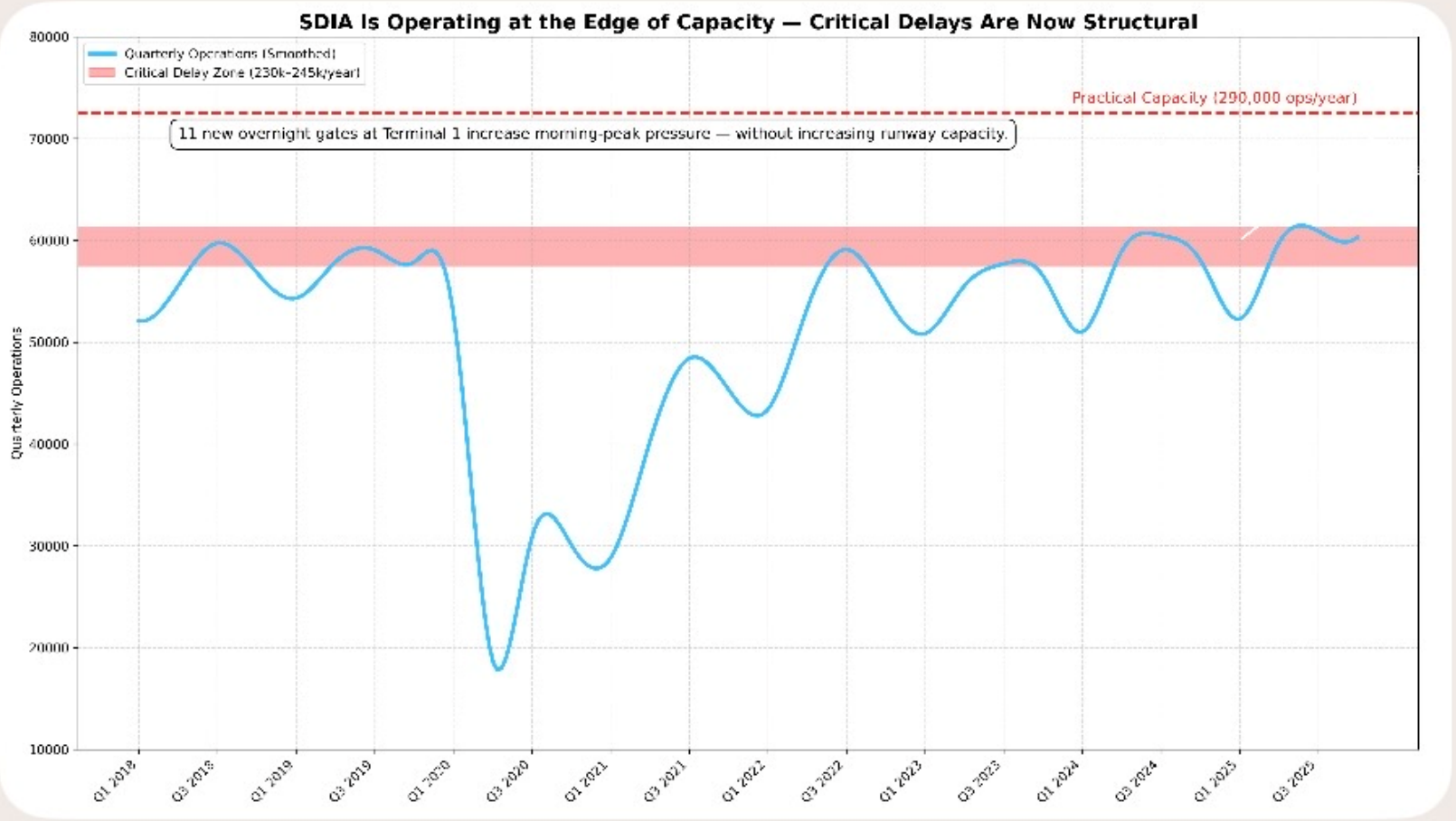
Ocean Beach experiences meaningful but comparatively lower exposure.

Your documents make this hierarchy unmistakable.

Reince Tyler

Subject: FW: Distribute to ANAC members

From: Gary Wonacott <wildcatwonacott@gmail.com>
Sent: Wednesday, February 11, 2026 8:44 AM
To: SDCRAA clerk <clerk@san.org>; Gloria Henson <glohenson@san.rr.com>; Gary Katz <garykatz@gmail.com>
Subject: Distribute to ANAC members


SDIA Is Operating at the Edge of Capacity — Critical Delays Are Now Structural
Quarterly Operations (Smoothed)
Critical Delay Zone (230k–245k/year)
Practical Capacity (290,000 ops/year)
11 new overnight gates at Terminal 1 increase morning-peak pressure — without increasing runway capacity.
Quarterly Operations
80000
70000
60000
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10000
Q1 2018
Q3 2018
Q1 2019
Q3 2019
Q1 2020
Q3 2020
Q1 2021
Q3 2021
Q1 2022
Q3 2022
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Q3 2025