

Hillsboro Airport Parallel Runway 12L/30R Draft Environmental Assessment

Prepared for



VOLUME 1

Responsible FAA Official

Date

This environmental assessment becomes a Federal document when evaluated, signed, and dated by Responsible FAA Official.

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October 2009

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Executive Summary

Hillsboro Airport (HIO) is the busiest general aviation (GA) airport in the State of Oregon, and relative to total aircraft operations, is the second busiest airport in the state behind Portland International Airport (PDX). HIO is a designated reliever airport for PDX. The Federal Aviation Administration (FAA) encourages the development of such high capacity GA airports in major metropolitan areas. These specialized reliever airports provide pilots with safe, efficient, and attractive alternatives to using congested commercial airports and provide facilities for GA users in the surrounding area.

As the Airport sponsor, the Port of Portland (the Port) prepared the 2005 Hillsboro Master Plan, which identified facility improvements to enable the Airport to continue serving as an effective GA reliever as activity levels increase. The improvements recommended in the Master Plan include a new runway parallel to the existing primary runway, which would be used by small, primarily single-engine propeller aircraft. This new runway would require the relocation of an existing helipad used for helicopter training flights. The recommended improvements also include new taxiways to provide access to the new runway. The continued increase in aircraft operations at HIO now requires the implementation of these improvements.

This Environmental Assessment (EA) is being prepared to meet the requirements of the National Environmental Policy Act of 1969, as amended (NEPA).

The Proposed Action

This proposed project includes three components: 1) construction of Runway 12L/30R and associated taxiways, 2) the relocation of the existing Charlie Helipad, and 3) associated infrastructure improvements.

Construction of the proposed runway and associated taxiways would be initiated in 2010 and the capacity-enhancing infrastructure would be in operation by the end of 2011. The relocated Charlie Helipad would be under construction in 2014, and would be in operation by 2015. Stated more specifically, the proposed improvements include the following:

- The proposed Runway 12L/30R would be parallel to and 700 feet east of Runway 12/30 (to be re-designated Runway 12R/30L), the Airport's main runway. The new runway would be 3,600 feet long and 60 feet wide, consistent with the runway's intended use by fixed-wing, piston-engine, propeller-driven airplanes. This new runway would occupy the location of the existing Charlie Helicopter Landing and Take-Off Pad, commonly known as the Charlie Helipad.
- Taxiway D would be parallel to and 240 feet east of the new Runway 12L/30R and would connect to Taxiway C. Taxiway D would provide access to aircraft landing and taking off from the new Runway 12L/30R. Taxiway D would also be used as an interim replacement for the existing Charlie Helipad.

- Four runway exit taxiways would connect the proposed Runway 12L/30R to Taxiway D.
- One connector taxiway would cross the existing Runway 12/30 and provide access to the new runway from the ramp area.
- Relocated Charlie Helipad would be located 500 feet to the east of and parallel to the proposed Runway 12L/30R.

Purpose and Need

The purpose of the proposed action is to reduce congestion and delay at HIO in accordance with planning guidelines established by the FAA. The proposed action is needed because the HIO airfield is currently operating at close to 100 percent of annual service volume (ASV) and current Airport activity levels exceed the FAA capacity planning criteria. The FAA National Plan of Integrated Airport Systems (NPIAS) states: "Current FAA guidance recommends that capacity planning start when aircraft activity reaches 60 to 75 percent of an airport's capacity."¹ Forecast activity levels through 2025 are expected to substantially exceed the ASV of the current airfield, with increasing levels of unnecessary congestion and delay corresponding to the increased demand.

Alternatives

A wide range of alternatives was considered to meet the Purpose and Need for the proposed project. These alternatives included several new runway locations and configurations, use of new technologies, and demand management. These alternatives were evaluated with respect to their ability to meet the Purpose and Need for the proposed action, site constraints, and environmental factors. This evaluation concluded that the following three alternatives should be retained for detailed consideration in this EA:

- **Alternative 1 – No Action.** NEPA requires consideration of the No Action Alternative. 40 CFR 1502.14(d) (agencies shall “include the alternative of no action”). This alternative also serves as the basis of comparison for other reasonable alternatives.
- **Alternative 2 – Proposed Runway 12L/30R with Charlie Helipad Option A.** This alternative includes the improvements described above. In this alternative, the relocated Charlie Helipad would be located at the southern end of the area available for siting.
- **Alternative 3 – Proposed Runway 12L/30R with Charlie Helipad Option B.** This alternative differs from Alternative 2 only in the location of the relocated Charlie Helipad. In this alternative, the relocated Charlie Helipad would be located at the northern end of the available area.

Chapter 3 provides details concerning the alternatives considered.

¹ U.S. Department of Transportation, FAA (2004), *Report to Congress, National Plan of Integrated Airport Systems (NPIAS) 2005-2009*, Chapter 2, page 12.

Affected Environment

Hillsboro Airport is located in the city of Hillsboro in Washington County, Oregon, approximately 2 ¼ miles from Hillsboro city center and 12 miles west of downtown Portland. The Airport and surrounding Port-owned property occupy approximately 965 acres of land. The Airport is generally bound by NE Brookwood Parkway to the east, NE 25th Avenue to the west, NW Evergreen Road to the north, and NE Cornell Road to the south. The Airport is owned and operated by the Port of Portland. While the Airport is located almost entirely within the city of Hillsboro, it is located on the northern boundary of the city and Port-owned lands north of NW Evergreen Road are under the jurisdiction of Washington County. Chapter 4 of the EA discusses the environment potentially affected by the proposed project alternatives.

Noise

The existing 65-decibel day-night average sound level (DNL 65) contours that define “significant” aircraft noise exposure are entirely on the Airport. No noise-sensitive uses are currently exposed to significant levels of aircraft noise.

Land Use

Areas to the east and south of the Airport are generally developed in residential uses with commercial development at the intersections of major roadways. Areas to the north and west of this corridor remain in agricultural uses generally.

Air Quality

HIO is located in the Portland-Vancouver Air Quality Maintenance Area (AQMA), which is in attainment for all pollutants but is subject to maintenance plans developed to ensure continued compliance with carbon monoxide standards.

Water Quality and Floodplains

HIO lies on higher ground between two watersheds: the McKay Creek watershed, which includes Glencoe Swale, which drains the northern portion of the Airport; and the Dawson Creek watershed, which drains the southern portion of the Airport. Both watersheds are sub-basins of the Tualatin River watershed.

Currently, Glencoe Swale is designated as a “Zone A” regulatory floodplain, as designated in the Flood Insurance Study of Washington County (unincorporated areas), revised March 18, 1987. A “Zone A” floodplain is an approximate floodplain designation used outside the area of detailed study in the Flood Insurance Study.

Fish, Wildlife, and Plants

No plant or terrestrial animal species in the project vicinity are listed as threatened or endangered under the federal Endangered Species Act (ESA). There are no ESA-listed fish species in the immediate project area. Fish species in the project vicinity listed as threatened or endangered under the federal Endangered Species Act include the Upper Willamette River Distinct Population Segment (DPS) steelhead and the Upper Willamette River

Evolutionarily Significant Unit (ESU) Chinook salmon. Upper Willamette River DPS steelhead are believed to have been present historically in the McKay Creek watershed. There are no records of Upper Willamette River ESU Chinook salmon occupying the McKay and Dairy creeks systems (Oregon Natural Heritage Information Center, 2008). During the project team's August 2008 site visits at the Airport, most of the streambed of Glencoe Swale was dry, and no fish were observed.

Wetlands

There are approximately 51 acres of wetlands on airport property. Airport land and surrounding land on which wetlands have been identified have been developed for public and commercial uses, and consequently, wetlands that are present are managed for purposes other than maintenance of high-quality wetland functions. These wetlands are subject to tilling, seeding, and/or mowing on a frequent or regular basis. Very little native vegetation remains in the wetlands.

There are three types of wetland resources in the study area:

- Palustrine emergent, depressional, isolated wetlands
- Palustrine emergent wetlands in or associated with drainages
- Unvegetated stormwater ditches

Environmental Consequences

Consistent with the requirements of FAA Orders 1050.1E, Change 1, and 5050.4B, the following sections summarize the impacts of the project alternatives as they relate to the specific environmental resource categories.

Noise

No residential or other noise-sensitive land uses would be within the DNL 65 contours that define significant aircraft noise exposure for any of the alternatives under consideration. No noise-sensitive land uses would experience significant project-related aircraft noise impacts or significant noise exposure from construction activities.

Compatible Land Use

As noted above none of the alternatives under consideration would generate a significant noise impact, and no residential or other noise-sensitive land uses would fall within the DNL 65 contours for any of these alternatives. The Airport is noted within the City of Hillsboro and Washington County land use plans and policies and thus is a consistent land use. None of the alternatives would require change of use approval, annexation or relocation that would disrupt land use patterns in the Airport environs. The project alternatives would not therefore create non-compatible land use.

Historical, Architectural, Archeological, and Cultural Resources

No archaeological or historic resources on or eligible for the National Register of Historic Places were found in the project Area of Potential Effect (Appendix C.2). The background

research and field observations conducted in this analysis indicate that a “No Properties Affected” determination by the FAA in consultation with the Oregon State Historic Preservation Office (SHPO) is appropriate. The SHPO concurred with this determination on June 12, 2009.

DOT Section 4(f) Resources

No potential DOT Section 4(f) or Land and Water Conservation Fund Section 6(f) properties are present within the existing or future DNL 65 noise contours. No property would be acquired as part of this project and no change in noise levels would occur off of Airport property as a result of implementing any of the Alternatives. Therefore, no significant direct or indirect impacts to potential Section 4(f) or Section 6(f) resources would occur.

Socioeconomic Impacts, Environmental Justice, Children’s Environmental Health and Safety Risks

No significant adverse socioeconomic impacts or disproportionate risks to children’s environmental health and safety are expected due to the proposed project. None of the alternatives would result in the relocation of any residences or businesses, division or disruption of any communities in the surrounding area, or change in surface transportation facilities or traffic volumes. Neither Alternative 2 nor Alternative 3 would cause significant noise impacts off-airport. Neither Alternative 2 nor 3 would result in adverse impacts on environmental resources that could lead to disproportionately high and adverse impacts on minority and/or low-income populations.

Secondary (Induced) Impacts

No significant adverse secondary impacts would occur as a result of the proposed project. None of the project alternatives would result in land use, noise, or direct social impacts that could lead to shifts in patterns of population movement and growth, increased demand for public services, or changes in business and economic activities.

Air Quality

Construction of either Alternative 2 or Alternative 3 would temporarily increase air emissions due to construction of the proposed runway, taxiways, and the Charlie Helipad. These construction emissions would not be significant. Once constructed, the project alternatives would reduce airfield congestion and aircraft delay compared to the No Action Alternative, resulting in long-term, ongoing emissions reductions. The project alternatives would not, therefore, cause significant air quality impacts.

Water Quality

Surfaces at Hillsboro Airport drain to Glencoe Swale, a tributary of McKay Creek, on the north and Dawson Creek on the south. Both Alternative 2 and Alternative 3 would represent an increase in impervious surface of 15.3 acres, a 42 percent increase in impervious area draining to Glencoe Swale relative to the No Action and an approximate 0.9 percent increase in the impervious area draining to Dawson Creek. Because the increase in impervious area for Dawson Creek is below the margin of error for modeling and the increase in flows and pollutants would not be measurable, impacts to Dawson Creek are

considered negligible. Increased flow to Glencoe Swale would be approximately 5.9 percent in a 10-year storm event and approximately 4.0 percent in a 100-year storm event, which does not exceed the defined threshold of significance. Thus, with respect to water *quantity*, no significant impacts are expected under either Alternative 2 or 3.

Stormwater runoff from the new impervious surface in Alternatives 2 and 3 would be treated through a vegetated filter strip to reduce pollutant levels to below water quality criteria. Downstream pollutant concentrations in Glencoe Swale would be lower for Alternatives 2 and 3 compared to the No Action Alternative because the receiving water concentrations would be diluted by the increased runoff. Thus, no significant water *quality* impacts are expected with either Alternative 2 or 3.

Fish, Wildlife, and Plants

No significant impacts on fish, wildlife, or plants are expected from Alternative 2 or Alternative 3. Either Alternative 2 or Alternative 3 would affect approximately 70.4 acres of Airport land that are currently vegetated and undeveloped, converting 68.12 acres of mostly improved pasture and 2.22 acres of wetland to impervious pavement or managed vegetation for parallel runway 12L/30R, the associated taxiways, and the relocated Charlie Helipad. The area between the proposed parallel runway and the existing Runway 12/30 would also be maintained more frequently as a grass infield area, instead of pasture land. Of the affected lands, the improved pasture area currently provides small mammal habitat and the wetlands are used by a variety of waterfowl. Filling wetlands within the construction footprint may reduce waterfowl use of Airport lands. A slight reduction in potential for birdstrikes may occur as some aircraft flight activity moves farther away from wetlands associated with Glencoe Swale. These changes are consistent with the *Hillsboro Airport Wildlife Hazard Management Plan* (Port of Portland, 2007). Impacts of stormwater runoff on water quality and quantity discussed in the Water Quality section above would not have an adverse effect on fish species in downstream water bodies.

No federally-listed threatened or endangered plant or animal species are present in the study area. FAA has determined the project would have “no effect” on federally-listed fish species (see No Effects Memorandum in Appendix C.5). There would be no impacts on any federal or state listed threatened or endangered species.

Wetlands

Alternative 2 and Alternative 3 would both result in permanent loss of 2.22 acres of scattered, low value wetlands. Wetlands that would be impacted range in size from 0.01 acre to 1.71 acres, with the largest wetland being only partly impacted. All wetlands that would be impacted are vegetated primarily, if not exclusively, by non-native grasses and opportunistic weedy species. These impacts would be mitigated through restoring 2.22 acres of wetlands at the nearby Jackson Bottom Wetland Preserve. This restored wetland would provide several wetland functional characteristics that would exceed the functions of the impacted wetlands. They would be higher functioning in characteristics of native vegetation, wildlife habitat, fish habitat, flood water storage, sediment retention, and possibly removal or storage of nutrients.

Floodplains

No work is proposed within the 100-year floodplain for Glencoe Swale or Dawson Creek under any Alternative. The stormwater runoff analysis discussed in the Water Quality section above was used to determine that the estimated floodplain impacts for Alternatives 2 and 3 would not reach the threshold of significance as defined by FAA.

Hazardous Materials, Pollution Prevention, and Solid Waste

No significant impacts related to hazardous materials, pollution prevention, or solid waste were identified for the proposed project. No recorded contaminated sites were identified inside the area to be disturbed for the project alternatives. Neither Alternative 2 nor Alternative 3 would affect any known contaminated soil; however, it is possible contaminated media from unknown sources could be encountered during construction. Neither of these alternatives is expected to generate hazardous or toxic wastes.

Various non-hazardous solid wastes would be generated during demolition and construction of the project. The concrete, asphalt, soil, and other wastes would be segregated and recycled or reused when possible. For example, clean soil would be used as fill, if appropriate. Solid waste generation from the construction activities is not expected to exceed 50 cubic yards of material.

The Airport generates municipal type solid waste and other nonhazardous wastes associated with the operation and maintenance of general aviation aircraft. The project alternatives would not increase solid waste generation, with the exception of incremental increases of pavement cleaning waste, storm filters, and light tubes. The Port of Portland's waste management system separates waste streams so that materials that can be recycled are captured and remaining materials are properly disposed. The facilities constructed in Alternative 2 or 3 would not increase the number of Airport users compared to the No Action Alternative; therefore a substantial increase in solid waste generation once construction is completed is not expected.

Farmlands

With respect to farmlands classified as prime, unique, or of statewide importance, as defined by the US Department of Agriculture Natural Resource Conservation Service (NRCS), approximately 50 acres of prime farmland or farmland of statewide importance would be directly or indirectly converted to non-farmland use as a result of Alternative 2 or 3. Coordination with the NRCS under the Farmland Protection Policy Act resulted in a Farmland Conversion Impact Rating Score of 107, which is below the threshold of significance of 200. No further action other than documentation for record with the NRCS is required.

Energy Supply, Natural Resources, and Sustainable Development

Implementation of either Alternative 2 or Alternative 3 would decrease demand for energy and would not lead to increased activity at HIO compared to the No Action Alternative. The expected reduction in aircraft delay would decrease aviation fuel consumption by 103 tons in 2012 and 183 tons in 2015. Although operation of the new runway and associated taxiways would entail a small increase in electrical demand for the new taxiway and

runway lights, this increase would not be substantial. As part of its sustainability practices, the Port reduces waste generation through its waste management program, which includes waste segregation, recycling, and energy recapture programs. Construction and operation of the project alternatives would not, therefore, cause significant impacts with respect to energy supply, natural resources, and sustainable development.

Light Emissions and Visual Impacts

Construction of either Alternative 2 or Alternative 3 would not involve new approach lighting systems or other lights that could affect surrounding areas. Other on-airport lighting such as taxiway and runway lighting would not affect surrounding areas. Also, continued Airport development is consistent with the existing pattern of development. Construction and operation of the project alternatives would not, therefore, cause significant impacts with respect to light emissions and visual impacts.

Cumulative Impacts

Construction and operation of the project alternatives would not contribute cumulatively to significant impacts on any environmental resource.

Mitigation

The only environmental impact of potential significance is the loss of 2.22 acres of scattered wetlands. Compensatory mitigation would be provided for these unavoidable wetland impacts and would involve restoring historic wetlands at an offsite location at a ratio of 1:1 impact to mitigation. 2.22 acres of wetland would be restored for mitigation.

Construction and operation of the project alternatives would not generate significant impacts on any other environmental resource and no other mitigation is required.

Measures to Avoid and Minimize Impacts

Best management practices would be specified during construction to minimize noise, dust, erosion, and sedimentation. Minimum requirements are included in FAA Advisory Circular 150/5370-10C, Standards for Specifying Construction of Airports, and are provided in Port standard construction specifications. Construction BMPs would be implemented to avoid or effectively minimize erosion and sedimentation from exposed soils during construction. Design of the alternatives has avoided and minimized impacts on wetlands to the extent possible. Impacts on remaining wetlands would be further minimized by keeping the construction footprint as small as possible while enabling construction that meets all requirements for HIO's operation. The construction contractor would be required to avoid and minimize unnecessary impacts on wetlands during construction. The Port also has a construction waste recycling specification that sets goals for recycling construction and demolition work on Port property.