Reference Material

58  History of Narita International Airport and Environment Conservation Activities

60  Narita International Airport Noise Impact Zone Map

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    Short-Term Aircraft Noise Monitoring Results (FY 2017)

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    Standard Flight Courses

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    Air Quality Monitoring Results (FY 2017)
    As Compared with Assessment Methods of Environmental Standards

64  Graph of Periodic Water Quality Monitoring Results
    Narita Airport Regional Symbiosis Promotion Foundation

65  Guide to Airport-Related Inquiries and Public Information Sources
### History of Narita International Airport and Environmental Conservation Activities

#### Minister of Transport refers question of prospective sites and scale of New Tokyo International Airport to Council for Civil Aviation. Council for Civil Aviation responds to Minister (Dec)

#### New Tokyo International Airport Authority Law promulgated (Aug)

#### Ordinance issued designating site of “Minato-Sayama” as airport development ground (Oct), New Tokyo International Airport Authority established (Oct), Master Plan released (Dec)

#### Action approved under Land Exploitation Act (May)

#### First-exploitation action (Apr), Second-exploitation action (Sep)

#### Aerodrome and navigation aids certification (Nov)

#### Left-wing opposition denounces 15th floor of traffic control tower (Mar), Airport opens (May)

#### Second expropriation action (Feb), Second expropriation action (Sep)

#### 1971

#### Ordinance issued designating site of New Tokyo International Airport (Jul), New Tokyo International Airport Authority Law promulgated (Jun)

#### 1966

#### Statement on Further Functional Improvements of Narita Airport (Apr)

#### 1990

#### Encompassing Global Issues; final report (May), Fundamental Blueprint for an Eco-Airport online, restrictions imposed on APUs (Apr), Daily slots increase from 360 to 370 (Apr), 22nd

#### 1995

#### Concept Implementation Committee for Symbiosis between the Airport and the Local Community, Ministry of Transport releases Fundamental Committee for an Experimental Village Encompassing Global Issues (Jan), 1st session of Concept Implementation Committee for an Experimental Village Encompassing Global Issues (Jan), 1st session of Concept Implementation Committee for an Experimental Village Encompassing Global Issues (Jan)

#### 1998

#### Administrative measures to prevent flight noise in Kyushu (Aug), Ministry of Transport and NAA (Dec)

#### 1999

#### Committee for Symbiosis between the Airport and the Local Community, Sawara TV relay tower begins transmission (Jan), 1st session of Concept Implementation Committee for an Experimental Village Encompassing Global Issues (Jan), 1st session of Concept Implementation Committee for an Experimental Village Encompassing Global Issues (Jan)

#### 2000

#### NAPA reports to Minister of Land, Infrastructure, Transportation and Tourism on southern extension option for parallel runway (Jul), Minister issues development directive for 2,500-meter parallel runway under southern extension proposal (Jun)

#### 2001

#### Statement on Further Functional Improvements of Narita Airport (Apr)

#### 2002

#### Release of Environmental Impact Statements for parallel runway development (Jul)

#### 2004

#### Release of Environmental Impact Statements for construction of taxiways on western side of Runway B and Yokobori district (Apr), Release of Environmental Impact Statements for development of LCC satellite north side apron (Apr), Release of Draft Environmental Impact Statements for parallel runway development (Jul)

#### 2005

#### Narita Airports Authority Headquarters moves to Narita Airport (Jul)

#### 2006

#### Narita Airport Regional Symbiosis Promotion Foundation established (Jul), Narita Hydrogen Station began operations (Mar), Eco-Airport Vision 2030 and Eco-Airport Planning Council established (Jan), Greenport Air Expo awarded (Jul), Eco-Airport Master Plan (FY 2010–2020) formulated (Mar), Narita Airport Eco-Park, Narita Airport Eco-Kids Club launched (Jul), Organic farming course opens (Jul), New landing charges for international flights based on aircraft noise levels (Dec), Northern extension proposal for parallel runway to local communities (Dec), Waste sorting in passenger terminals expanded (Dec)

#### 2007

#### Release of Environmental Impact Statements for parallel runway development (Jun)

#### 2008

#### Narita International Airport City Planning Promotion Council announces possibility of expanding airport capacity to 300,000 movements per year and releases provisional calculations (Mar), Decision to end right-of-way negotiations on parallel runway (Nov)

#### 2009

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)

#### 2010

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)

#### 2011

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)

#### 2012

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)

#### 2013

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)

#### 2014

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)

#### 2015

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)

#### 2016

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)

#### 2017

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)

#### 2018

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)

#### 2019

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)

#### 2020

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)

#### 2021

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)

#### 2022

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)

#### 2023

#### Narita Airport Development Authority单车村南側開発（Apr）, Narita International Airport Authority Law promulgated (Jun), Environmental Information website, Narita Airport Environmental Community revamped (Apr), External power supply system for electric vehicles installed in truck parking yard (Jul), Additional noise control zones announced for international flights based on aircraft noise levels (Dec)
**Narita International Airport Noise Impact Zone Map**

**Short-Term Aircraft Noise Monitoring Location Map**

**Specified zones under the Aircraft Noise Prevention Law**

- **Class 1 noise zone** ($L_{den}$ 62 db or higher)
- **Class 2 noise zone** ($L_{den}$ 73 db or higher)
- **Class 3 noise zone** ($L_{den}$ 76 db or higher)

**Reference Material**

- **Monitoring points**
  - Locations A: Tagawa, Shimotagawa, Ansai, Kitahadori, Isobe, Naganuma, Oou, Ashida, Nishi-Izumi, Nogedaira, Nogedaira Industrial Park, Akaogi, Kume, Toyomi (A), Kosuge, Hatakeda, Honsanrizuka, Sanrizuka (elementary school), Sanrizuka (Goryo), Sanrizuka (nursery school), Sanrizuka (Public Housing Estate), Shinotsuka, Kamadosaka, Shibu, Shibayama Industrial Park, Koike Ground, Koike, Ohara, Ohara, Ushikuma, Ushikuma, Yamamuro, Ubayama, Yatsu, Nagakura, Kaburaki, Omoteba, Keneijutakushita, Saruo, Gotanda
  - Locations B: Kanaetsu, Namegawa, Nishiosuka, Nagoya, Hataya, Naruge, Shiba, Koizumi, Inarimine, Toyomi (B), Kawakami, Hishida, Kamo, Shiramasu, Hayashi, Obaraku, Mito, Shimofukiire, Ushino

**Short-Term Aircraft Noise Monitoring Results (FY 2017)**

<table>
<thead>
<tr>
<th>Location No.</th>
<th>Runway A</th>
<th>Location No.</th>
<th>Runway B</th>
<th>Location No.</th>
<th>Runway A</th>
<th>Location No.</th>
<th>Runway B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>56.6</td>
<td>A21</td>
<td>60.1</td>
<td>B20</td>
<td>56.5</td>
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<tr>
<td>A2</td>
<td>57.5</td>
<td>A22</td>
<td>57.7</td>
<td>B20</td>
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<tr>
<td>A3</td>
<td>57.2</td>
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<td>56.3</td>
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<td>A7</td>
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<td>56.3</td>
<td>B24</td>
<td>53.3</td>
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<tr>
<td>A10</td>
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<td>56.1</td>
<td>B13</td>
<td>56.0</td>
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<td>A14</td>
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<td>55.8</td>
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<td>53.1</td>
<td>A39</td>
<td>55.5</td>
<td>B19</td>
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<td>A20</td>
<td>56.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Diagram of Local Environment Strategy Framework at Narita International Airport**

- **Airport environment strategies**
  - Building reduction
  - Land use
  - Noise prevention
  - Construction of new roads
  - Public dissipation
  - Grass for community programs
  - Prevention of objects falling from aircraft
  - Other community programs

- **Community programs**

- **Other community programs**

* This strategy was brought to an end with the transition to digital terminal control in July 2011.

---

**Standard Flight Courses**

- **North wind operation applied**
  - North wind operation
  - South wind operation

- **South wind operation applied**
  - South wind operation

---

**Graph of Air Quality Monitoring Results (see p. 22)**

- **Yearly Changes in Sulfur Dioxide (SO₂)**
  - Upper 2% excluded daily mean
  - Comparison with environmental standards

- **Yearly Changes in Nitrogen Dioxide (NO₂)**
  - 99% of daily mean for year

- **Yearly Changes in Carbon Monoxide (CO)**
  - Upper 2% excluded daily mean

- **Yearly Changes in Photochemical Oxidants**
  - (annual hourly average between 11:00 and 13:00)

- **Yearly Changes in Suspended Particulate Matter**
  - Upper 2% excluded daily mean

- **Yearly Changes in Non-Methane Hydrocarbons**
  - (daily mean between 6:00 a.m. and 9:00 p.m.)

---

**Air Quality Monitoring Results (FY 2017) As Compared with Assessment Methods of Environmental Standards**

- **Items monitored**

  - Sulfur dioxide (NO₂)
    - 99% of daily mean for year
    - Comparison with environmental standards

  - Nitrogen dioxide (NO₂)
    - 99% of daily mean for year
    - Comparison with environmental standards

  - Carbon monoxide (CO)
    - 99% of daily mean for year
    - Comparison with environmental standards

  - Photochemical oxidants
    - Comparison with environmental standards

  - Suspended particulate matter
    - Comparison with environmental standards

- **Airports monitored**
  - Airport east
  - Airport west
  - Runway A south
  - Runway A north
  - Runway B south
  - Runway B north

- **Comparison with environmental standards**
  - Mean: 0.4 mg/m³

---

**Note**

1. In the comparison with environmental standards, a circle (○) denotes the value is within the standards and a cross (×) denotes the value has exceeded the standards.
2. Photochemical oxidants are for daylight hours between 11:00 a.m. and 13:00.
3. Readings for all items result from long-term monitoring over a period of 24,000 hours.

---

**Reference Material**

- **Standard Flight Courses**

  - Introduction of quieter aircraft
    - Modifications of existing engines for quieter operation
    - Restrictions on night operations
    - Reduction in noise level

  - Noise abatement operational procedures
    - Stoppage of flights
    - Noise reduction measures

  - Special areas for noise prevention

- **Other community programs**

---

**Note 3:** Readings for all items result from long-term monitoring over a valid period of 6,000 hours.

**Note 2:** Photochemical oxidants are for daylight hours (between 5:00 a.m. and 8:00 p.m.).

For example, when converting 1 ppm of benzene to methane, benzene contains 6 atoms of carbon, so it will be 6 ppmC.

*2 ppmC: Similar in meaning to ppm. This unit is the concentration of carbon when converting the hydrocarbon to methane.*
Reference Material

Graph of Periodic Water Quality Monitoring Results (see p. 23)

Annual Hydrogen Ion Concentration Index Averages

Annual 75% of Biochemical Oxygen Demand

Annual Suspended Solids Averages

Annual Dissolved Solids Averages

Annual Number of Total Coliform Averages

Annual Zinc Averages

Drainage canal A
Upper Obanegawa Riv.
Upper Takayakawa Riv.
Upper Asakawa Riv.

Graph of Periodic Water Quality Monitoring Results (see p. 23)

Narita Airport Regional Symbiosis Promotion Foundation

Narita Airport Regional Symbiosis Promotion Foundation was established in July and began operating in October of 1997. It aims to provide more closely tailored solutions in addition to the community relations policies implemented by NAA, and bring Narita International Airport and the local community closer together.

(a) Soundproofing of residential buildings

Partially subsidizes the costs to soundproof designated houses of residents living in or adjacent to Class 1 noise impact zones or living in noise prevention area per the Special Act for Aircraft Noise Prevention.

<table>
<thead>
<tr>
<th>Category</th>
<th>Area</th>
<th>Recipients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjacent Area</td>
<td>Soundproofing in</td>
<td>Dwellings used for residential purposes as of October 1, 1997 in areas designated by the foundation as adjacent to Class 1 noise impact zone.</td>
</tr>
<tr>
<td>Class 1 Impact Zone</td>
<td>for refurbished</td>
<td>Dwellings used for residential purposes as of October 1, 1997, which have been soundproofed using subsidies from NAA and which were renovated before March 31, 1995 (crosswind runway Class 1 noise impact zone only).</td>
</tr>
<tr>
<td></td>
<td>soundproofing</td>
<td>Dwellings used for residential purposes as of October 1, 1997, which were constructed or are after 308.2, 1995 (crosswind runway Class 1 noise impact zone only).</td>
</tr>
<tr>
<td></td>
<td>soundproofing after</td>
<td>Dwellings in which air conditioning units installed during NAA soundproofing did not meet the prescribed number according to the method used at the time of soundproofing and according to the number of people in the household as of October 1, 1997.</td>
</tr>
<tr>
<td></td>
<td>for houses</td>
<td>Dwellings which were soundproofed using subsidies from NAA and which had soundproofing installed; for which two or more years have passed since installation; and which soundproofing elements replaced due to damage, etc. (includes valley/semi-valley area).</td>
</tr>
<tr>
<td></td>
<td>replacement</td>
<td>Dwellings which were soundproofed using subsidies from NAA and which had soundproofing installed; for which two or more years have passed since installation; and which soundproofing elements replaced due to damage, etc. (includes valley/semi-valley area).</td>
</tr>
<tr>
<td></td>
<td>for additional</td>
<td>Dwellings which were soundproofed using subsidies from NAA and which had soundproofing installed; for which two or more years have passed since installation; and which soundproofing elements replaced due to damage, etc. (includes valley/semi-valley area).</td>
</tr>
<tr>
<td></td>
<td>interior window</td>
<td>Dwellings used as residences as of October 1, 2018 which have or will be soundproofed using subsidies from NAA, related municipal or foundation subsidies.</td>
</tr>
</tbody>
</table>

(b) Local noise projection projects

Involved with three projects designed to contribute to building a healthy local environment.
- Resident health related matters derived from aircraft noise exposure
- Lectures, courses and similar activities related to environmental problems
- Assistance with residential environment improvements associated with relocation

(c) Aircraft noise measurement

Complex aircraft noise level data from local governments and NAA, provides a central, objective assessment point and releases that information to the public.

(d) Studies and research on aircraft noise, etc.

Undertakes studies and research for more precise aircraft noise measurement.

Guide to Airport-Related Inquiries and Public Information Sources

Please visit the following facilities for your inquiries on Narita International Airport, browsing or requests for released information.

South Area Consultation Center
Address: 2nd Floor, Chiyoda Annex, Shibusawa Central Community Center, 18-52 Ootsu, Shibusawa-machi, Sanbu-gun, Chiba
Tel: +81-479-78-1394 (domestic only)
Fax: +81-479-78-0554
Business hours: Mon.–Fri., 9:00 a.m.–5:00 p.m.

Sanbu Area Consultation Center
Address: 2nd Floor, Main Building, Yokohabukai Town Office, 11900 Miyazaki, Yokohabukai, Sanbu, Chiba
Tel: +81-479-84-1226 (domestic only)
Fax: +81-479-84-1228
Business hours: Mon.–Fri., 9:00 a.m.–5:00 p.m.

East Area Consultation Center
Address: 1st Floor, Taka Town Office, 584 Taki, Taka-machi, Sanbu, Chiba
Tel: +81-479-74-8882 (domestic only)
Fax: +81-479-74-8889
Business hours: Mon.–Fri., 9:00 a.m.–5:00 p.m.

Ibaraki Area Consultation Center
Address: North Building, Kawaiz Town Hall, 11813 Genseida, Kawaiz, Inashiki, Ibaraki
Tel: +81-297-84-5017
Fax: +81-297-84-5303
Business hours: Mon.–Fri., 9:00 a.m.–4:00 p.m.

NAA Information Room
Address: 1st Floor, NAA Bldg., Narita International Airport, Narita, Chiba
Tel: +81-476-34-5658 (Public Relations Office)
Fax: +81-476-34-5650 (Public Relations Official)
Business hours: Mon.–Fri., 9:30 a.m.–5:00 p.m.

Museum of Aeronautical Sciences
Address: 111-3 Tokuhama, Shibusawa, Sanbu, Chiba
Tel: +81-479-78-0557
Fax: +81-479-78-0560
Business hours: 10:00 a.m.–5:00 p.m.
(No entry after 4:30 p.m.)
Closed: Every Monday (or following day if Monday is a public holiday)
Year end (29–31 Dec.)

Airport Information Center
Address: 113-2 Tokuhama, Shibusawa, Sanbu, Chiba
Located in the Narita Airport Historical Museum
Tel: +81-476-34-5658 (Community and Environmental Affairs Department)
Business hours: 10:00 a.m.–5:00 p.m.
(No entry after 4:30 p.m.)
Closed: Every Monday (or following day if Monday is a public holiday)

*Open every day during summer holidays*