

# Part 150: Records of Approval

## Portland International Airport, Oregon

Approved on 4/18/97

### INTRODUCTION

The Noise Compatibility Program (NCP) for Portland International Airport (PDX) includes measures to abate aircraft noise, control land development, mitigate the impact of noise on non-compatible land uses, and implement and update the program. Federal Aviation Regulations (FAR) Part 150 requires that the plan apply to a period of no less than five years into the future, although it may apply to a longer period if the sponsor so desires. The NCP has been developed based on a long-range perspective involving full capacity use of the ultimate airport layout.

The objective of the noise compatibility planning process has been to improve the compatibility between aircraft operations and noise-sensitive land uses in the area, while allowing the airport to continue to serve its role in the community, state, and nation.

The approval actions listed herein include all those that the airport sponsor recommends be taken by the FAA. It should be noted that the approvals indicate only that the actions would, if implemented, be consistent with the purposes of Part 150. These approvals do not constitute decisions to implement the actions. Subsequent decisions concerning possible implementation of these actions may be subject to applicable environmental requirements or other requirements, including aeronautical study requirements.

The program elements below summarize as closely as possible the airport operator's recommendations in the noise compatibility program and are cross-referenced to the program. The statements contained within the summarized program elements and before the indicated FAA approval, disapproval, or other determination do not represent the opinions or decisions of the FAA.

### PROGRAM ELEMENTS

#### **Noise Abatement Elements**

**A. Continue Current Measures.** The following measures were approved by the FAA in March 1992 in accordance with 14 CFR Part 150. They have been in effect for some time, are proposed to continue virtually unchanged, and were shown in the 1992 NCP to be noise beneficial.

1. Page 7-1. Use of Runway 3-21. The following restrictions shall be applied to the use of Runway 3-21:

- a. Use of the runway by aircraft weighing 12,500 pounds or less is permitted only when the wind velocity is 10 knots or greater and from between 190 degrees and 230 degrees or between 010 degrees and 050 degrees.

b. Runway 21 will be the runway in use by jet and large non-jet aircraft only when the wind velocity is 20 knots or greater and from between 190 degrees and 210 degrees. However, if requested, pilots should have the option of using the runway when winds are 15 knots or greater.

c. Restrictions will not apply when deemed necessary by the Airport Manager or Air Traffic Manager to maintain the operational integrity of the airport, including but not limited to the closure of other runways for temporary periods. (Notification of the runway's use will be passed to the airport's Noise Abatement Office as soon as possible.)

d. Departure procedures - large non-jet aircraft en route to southeastern destinations may be turned after reaching an altitude of 700 feet above MSL to a southeasterly heading. All jet and other large non-jet aircraft, after reaching an altitude of 700 feet above MSL, shall turn to a heading of 290 degrees and maintain that heading until reaching an altitude of:

(1) All large non-jet aircraft - 3,000 feet above MSL

(2) All jet aircraft - 6,000 feet above MSL

e. Arrival procedures - all jet and large non-jet aircraft shall be vectored to intercept the extended final approach course at least eight nautical miles from the runway at or above a 2,500-foot altitude.

**FAA Determination: Approved.**

2. Page 7-2. Use of Runway 10R and 10L:

a. Runways 10R and 10L will be the preferred active runways under calm wind conditions (3 knots or less).

b. Departure procedures - all jet and large non-jet aircraft shall turn to intercept the Portland VOR 085-degree radial as soon as practical and fly that radial to:

(1) All large non-jet aircraft and business jets, as defined in the NCP, 3,000 feet above MSL,

(2) Business jets, as defined in the NCP, 6,000 feet above MSL,

(3) All other jet aircraft, 11 DME from the Portland VOR/DME or upon reaching an altitude of 7,000 feet above MSL.

c. During periods of peak traffic, large non-jet aircraft departing from Runway 10R and 10L may be assigned a heading of 100 degrees or the Portland VOR 100-degree radial.

d. When the VOR is not operational, all jet and large non-jet aircraft shall turn to a heading of 085 degrees as soon as practical and fly that heading to an altitude of:

(1) All large non-jet aircraft and authorized business jets as defined in the NCP, 3,000 feet above MSL,

(2) All other jet aircraft, 6,000 feet above MSL.

- e. When the DME is not operational, all jet and large non-jet aircraft shall continue to use the Portland VOR 085-degree radial to the altitude turn points.
- f. Arrival procedures, see arrivals under visual flight rules (VFR) conditions, A.4., below.

**FAA Determination: Approved.** These preferential runway programs have been in effect for some time and direct aircraft over the Columbia River or other areas of compatible land use. Pursuant to FAR 91.75, the pilot in command may request air traffic control authority to use another runway. All flight procedures are the responsibility of the FAA.

### 3. Page 7-3. Use of Runways 28R and 27L.

- a. Departure procedures - all jet and large non-jet aircraft shall turn to intercept the Portland VOR 277-degree radial as soon as practical and fly that radial until reaching:
  - (1) All large non-jet aircraft and authorized business jets as defined in the NCP, 3,000 feet above MSL,
  - (2) All other jet aircraft, 6,000 feet above MSL or 8 DME from the Portland VOR/DME.
- b. During periods of peak traffic, large non-jet aircraft departing from Runways 28R and 28L may be assigned a heading of 260 degrees or the Portland VOR 260-degree radial.
- c. When the VOR is not operational, all jets and large non-jet aircraft shall fly either runway heading or a 260-degree heading (divergent course) to the altitude turn points.
- d. When the DME is not operational, all jet and large non-jet aircraft shall continue to use the Portland VOR 277-degree radial to the altitude turn points.
- e. Arrival procedures - see Arrivals under VFR conditions, A.4., below.

**FAA Determination: Approved.** This program has been in effect for some time and has been shown to be effective in mitigating aircraft noise over noise-sensitive areas.

### 4. Page 7-4. Arrivals under Visual Flight Rule (VFR) conditions:

- a. When conditions permit use of charted visual flight procedures, all Instrument Flight Rule (IFR) jets, except business jets, will be vectored to and cleared as follows:
  - (1) Runways 10R and 10L for the Columbia Visual approach procedure at or above 2,500 feet above MSL,
  - (2) Runways 28R and 28L for the Mill Visual approach procedure at or above 3,000 feet above MSL, except:
    - (a) If traffic congestion dictates simultaneous arrivals to Runways 28R and 28L, jets shall be cleared for a straight-in visual approach to Runway 28L, at least eight nautical miles from the airport at or above 3,500 feet above MSL.
    - (b) Between 10 p.m. and 7 a.m., jets will not be cleared for straight-in visual approaches to Runway 28L. Pilots requesting Runway 28L for

landing may transition from the Runway 28R approach at a distance determined acceptable by the pilot in command, but not sooner than the LAKER outer marker.

b. When weather minimums, nighttime restrictions, or operation of an aircraft on a VFR flight plan prohibit use of the CVFP's, IFR jets, excluding business jets, will be cleared for a straight-in visual approach at least eight nautical miles from the runway threshold as follows:

(1) Runways 10R and 10L, at or above 2,500 feet MSL,

(2) Runways 28R and 28L, at or above 3,500 above MSL.

c. All business jets and large non-jet aircraft may be vectored for a final approach in accordance with the following:

(1) Runways 10R and 10L, turn final at or above 2,500 feet above MSL west of the railroad bridge over the Columbia River,

(2) Runways 28R and 28L from the south, turn final at or above 2,500 feet above MSL east of the LAKER outer marker,

(3) Runways 28R and 28L from the north, cross over the north bank of the Columbia River at or above 2,500 feet above MSL.

**FAA Determination: Approved.** These measures, which have been in effect for some time, direct aircraft over the Columbia River and over other compatible areas.

5. Page 7-5, Divergent Courses for Large Non-jet Aircraft. Divergent courses are established for use by large non-jet aircraft during periods of peak traffic to separate the slower non-jet aircraft from jet aircraft. These are:

a. For Runways 10R and 10L, runway heading or the Portland VOR 100-degree radial,

b. For Runways 28R and 28L, a heading of 260 degrees or the Portland VOR 260-degree radial.

**FAA Determination: Disapproved for Purposes of Part 150.** This measure, also proposed in 1992, provides no new noise benefits data and appears to be presented for purposes of air traffic efficiency to increase departure capacity. This measure is appropriate for implementation under programs related to airport capacity enhancement.

6. Page 7-5. Helicopter Routes. Four routes are designated for helicopters operating at the airport. North and south routes follow Interstate 205 at or above 1,500 feet above MSL. An east pattern follows the north bank of the Columbia River to Government Island with a transition to the airport or Pearson Field. West routes follow the Columbia Slough between Sauvie Island and the airport with transitions to Pearson Field and the Bonneville Power Administration Ross Substation in Vancouver.

**FAA Determination: Approved.** This measure, which has been in place for some time, places helicopters over areas having compatible land use development.

#### **B. New or Revised Measures.**

1. Pages 6-4, 6-5, 7-5, Appendix F, Exhibit F-1, Options 1 and 2: Pursue modifications to the Mill Visual and Columbia Visual approaches.

**FAA Determination: Disapproved pending submission of additional information to make an informed analysis.** The NCP does not provide sufficient information to determine the net benefits. Also, it is not clear what modification was modeled to the Columbia Visual approach.

2. Exhibit 5-3, Pages 6-15, 6-216, 7-5, Appendix F, Option 11. Pursue changes to the departure path from the 085 degree radial east.

**FAA Determination: Disapproved pending submission of additional information to make an informed analysis.** The analysis results in Appendix F do not provide sufficient information to show a net reduction in numbers of people or residences within the noise contour.

3. Pages 6-7, 6-8, 7-6, Appendix F, Option 4. Consider FMS and DGPS approach procedures (east and west flow, all weather conditions) as these technologies are made available.

**FAA Determination: Disapproved pending submission of additional information to make an informed analysis.** The analysis results in Appendix F do not provide sufficient information to show the potential for a net reduction in numbers of people within the noise contour.

4. Pages 6-9, 7-6, Appendix F, Option 5. Conduct a test of overhead approaches for OANG aircraft.

**FAA Determination: Approved under 14 CFR Part 150 for study only.**

5. Pages 6-13, 7-6, Appendix F, Option 8. Consider FMS and DGPS departure procedures (follow Columbia River, east and west flow) as these technologies are made available.

**FAA Determination: Disapproved pending submission of additional information to make an informed analysis.** The analysis results in Appendix F do not provide sufficient information to show the potential for a net reduction in numbers of people within the noise contour.

6. Pages 6-13, 7-6, Appendix F, Option 9. Conduct test of close-in and distant noise abatement departure profiles.

**FAA Determination: Approved under 14 CFR Part 150 for study only.**

7. Pages 6-14, 6-15, 7-6, Appendix F, Option 10. Conduct a test of a revised departure procedure for OANG aircraft with a faster climb at lower speed.

**FAA Determination: Approved under 14 CFR Part 150 for study only.**

8. Pages 6-15, 6-16, 7-6, Appendix F, Option 11, Exhibit F-1. Pursue relocation of the VOR/DME.

**FAA Determination: Disapproved pending submission of additional information to make an informed analysis.** The analysis results in Appendix F do not provide sufficient information to show the potential for a net reduction in numbers of people within the noise contour.

9. Pages 6-19, 7-6 through 7-8. Implement engine run-up procedures, including location, time of day, and use of a hush house.

**FAA Determination: Approved as voluntary.** New mandatory run-up procedures or changes to existing procedures, which would limit total numbers or hours of operation of Stage 2 or Stage 3 aircraft may not be implemented without first complying with applicable provisions of 14 CFR Part 161, Notice and Approval of Airport Noise and Access Restrictions and 49 USC 347521 et.seq.

10. Pages 6-16, 6-17, 7-8. Encourage the use of FAR Part 36 Stage 3 aircraft, particularly at night, and publicize reports on the percentage of Stage 2 and Stage 3 aircraft at the airport by airline.

**FAA Determination: Approved as voluntary.**

11. Pages 6-18, 7-8, Appendix F, page F-12. Maintain the current calm wind runway use policy. During calm winds, east is the preferred direction.

**FAA Determination: Approved.** This policy has been in effect since 1979. The NCP states that a significantly larger population is west of the airport.

12. Page 7-8, Chapter 9. Maintain the present role of the NAAC and consider expanding that role in advising Port staff on aircraft noise associated with operations at the airport. This committee was established at the first NCP to provide continuous monitoring and review of noise abatement efforts at PDX.

**FAA Determination: Approved.**

13. Page 7-8, 7-9. Enhance the capabilities of the Port's Airport Noise Management System (ANMS).

**FAA Determination: Approved.**

### **Noise Mitigation Measures**

1. Page 7-10. Continue to obtain noise easements as defined by the 1990 NEM (1992 NCP), DNL 65dB noise contour, in the previously approved program. It is recommended that this area be expanded to include any additional noncompatible land uses in the 1994 DNL 65dB noise contour submitted as part of this study update.

**FAA Determination: Approved.** The DNL 65dB contour is smaller in 1994 and is projected to shrink in 5 years. Incorporation of 1990 noncompatible land use designations into this program revision constitutes the airport operator's exercise of its local discretion to define land use areas for noise compatibility.

2. Page 7-11. Work with local jurisdictions to update comprehensive plans to prevent development in the DNL 55dB and higher noise contour.

**FAA Determination: Approved.** This measure, a local deviation from the Federal guideline contained in Table 1 of Part 150, is consistent with the intent of Part 150.

3. Page 7-11. Work with local jurisdictions to rezone undeveloped land exposed to DNL 65dB and higher, based on the larger 1990 NEM and any additional area exposed to DNL 65dB to that level based on the 1994 NEM.

**FAA Determination: Approved.** This measure encourages compatible land use development.

4. Page 7-12. Work with local jurisdictions to include height and noise zone overlays in zoning ordinances based on the updated NEMs.

**FAA Determination: Approved, except** height restrictions, which are addressed at 14 CFR Part 77. FAA's decision not to include the height restriction portion of this element in this Part 150 approval does not indicate FAA's disapproval of the measure for Part 77 purposes or reflect on the effectiveness of the height restriction for purposes of aviation safety.

5. Page 7-13. Encourage all affected jurisdictions to require fair disclosure of noise levels to ensure that prospective buyers of residential properties within the airport environs are made aware of the aircraft noise levels expected and any associated local requirements for acoustical treatment.

**FAA Determination: Approved.**

6. Page 7-13. Work with the Cities of Portland and Vancouver regarding noise insulation requirements in the cities' zoning codes to include additional areas exposed to DNL 65dB based on the new 1994 NEM.

**FAA Determination: Approved.**