

AIRPORT FUTURES PROJECT ASSUMPTIONS, CONCLUSIONS, AND RECOMMENDATIONS – Revised 12/15/09

NOTE: Staff took the initial Project Assumptions, PAG Vote (and Minority Reports), and then added an Update consistent with the PAG’s discussion and decisions. Finally, based on PAG input on 12/15/09 staff prepared key findings and PAG recommendations. Those recommendations and findings are included in the PAG Final Report.

#1. High-Speed Rail: Will Airport Futures consider high-speed rail as a means to meet travel demand?

High-speed rail will be considered in the **Forecast, Follow-on Studies**, and **Alternatives** phases. In the **Forecast**, high-speed rail will be included on the list of Key Issues and Trends that will be used to inform the forecast process. Rail studies completed by the Oregon (2001 Rail Plan, 2003 Rail Capacity Study) and Washington (2007 LATS Phase II Technical Report) Departments of Transportation (DOT) will be used to develop an understanding of the ridership potential of such a system and the potential mode shift from aviation to rail (primarily for the Seattle, San Francisco and Los Angeles markets). Further, existing studies completed by Oregon and Washington DOTs (lead agencies on rail) will be used to understand the timeframe for such a system.

The Regional Air Transportation Demand Task Force findings on high-speed rail and better intercity rail service will be reviewed by the PAG in the **Follow-On Studies**. Project staff completed some initial research on the state of development of high-speed rail in Europe and the U.S. and provided this to the PAG. Staff will continue to track this issue and share any updates with the PAG.

In an effort to maintain flexibility and keep options open well into the planning horizon and beyond, Airport Futures will consider how and where PDX could connect to high-speed rail if such a system was developed in the **Alternatives**.

Separate from this process, the Port will continue to work with the Oregon and Washington DOTs on regional transportation issues. The Port’s primary focus is on freight movement.

PAG Vote: 1=20, 2=4 (Ciarlo, Gilmour, Sallinger, Thompson), 3=1 (Bergman).

Minority Report (PAG Meeting Notes #4): A recommendation to advocate for high-speed rail should be included in the PAG’s final report. Planning for high-speed rail should occur now to avoid a crisis. High-speed rail will provide a supplemental system that does not rely on non-renewable fuels.

Update: The Forecast considered high-speed rail as one of approximately 40 key issues and trends that could affect aviation demand in the future. Staff and the consultant team researched high-speed rail in the US and Europe and completed a sensitivity analysis to understand the reduction in aircraft passenger traffic that might occur with the introduction of high-speed rail and other transportation modes. Because the region has not yet defined a high-speed rail alignment, the issue of how and where high-speed rail would connect to the airport terminal was not defined in the Master Plan Alternatives Analysis.

The Facility Planning criteria that were used to guide the development of the master plan

include preserving flexibility, keeping options open and maximizing land use efficiencies. In particular, the criteria speak to the issue of multi-modal access and the adaptability of plans. As a whole, the criteria and the plan developed to reflect them, provide sufficient flexibility to accommodate a future connection to high-speed rail. Staff is closely following the national and regional discussion of high-speed rail and has identified high-speed rail as a future follow-on study.

#2. Move Military Off PDX: Will relocation of the military off PDX be considered?

The Military will be considered in the **Forecast, Facility Requirements, Follow-on Studies, and Alternatives** phases. Their operations have only minimal impact on the forecasts, are not the tipping point for runway or taxiway requirements, and do not directly impact terminal requirements. A Military Siting Study was a Follow-on Study to the 2000 PDX Master Plan and will be reviewed during the **Follow-on Studies**.

The military location issue will be explored during the **Alternatives**. During this phase, Airport Futures will evaluate master plan alternatives and select a preferred alternative that represents the best long-term interest of the airport and the region it serves. If it is determined that the airport facility requirements cannot be met with the military continuing to occupy its current site or an alternative site at the airport, that issue will be identified and explored as part of the planning process. If F22s are proposed to be based at PDX or the military is relocated to another area of PDX, a National Environmental Policy Act (NEPA) review will be required. Environmental impacts, including noise and natural resources, associated with the proposed changes would be evaluated.

There is much uncertainty associated with the future of the military and the type of aircraft they may be operating. Those questions are unlikely to be resolved within the timeframe of this planning effort, and will be addressed by the federal government, Governor's office, and the Port Commission. In an effort to maintain flexibility and keep options open well into the planning horizon and beyond, Airport Futures will consider how and where PDX could accommodate the military needs, as staff currently understands them.

PAG Vote: 1=19, 2=0, 3=1 (Weigant).

Minority Report (PAG Meeting #5A): The military base at PDX is not viable from a cost benefit perspective and will likely be closed. The Port needs to do contingency planning should the military base be closed. While not responsible for a large number of operations or impacts on facilities, the military consumes a large number of acres at PDX, which could be used for other purposes. While F15s do not impact the noise contours, the noise is disruptive to residents. F22s are louder than F15s.

Update: Military operations were considered in the Forecast and, based on historical activity and future uncertainty, were held static at 6,000 annual operations for the planning period. The cost of relocating the military was an issue discussed in the testing of the 90th percentile forecast and decentralized terminal alternative. It was determined that the Centralized Terminal Alternative was the preferred alternative to meet the facility requirements defined for the 2035 planning period. The Centralized Alternative does not require the relocation of the military to an alternative site. The military confirmed that their existing campus could meet their long-term needs. The facility requirements analysis confirmed that all planning period requirements could

be met with the military continuing to occupy its current site.

#3. Move Air Cargo to Another Airport: Will moving air cargo operations to another airport to provide more capacity at PDX be considered?

Movement of cargo will be considered in the **Forecast, Facility Requirements, and Alternatives** phases.

In the **Forecast**, consideration will be given to whether market forces might add or shift cargo to other airports (leakage) within Oregon and Washington. The future level of air cargo activity at PDX is dependent on numerous other variables related to local and regional demand for goods (e.g., the future of air-dependent industries in the region, the cost of other transportation modes). Staff will also look to existing research to help inform the discussion of how air cargo is considered in the Key Issues and Trends of the forecast. The forecast data related to cargo will then be used to establish **Facility Requirements** and will be further examined in the **Alternatives**.

Air cargo activity is dependent to a great extent on national and international air traffic patterns and the availability of necessary air cargo infrastructure (not only aircraft ramp, taxiways and runways, but also good surface transportation connections). There are inherent operational reasons why the large cargo aircraft and small cargo feeder aircraft need to be co-located. Currently, there is no legal way to force cargo aircraft to other airports. While staff will not consider the forced relocation of existing cargo needs, in an effort to maintain flexibility and keep options open well into the planning horizon and beyond, Airport Futures will consider, in the **Alternatives**, how and where PDX could accommodate the cargo needs, as staff currently understand them. As new cargo operators approach PDX to start new service or expand existing service, the Port will continue to explore reasonable and permissible ways to reduce noise impacts.

There currently are weight-based landing fees for all commercial aircraft at PDX. Because of co-location requirements noted above, landing fees are unlikely to influence cargo traffic at PDX. Project staff will provide the PAG with new developments related to cargo as they arise. The Port will also continue to evaluate the expanded use of landing fees, lease rates and other tools that may help manage demand.

PAG Vote: 1=21, 2=0, 3=0

Update: The Forecast included a detailed look at air cargo demand and concluded that consolidation in the cargo industry, increasing use of consolidation points by freight forwarders, increased use of trucks to transport cargo to consolidation points and the increasing presence of integrated carriers were the dominate variables in future air cargo demand. In addition to co-location requirements (cargo feeder and long-haul aircraft), these factors make it unlikely that there will be a significant shift in cargo to other Oregon and Washington airports. The forecast of 3.3% growth for the planning period means that most if not all of the cargo activity projected to occur can be accommodated within the existing Airtrans Center area.

#4. Building Replacement or Supplemental Airport: Will Airport Futures look at building a new airport at some other location?

This issue will be considered in the **Forecast** and **Follow-on Studies** phases. Existing airports, PDX, and others in the Portland/Vancouver area and around the state have capacity to meet demand for the foreseeable future. In fact, numerous capacity enhancements are planned or under development at many of these existing airports (e.g., Hillsboro, Troutdale, Kelso/Long-View, Grove Field, Salem, Eugene, Redmond). A review of the Regional Air Transportation Demand Task Force findings will occur in the **Follow-on Studies**. While Airport Futures will not explore the development of a new airport (replacement or supplemental) within the region, it will consider the statewide airport systems for Oregon and Washington and strive to capture how that extended system of airports may influence aviation demand in the Key Issues and Trends discussion during the **Forecast**.

Beyond the Master Plan, Port staff will continue to coordinate with Oregon and Washington State Aviation Departments and other commercial airport operators to better understand and coordinate air service. Project staff will provide information to the PAG on facility and service developments at regional airports as they arise, including Connect Oregon funding and new service.

PAG Vote: 1=23, 2=1 (Stoecklin), 3=1 (Weigant).

Minority Report (PAG Meeting #4): While a replacement airport is not feasible, there should be additional analysis of how supplemental airports in a 60-mile radius could accommodate a portion of PDX traffic, reducing the growth of PDX traffic.

Update: Leakage to other regional airports was studied in the Forecast. The analysis concluded that while PDX would remain the primary commercial service airport in the region, by 2035, airline service and passenger traffic at other airports in Oregon will have sufficiently expanded to support their regional populations and economies. As a result, these communities will be less reliant on PDX in the future. The sensitivity analysis completed for the forecast suggested that, with assumed development of other regional facilities, as much as 8% of PDX passenger traffic could be leaked to other airports.

Port staff continues to coordinate with Oregon and Washington State Aviation Departments. Staff provided an update on Connect Oregon funding and new service at Newport and Astoria.

#5. Shifting Traffic to Other Airports: Will Airport Futures consider shifting traffic to other airports?

This issue will be discussed in the **Forecast**, **Follow-on Studies**, and **Alternatives** phases.

Existing and future service at other airports has been identified as part of the Key Issues and Trends that will receive further study in the **Forecast**. The Forecast will consider the degree to which market forces may result in shifting of traffic away from or bypassing PDX (leakage). This will include considering the potential shifting of general aviation (private planes) to other airports in the Portland/Vancouver metro area, as well as passengers and cargo shifting, to other commercial service airports within Oregon or Washington (e.g., Salem, Redmond, Eugene).

Forced shifting of traffic, whether general aviation private planes, or passenger and cargo, will not be considered because there is no current legal mechanism to accomplish this. The Regional Air Transportation Demand Task Force's review of, and updates on, this issue will be discussed in the **Follow-on Studies** and in the **Alternatives**.

Staff will track and report to the PAG, the development of concepts of demand management and congestion pricing as they develop at other airports, and report to the PAG as this process unfolds. Connect Oregon is one example of a government incentive program to increase capacity in other local areas. Staff will continue to monitor these investments and participate in state and regional discussions regarding system capacity.

PAG Vote: 1=23, 2=2 (Ciarlo, Weigant), 3=0

Update: The Forecast studied all eight commercial service airports in Oregon including analysis of number of passengers served and connecting flights to PDX. Currently PDX accounts for 87% of the passengers enplaned in the State. The analysis concluded that, while PDX would remain the primary commercial service airport in the region, by 2035, airline service and passenger traffic at other airports in Oregon will have sufficiently expanded to support their regional populations and economies. As a result, these communities will be less reliant on PDX in the future. The sensitivity analysis completed for the forecast suggested that, with assumed development of other regional facilities, as much as 8% of PDX passenger traffic could be leaked to other airports.

The Facility Requirements work examined the 2000 Master Plan, follow-on studies, and studies completed by Oregon and Washington state aviation departments. The Facility requirements technical memo indicated a shift in general aviation (GA) activity at PDX that was characterized by a decline in smaller piston-engine aircraft and an increase in business aviation (jet and turbo prop) activity. While the Port cannot prohibit smaller GA aircraft from using PDX, the general approach is to continue to invest in more suitable reliever airports to accommodate that segment of the GA market. The Facility Requirements technical memo identified the need for additional land for GA consistent with the potential need to relocate the current GA campus to accommodate future passenger facilities and demand in the business aviation segment of GA.

Port staff continues to coordinate with Oregon and Washington State Aviation Departments.

PAG RECOMMENDATION: The Port should continue to coordinate with the Oregon and Washington State Aviation Departments to better understand PDX's role and the role of Port reliever airports in the larger system of airports serving the needs of the region. Consistent with that effort, the Port should partner with Oregon, Washington, and the FAA to continually seek improvement of regional airports consistent with state airport system plans.

#6. Possible 3rd Parallel Runway: Will Airport Futures consider the third parallel runway?

This issue will be considered in the **Forecast, Facility Requirements, Follow-on Studies, Alternatives, City Land Use Plan**, and the **Adoption** phases. Current projections, post 9-11, indicate that the need for a third parallel runway (500,000 annual takeoffs and landings) is well outside of the current 25-year planning horizon.

The 2000 Master Plan and subsequent studies, including the work of the Regional Air Transportation Demand Task Force, examined the need for additional airfield capacity. All agreements defining this planning process propose beginning it where the 2000 Master Plan ended. As a result, its review and the **Follow-on Studies** are a key component and essential step that must be taken before moving forward.

In the summer of 2007, the Port made a commitment to the Portland City Council not to include a request for a third parallel runway in the City's land use plan being developed through Airport Futures. Before development of a third runway, a) a National Environmental Policy Act (NEPA) review of the new runway would be required, b) City Council would be asked to approve this land use action, and c) funding for the project would need to be identified. While no near term approval of the third runway would be requested of Council, the Port indicated that the updated PDX master plan would likely include the third runway in the Airport Layout Plan (ALP), just as it is in the 2000 PDX Master Plan. It is prudent to develop long-range plans, which give some consideration to where it might go, if and when, it is needed. (Source: June 12, 2007 Bill Wyatt letter to City Council)

Staff will track and report to the PAG, the development of concepts of demand management and congestion pricing at other airports, and report to the PAG as this process unfolds.

As with high-speed rail, a third runway is likely beyond the current planning period, and, based on demand (influenced by rail development, development of new service at other area airports, etc.) will be a subject for further evaluation in subsequent master plans, which traditionally happen every 7 to 10 years. The fact that the third parallel runway may be shown on the ALP does not mean the Port intends to construct it any time soon, if ever. It simply means it has reserved an appropriate amount of land in case the need materializes. The ALP will be discussed in the **Alternatives** phase.

The ALP is required by the FAA. Acceptance of the ALP by the FAA "does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein, nor does it indicate that the proposed development is environmentally acceptable in accordance with appropriate public laws." It is unknown how the ALP will relate to the City's land use plan because this is the first time the Port has undertaken a legislative land use process with the City. The ALP will be included in the materials submitted to the City. While the Port will not request approval for a third runway, there will be a planning-level review of the impacts of a potential third runway, including noise, natural resources, and surface transportation, if it is built. The **City Land Use Plan** will detail a land use review process, identifying projects, which would be permitted outright, and those that would require additional review.

The **Forecast** will produce a projection of operations, which will be considered in the **Facility Requirements** and **Alternatives** phases. In the **Adoption** phases, as well as earlier reporting points, the Planning Commission and Portland City Council will be briefed on the community and environmental concerns related to a third runway.

PAG Vote: 1=20, 2=0, 3=0

Update: The Forecast and Facility Requirements work confirmed that the need for a 3rd parallel runway was beyond the planning period ending in 2035. The Facility Requirements concluded that the existing airfield, operated consistently with today's restrictions, was adequate to meet the needs defined in the 50th percentile forecast with minimal delay.

Consideration of the 3rd parallel runway was a central issue in the PAG's midterm process review and approval of the 10-step process for moving forward with the planning process. The 10-step process outlined the PAG's continued commitment to considering the implications of the 90th percentile forecast as a means of testing the ability of emerging plans to be sufficiently flexible in responding to the uncertainties of future growth and changes in technology. The

testing of the 90th percentile forecast included the need for a 3rd parallel runway and enabled PAG to understand how issues related to noise, height, traffic and natural resources were the same or different under higher growth assumptions. Further, the 10-step process and testing of a range possible growth gave the PAG a means to continue to apply the good work done in the forecast phase to subsequent facility requirement, alternatives analysis and adoptions phases of the project.

Consistent with prior commitments, the City Land Use plan will prohibit the 3rd runway within the plan district. Further study of the 3rd parallel runway would be triggered by approximately 400,000 annual operations (2008 – 265,000 annual operations), a new master plan and will require both a City legislative process and NEPA.

#7. City Council Consideration of 3rd Parallel Runway in Land Use Plan: Will the Portland City Council consider approval to construct a third parallel runway in the City's 2010 land use plan for PDX?

As noted in item #6, the Port will not be requesting City Council approval of a third runway. However, in the **Adoption** phase, as well as earlier reporting points, the Planning Commission and Portland City Council will be briefed on the community and environmental concerns related to a third runway.

PAG Vote: 1=23, 2=2 (Bergman, Weigant), 3=0

Update: Consistent with prior commitments, the City Land Use plan will prohibit the 3rd runway within the plan district. Further study of a 3rd parallel runway would be triggered by approximately 400,000 annual operations (2008 – 265,000 annual operations), a new master plan and will require both a City legislative process and NEPA.

#8. Terminal Alternatives Other Than Centralized and Decentralized: Will Airport Futures consider alternatives other than the Decentralized and Centralized alternatives that came out of the 2000 PDX Master Plan Update?

This issue will be discussed in the **Forecast, Facility Requirements, Alternatives, and City Land Use Plan** phases.

In the 2000 PDX Master Plan, numerous alternatives were evaluated and two alternatives (Centralized and Decentralized) were identified for further study. The intergovernmental agreements defining the Airport Futures planning process proposed beginning where the 2000 Master Plan ended. As such, the **Alternatives** and the **City Land Use Plan** will begin with the Decentralized and Centralized options. The analysis will consider these alternatives in light of new information developed in the **Forecast** and **Facility Requirements**, and changes within the aviation industry. A thorough analysis of each alternative's strengths and weaknesses will be completed, including a sustainability evaluation of each alternative. Dependent on that analysis, other potential facility, and site configurations, may need to be explored by staff and the PAG. A no-build alternative will be included in this analysis.

PAG Vote: 1=25, 2=0, 3=0

Update: Both the Centralized and Decentralized terminal concepts included in the 2000 Master Plan were evaluated in light of the Forecast and Facility Requirements work. The Master Plan Alternatives Subcommittee did a thorough review of the strengths and weaknesses of the two alternatives. The analysis demonstrated that the Centralized Terminal Alternative could reasonably meet higher (90th percentile) growth requirements, provide sufficient flexibility for creative and sustainable solutions, provide a reasonable level of service even at higher growth, could be effectively phased and built and was more sustainable than the decentralized alternative. The analysis of alternatives considered numerous other alternatives including, a no-build option, in an effort to insure we had considered all potential options before focusing our efforts on the Centralized Terminal Concept. The PAG concluded that the planning team had completed sufficient analysis to proceed with planning for the Centralized Terminal Concept and that there was no additional need to test the Decentralized concept at this time.

#9. NEPA Review: PDX Master Plan: Will there be a National Environmental Policy Act (NEPA) analysis of the PDX Master Plan?

As outlined in the City-Port Intergovernmental Agreement, there will be an environmental screening of all projects recommended in Airport Futures using the NEPA checklist criteria. That screening will not be a substitute for a full NEPA analysis required for the implementation of any resulting projects. The timing for such projects will be demand-based and triggered by specific metrics. This NEPA environmental screening, along with a sustainability evaluation, will occur as part of the **Alternatives** and the **City Land Use Plan** phases (and capital planning included in this phase). Master Plans, by themselves, do not require a NEPA analysis, unless federally funded, and there is no federal funding in this process.

PAG Vote: 1=21, 2=0, 3=0

Update: Sustainability, including its framing within the PAG's Vision and Values, guiding principles and facility planning criteria, has been considered throughout the planning process. The Port and City used the Airport Futures process to review many NEPA criteria in evaluating the social, environmental, and economic aspects of the emerging facilities plans. The result is that major projects envisioned at the outset of the planning process (decentralized terminal, 3rd parallel runway) are not included on the list of facilities identified for the planning period (2010 – 2035). The most significant facilities needed within the planning period include additional public parking and a grade separated interchange at 82nd and Airport Way but nothing on the scale of a new runway or decentralized terminal. The PAG concluded that the appropriate level of environmental screening was completed for the Master Plan, that reasonable alternatives were considered and that planning decisions have reflected environmental values (vision & values, sustainability criteria). The Port will continue to screen future projects for environmental issues and comply with NEPA as required.

#10. Air Quality: Will air quality be considered as part of Airport Futures?

Air quality will be considered as part of the **Alternatives, City Land Use Plan, and Follow-On Studies** phases. Consistent with the commitment to complete an environmental screening and evaluate the relative sustainability of different alternatives, Airport Futures will consider the probable effects of the alternatives on airport efficiency and the resulting emissions. The creation of a new air quality standard is not within the scope of Airport Futures.

If desired by the PAG, staff could request an air quality presentation by DEQ, Port/City environmental staff, and/or other environmental interests. Many of these experts are on the project Technical Advisory Pool (TAP) for this purpose.

PAG Vote: 1=25, 2=0, 3=0

Update: Air quality, particularly emissions from taxiing aircraft, vehicle access to the terminal and parking facilities were a consideration in the comparison of the centralized and decentralized terminal options, the decision to proceed with the analysis of the Centralized Alternative, and the application of the facility planning criteria in the alternatives analysis. Because the decentralized terminal alternative was abandoned based on a higher level analysis, and because PDX has chosen to keep multiple options open for parking, rental cars and other projects, an environmental screening of “alternatives” in terms of air quality impacts was no longer needed for purposes of Airport Futures.

#11. Climate Change: Will Airport Futures consider climate change?

Climate change issues will be considered in the **Forecast, Alternatives, and City Land Use Plan** phases. The impact of climate change on future aviation demand will be considered in the **Forecast**, as one of the Key Issues and Trends that will receive specific consideration. To the extent climate change may result in programs to limit greenhouse gases (which affect the price of fuel, the price of air transportation, and the number of persons traveling by air), staff will attempt to capture those concerns. During the **Alternatives and City Land Use Plan** discussions, staff will evaluate alternatives relative to sustainability principles, which include climate change issues. Sustainability is one of the major goals of this planning process.

Minimizing emissions of greenhouse gases, in design and operational policies, while meeting demand is an ongoing focus of the Port. Currently, there is no plan to reduce demand at PDX through mandatory taxes or fees. The Forecast will include the impacts of a carbon tax on passenger and cargo demand. Staff will monitor international, national, regional, and state policy on climate change and report back to the PAG.

PAG Vote: 1=25, 2=0, 3=0

Update: Climate change was identified as a key issue in the Forecast. In fact, climate change dominated much of the discussion at the Forecast Subcommittee.

The subject of climate change was addressed in a variety of ways including the inclusion of potential future carbon costs as an independent variable in the forecast yield equations. This required research of European Union emissions trading schemes and private companies offering voluntary carbon offsets in order to establish a basis for estimating costs associated with a possible future U.S. carbon-trading program. Further, the Forecast looked at the related subject of oil price forecasts by completing extensive research on records from DOE, International Energy Agency, World Bank commodity forecasts and private industry. Further, a sensitivity analysis was completed to understand the potential impact of alternative fuels and high-speed rail.

The facility planning criteria, developed to apply the work of the Vision and Values and Sustainability Guiding principles to the facility planning exercise, focused efforts on redevelopment, compact facilities, maximizing the utility of existing facilities and multi-modal access. The facility planning criteria were specifically intended to insure that sustainability and climate change were considered as an integral part of the facility planning process from beginning to end.

Staff continues to track international, national, state, and local policy on climate change and held a special information meeting where the City presented the draft Climate Action Plan. That plan and the desire of the PAG to recognize it was incorporated into the Sustainability Guiding Principles.

#12. Emissions from Jet Aircraft: Will Airport Futures consider emissions from jet aircraft?

Jet aircraft emissions will be considered during the **Alternatives** and **City Land Use Plan** phases. Emissions associated with each alternative will be evaluated against the sustainability framework and considered in the PAG recommendations. Airport Futures will explore a process for evaluating the effects of the alternatives (and sub-alternatives) on airport efficiency, including aircraft movement and how those changes in efficiency may affect emissions.

As noted above, minimizing emissions in design and operational policies while meeting demand is an ongoing focus of the Port. The creation of new emissions standards for jet aircraft engines is outside the scope of Airport Futures. However, the Port will continue to support research on jet emissions and report to the PAG.

PAG Vote: 1=24, 2=1 (Bergman), 3=0

Update: The efficiency of the airfield was evaluated in the Capacity Enhancement follow-on studies. The two Capacity Enhancement Studies were central to the evaluation of the airfield completed in the facility requirements technical memo and based on the Airport Futures Forecast. The discussion of pros and cons associated with the centralized and decentralized terminal alternatives considered ground travel times, runway crossings and runway use. Consistent with the follow-on studies the centralized alternative was generally determined to be more efficient (taxi-distances, runway crossings, etc.) than the decentralized. Reduced taxi-distances and minimal aircraft delay translate into reduced aircraft emissions.

Emissions from all sources were discussed at length by the Airport Futures Sustainability Subcommittee and were the subject of a PAG presentation by Port Environmental staff. Emissions as they are related to energy efficiency, climate change, and pollution are addressed in the draft sustainability guiding principles, draft sustainability goals, and facility planning criteria.

#13. Noise Impacts: Will Airport Futures consider aircraft noise impacts from aircraft?

This issue will be addressed in the **Follow-on Studies**, **Alternatives**, and **City Land Use Plan** phases.

There will be a PAG briefing on noise in the **Follow-on Studies**, including an overview of federal, state, and local noise regulations and metrics, an overview of and update on the Part 150 Study, Cargo Study, current and future noise contours, and an update on implementation actions associated with these studies. An overview of the work of the PDX Citizen Noise Advisory Committee, a multi-jurisdictional noise committee, will also be provided to the PAG.

To the extent that additional noise analysis is needed to fill significant gaps in the 2007 PDX Noise Plan Update (Part 150 Study), that information will be provided during the **Alternatives**

and the **City Land Use Plan** discussions. This could include changes in the aircraft fleet mix (fewer or more of a noisy or quiet aircraft) or numbers of flights when compared with the data in the 2007 noise plan. Implementation of the three-year Part 150 Study and Regional Cargo Feeder Study is ongoing and should be compatible with Airport Futures planning. The boundaries and provisions of the City's noise overlay zone also will be evaluated along with the current and potential noise regulations related to PDX.

A recommendation for an ongoing PDX Community Advisory Committee will be developed as part of the **City Land Use Plan** and **Adoption**. This will accompany the regulatory and policy amendments and intergovernmental agreements that will be included as part of the **City Land Use Plan**.

PAG Vote: 1=32, 2=2 (Bergman, Sloan), 3=0

Update: Port and City staff provided a Special Information Meeting on aircraft noise and provided the PAG with an overview on airport noise including the regulatory framework, how noise is measured, FAR Part 150 Airport Noise Compatibility Planning, existing noise contours and possible implications for the City's Noise Overlay. The Noise Overlay was the subject of numerous PAG and Land Use and Transportation Subcommittee meetings.

The Airport Futures aviation consultant Jacobs Consultancy completed extensive noise analysis including new noise contours for 2008 and multiple future case scenarios (duel stream and triple stream (3 parallel runways) operations at 90th Percentile Forecast levels of activity). In addition, Jacobs Consultancy developed a number of supplemental noise metrics including Time Above and Number Above contours for multiple future scenarios.

#14. Nighttime Curfew: Is a nighttime curfew a realistic option to address noise impacts?

Detailed operations forecasts will be undertaken in the **Forecast** phase and will be used to inform the **Facility Requirements** and **Alternatives Analysis** phases. This issue will be discussed in the **Follow-on Studies** phase.

The Airport Noise and Capacity Act passed by Congress in 1990 prohibited creation of new curfews for airports without approval of a Part 161 Study. This prohibition was in exchange for a phasing out of older, noisier (Stage 2) aircraft by airlines. Airports with existing curfews were grandfathered. Only a handful of airports have attempted a Part 161 study and no airports have received final FAA approval.

A Part 161 Study is not contemplated in this planning process. Staff will track the Part 161 processes currently underway at other airports and will report to the PAG on a periodic basis. Current federal law and FAA regulations make it unrealistic to undertake a Part 161 curfew study at this time because the time required to complete it is well beyond the Airport Futures timeframe.

As new cargo feeder operators approach PDX to start new service or expand existing service, especially at late night/early morning operations, the Port will continue to explore reasonable and permissible ways to reduce noise impacts. In the **Follow-on Studies**, staff will review the Regional Cargo Feeder Study recommendations related to nighttime operations.

PAG Vote: 1=25, 2=0, 3=0

Update: The Part 150 and subsequent Regional Cargo Feeder Study were both discussed in the context of the noise overview presentation to PAG, noise analysis completed by Jacobs Consultancy and the City's noise overlay options.

#15. Water Quality: Will water quality be considered as part of Airport Futures?

Water quality impacts associated with each alternative will be evaluated against the sustainability framework and considered in the PAG recommendations in the **Alternatives** and **City Land Use Plan** phases.

PAG Vote: 1=25, 2=0, 3=0

Update: The amount of impervious surface was a consideration in the discussion of pros and cons associated with the centralized and decentralized terminal alternatives. The centralized alternative was found to have less impervious surface, and therefore, was considered better than the decentralized alternative in terms of stormwater management/water quality. The Strategic Environmental Analysis follow-on study was discussed as part of the mid-term process review and the decision to begin the planning analysis with the Centralized Alternative. An executive summary of the Strategic Environmental Analysis, including an analysis of water quality, was provided to the Master Plan Alternatives Subcommittee and PAG as supporting documentation to the mid-term process review and decisions for moving forward.

Stormwater management was a subject area for the City/Port Natural Resources Working Group and the Land Use Transportation Subcommittee. The Port's relationship to the City's Stormwater Management Manual was discussed and it was concluded that the existing regulatory framework balances the stormwater management goals of the City with the wildlife management goals of the airport.

Water quality is a goal proposed to be tracked by the PDX Community Advisory Committee.

#16. Deicing: Will deicing issues be considered as part of Airport Futures?

The Port is currently working on enhancements to the existing deicing system. Briefings on that project and the impact of deicing will be provided to the PAG to keep them informed of progress toward a deicing "solution." How that system may be developed to serve a centralized or decentralized alternative will be considered during the **Facilities Requirement** and **Alternatives** phases.

PAG Vote: 1=25, 2=0, 3=0

Update: Information on PDX's deicing program, including its history and planned enhancements was presented to the PAG by Port environmental staff. In addition, the subject of deicing is covered in the Inventory of Existing Conditions and Facility Requirements Technical Memos. Because it is the subject of a current PDX project, information on proposed deicing program enhancements has been included at all of the Airport Futures open house events. Most of the airport deicing requirements will be satisfied by the existing system and proposed enhancements. Incremental additions to the system may be required over time to address the need for additional aircraft parking ramp or changes in operations but no major new facilities are included in the plan.

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#17. Neighborhood Improvements Not Related to PDX Impacts: Will neighborhood improvements, not related to PDX impacts, be considered in Airport Futures?

Neighborhood improvements and protection of nearby natural resources will be explored in the **City Land Use Plan** phase. Impacts associated with airport development will require mitigation. The **City Land Use Plan** will evaluate the impacts of proposed development and require mitigation that is proportional to the impacts while meeting any legal requirements. Desired neighborhood improvements (e.g., improving streets, installing sidewalks), not directly associated with airport impacts and infrastructure deficiencies, may be identified as part of the **City Land Use Plan** along with possible funding sources.

PAG Vote: 1=25, 2=0, 3=0

Update: The City's Land Use Plan identifies needs for infrastructure improvements to connect the airport industrial area with the neighborhoods to the south, both in terms of trails, crossings, and overall improved safety. Improvements directly associated with airport development were identified in the transportation impact analysis and the natural resources program update. Details of the mitigation are included in the Transportation Impact Analysis and the City-Port Intergovernmental Agreement.

#18. Economic Development Areas Adjacent to PDX: Will an economic development plan for areas adjacent to PDX be considered?

An economic development analysis of and potential actions in the industrial and employment areas around the airport (including the Columbia South Shore) will be discussed in the **City Land Use Plan** phase. This analysis will include an assessment of current airport-related and airport-dependent uses, an assessment of ownership patterns and land supply, identification of current constraints in terms of infrastructure and facilities, and anticipation of future demand for airport-related industrial uses around the airport. This analysis will be closely coordinated with the City's anticipated Columbia Corridor environmental scoping effort, the Comprehensive Plan Update, and the Portland Development Commission's Economic Development Strategy update. It is intended to provide a better understanding of economic development issues around the airport. Any resulting recommendations will need to be balanced with the project's sustainability goals.

PAG Vote: 1=19, 2=5 (Bergman, Ciarlo, Gilmour, Sallinger, Sloan), 3=1 (Weigant).

Minority Report: In its planning, the region needs to shift from a growth paradigm (including economic development) to a sustainability paradigm. In a mobile society, jobs are not reserved for local residents. As a result, economic development or job creation drives the population and the economy, both of which are driver of air travel projections. Economic development should be considered in the **Forecast** and **Alternatives** so policy makers can understand the implications of such economic development strategies on population size (and related air travel impacts) and can consider different population sizes as options in their decision-making.

Update: An Economic Development Inventory of the area surrounding the airport was completed and presented to the PAG. The inventory assessed current and prospective business needs and evaluated the strengths, opportunities, weaknesses, and threats associated with future development in the airport area.

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#19. Moving or Piping the Columbia Slough: Will Airport Futures consider moving or piping the Columbia Slough to make way for a third runway?

Any impacts on the Columbia Slough will be considered in the **Follow-on Studies, Facility Requirements, Alternatives, and City Land Use Plan** phases. Avoiding, Minimizing, and Mitigating impacts to the Slough is a priority. Environmental impacts associated with each alternative will be evaluated against the sustainability framework and considered in the PAG recommendations. In keeping with its environmental policy, the Port will continue to integrate environmental considerations in planning and development. While there are no plans to move or pipe the slough, this process will provide a forum to understand how Port development at PDX will intersect with the City's efforts to protect wildlife and wildlife habitat in the Slough.

As desired by the PAG, staff can schedule a presentation on the PDX Wildlife Management Program.

PAG Vote: 1=20, 2=1 (Bergman), 3=0

Update: The Strategic Environmental Analysis follow-on study was discussed as part of the mid-term process review and resulted in the decision to begin the planning analysis with the Centralized Alternative. An executive summary of the Strategic Environmental Analysis, including an analysis of natural resources (including the Columbia Slough) was provided to the Master Plan Alternatives Subcommittee and PAG as supporting documentation to the mid-term process review and decisions for moving forward.

The 50th percentile forecast and subsequent facility requirements did not identify facility needs that required exploration of any alternatives to move or pipe the Slough. The Airport Futures aviation consultant Jacobs Consultancy has completed a preliminary assessment for a potential 3rd runway and concluded that a shorter runway (8,500 instead of 12,000 feet) satisfies future demand while not impacting the Slough directly.

#20. FAA Compelling Capacity: Can the Federal Aviation Administration (FAA) compel PDX to add capacity to the runways, terminal building, or roadways?

The FAA cannot compel PDX to add capacity. That is the prerogative of the local airport operator. At PDX, capacity is added when we run out of it in some area, or when we foresee that we will run out of it, generally in the near term. Due to the high costs of facilities, we focus on capacity preservation wherever we can. Capacity preservation approaches will be discussed in the **Facility Requirements, Follow-on Studies, and Alternatives** phases.

PAG Vote: 1=20, 2=0, 3=0

Update: The idea of capacity preservation has been a key focus in the facility requirements and alternatives analysis. A number of follow-on studies, including the Airport Capacity Enhancement Plan and Regional Air Transportation Demand Task Force Report, were reviewed and discussed by the Master Plan/Sustainability Subcommittees and PAG when they considered how to apply sustainability in Airport Futures. What has emerged from the initial Vision and Values is a set of Sustainability Guiding Principles and Facility Planning Criteria that helped staff to craft a plan that preserves future flexibility, maximizes operational efficiencies, maximizes land use efficiencies, and effectively phases future improvements. Concepts such

as common use ticket counters and hold rooms, increased utilization of aircraft gates, reuse of the commercial roadway, and, at a broader level, the emergence of the Centralized Terminal Concept, all point to a plan that prioritizes capacity preservation and maximizing the utility of existing facility investments.

#21. Wildlife: Will Airport Futures consider the impacts of future Port development on wildlife habitat?

In keeping with its environmental policy, the Port will continue to integrate environmental considerations in planning and development. Airport Futures will consider the impacts of future PDX development on wildlife and natural resources in the **Follow-on Studies**. Avoiding, minimizing, and mitigating impacts will also be discussed in the **Facilities Requirements, Alternatives, and City Land Use Plan**. Wildlife impacts associated with each alternative will be evaluated against the sustainability framework and considered in the PAG recommendations. The existing PDX Wildlife Management Plan and applicable city, state and federal regulations will serve as a guide. This sustainability framework to be used to evaluate the **Alternatives and City Land Use Plan** are based on the Airport Futures Vision and Values. This process will provide a forum to understand how Port development at PDX will intersect with the City's efforts to protect wildlife and wildlife habitat.

PAG Vote: 1-19, 2=2 (Bergman, Ciarlo), 3=0

Update: The Strategic Environmental Analysis follow-on study was discussed as part of the mid-term process review and resulted in the decision to begin the planning analysis with the Centralized Alternative. An executive summary of the Strategic Environmental Analysis, including an analysis of natural resources, was provided to the Master Plan Subcommittee and PAG as supporting documentation to the mid-term process review and decisions for moving forward.

The Alternatives Analysis exercise was guided by a set of Facility Planning Criteria derived from the PAG Vision and Values and Sustainability Guiding Principles. The Criteria emphasize minimizing impacts to natural resources, air quality, water quality and greenhouse gas emissions.

An overview of the PDX Wildlife Management Program was presented to the PAG as was a summary of state, federal and local requirements related to natural resources (including wildlife habitat). The Wildlife Management Plan, city, state, and federal regulations provided guidance for the Natural Resources Inventory and the Environmental, Social, Economic and Energy analysis completed for the airport and surrounding study area. The City and Port formed a Natural Resources Working Group that reported to the Land Use and Transportation Subcommittee and PAG throughout the process.

The findings of the Forecast, Existing Conditions Inventory, and Facility Requirements in combination with the Sustainability Guiding Principles and Facility Planning Criteria have led to an understanding that the 3rd runway is not needed within the planning period and that the Centralized Terminal Concept is the more sustainability direction for future airport growth. This conclusion has enabled staff, consultants and the PAG to focus more on specific issues and opportunities related to wildlife management.

Finally, the City-Port Natural Resources Working Group developed a Natural Resources

Management Plan that balances the Wildlife Hazard Management Plan with City wildlife goals and objectives. Specific policies and actions are included to allow modification of habitat that is considered hazardous in exchange for enhancing habitat where no hazards exist.

#22. Technology Changes: Will Airport Futures consider the impacts of technology changes?

Aviation technological changes are being tracked by Port staff on an ongoing basis and will be shared with the PAG, as relevant. This will be evaluated in the **Facility Requirements** and **Alternatives** phases.

PAG Vote: 1=20, 2=0, 3=1 (Bergman).

Minority Report (PAG Meeting #5A): Not provided.

Update: Technology changes were explored in the Facility Requirements Technical Memorandum and were the subject of numerous discussions at Subcommittee and PAG meetings. Potential future technology changes were of particular importance to assessments of airfield capacity, passenger processing (ticketing, baggage check), security checkpoints and possible reuse of the existing ticket lobby and existing rental car counters. The Alternatives Analysis considered a range of alternatives that incorporate new and emerging technologies and the plan in general is designed to provide adaptability to take advantage of technological advances.