GENERAL AIRPORT INFORMATION

Airport ownership: Public, owned by the Pullman-Moscow Regional Airport Board
Year opened: February 1932
Airport classification: Primary non-hub

AIRPORT USERS

Alaska Airlines service to Seattle (four flights daily)
- 2015 Total Passengers: 100349 (+20% over 2014)
  - Up 42 percent for January/February 2016 over January/February 2015
- 2015 enplaned passengers: 50434
  - Up 42 percent for January/February 2016 January/February 2015

Charter operations supporting university athletics
- PUW captures just 72 of 220 charter flights, due to insufficient runway length and all-weather reliability

Corporate general aviation
- More than 720 annual jet operations by large aircraft with maximum take-off weight up to and including 60,000 pounds

General aviation
- Over 38,000 operations in 2015
- 73 based aircraft in 2015

Government, military and medical
- Training
- Emergency response
  - WA and ID Air National Guard
  - US Forest Service Fire Response
  - Medical Flights (5-6 per week serving three hospitals)
  - US Department of Agriculture

Serves universities’ students, faculty, and research
- Washington State University (WSU) enrollment: 19,243
- WSU faculty and staff: 4,697
- WSU annual research and development expenditures: $389 million
- University of Idaho (UI) enrollment: 13,750
- UI faculty and staff: 3,124
- UI annual research and development expenditures: $100 million
PUW is a transportation gateway to the world. The lines on the map show actual flights that happened in 2010. The scheduled, commercial air service allows travelers to connect to national destinations. Commercial flights are shown with the green lines. From Seattle, there are international connections to Mexico, Europe and Asia. International connections are shown with the red lines. The blue lines represent flights made by private aircraft traveling to and from the airport.

The cities of Pullman and Moscow are a six-hour drive to Seattle and Boise. Air Service from PUW reduces these trips to one hour.

On an annual basis, PUW contributes to the economies of Washington and Idaho. The runway realignment construction project will also have a significant economic impact to both states.

**Annual economic benefits**
- Local Jobs: 300
- Gross Regional Product: $17.4 million
- Local and State Taxes Annually: $2.72 million

Source: Steven Peterson, Clinical Assistant Professor, Economics College of Business and Economics, University of Idaho
PUW LIMITATIONS

Existing runway centerline to taxiway centerline separation does not meet FAA design standards

- PUW is currently operating under a “Modification to Design Standards” from the FAA. This agreement permits commercial operations to continue, provided the airport works towards a long-term solution to meet the required design standards.

All-weather reliability limited due to runway alignment

- 124 cancellations or re-routing annually
- 80% of cancellations occur in winter months

Existing runway length is inadequate for some existing airport users.

Terminal building is inadequate to support existing demand.

- PUW passenger enplanements are growing at a rapid pace, which has resulted in an inadequate terminal building. The existing terminal building is 50% of the size it should be to accommodate existing passengers and security requirements.

PUW RUNWAY REALIGNMENT CONSTRUCTION IMPACT (2015-2019)

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Jobs</td>
<td>226</td>
</tr>
<tr>
<td>Total Compensation</td>
<td>$14,305,791</td>
</tr>
<tr>
<td>Sales</td>
<td>$46,615,102</td>
</tr>
<tr>
<td>Gross Regional Product</td>
<td>$20,099,201</td>
</tr>
<tr>
<td>Local Taxes</td>
<td>$499,643</td>
</tr>
<tr>
<td>State Taxes</td>
<td>$2,467,000</td>
</tr>
</tbody>
</table>

Source: Steven Peterson, Clinical Assistant Professor, Economics College of Business and Economics, University of Idaho
PUW SOLUTIONS

A runway realignment will significantly improve all-weather reliability of the airport.

**Realign runway** to meet FAA design standards for runway/taxiway separation
- PUW and the FAA have evaluated more than 20 alternatives to correct design standard issues.
- An airport master plan was completed that established a preferred runway alignment at the existing airport site. The runway realignment will achieve compliance with FAA design standards and lower approach procedure minimums to improve all-weather reliability.

The FAA has approved a **runway extension** to 7,100 feet, which will meet the needs of existing corporate users and improve conditions for charter aircraft serving Washington State University, the University of Idaho, and other Pac-12 university athletic programs. An ultimate runway length of 8,000 feet is planned.

A **terminal area plan** is being prepared to present terminal expansion or relocation alternatives to meet the existing and projected passenger demands.

The preferred runway development program rotates the existing runway and taxiway system approximately 5.5 degrees counterclockwise and shifts the new runway south to allow for future landside development on airport property.

The program provides for a 7,100 foot realigned runway with an ultimate length of 8,000 feet.
The airport master plan identified multiple challenges associated with the realignment of the airport’s only runway. PUW is located in the rolling hills of the Palouse region where large areas of level land are rare, and the area around the airfield is no exception. The preferred development program will require the removal of more than 5 million cubic yards of earth, enough to fill Washington State University’s Martin Stadium 16 times or the University of Idaho’s Kibbie Dome 36 times.

Other design challenges include:
- Property impacts to Washington State University’s agricultural research facilities
- Realignment of the future State Highway 276 corridor
- Relocation of power lines serving the community
- Relocation of Airport Creek
- Minimizing impacts to wetlands
- Construction phasing to reduce airport closures

The runway realignment is a crucial turning point for the airport. It makes sense for many reasons, including the economic and transportation benefits it provides to the community. On the other hand, the “No Action” scenario will permanently limit the services and facilities the airport can provide.

Advantages of a positive resolution:
- Airfield meets FAA design standards for C-III aircraft
- Continued commercial air service
- Improved reliability of commercial air service
- Opportunity for future, expanded commercial air service
- Opportunity for additional charter flights
- Improved service, facilities and reliability to support regional economy
- Additional land available for development at the airport
- Opportunity for expanded general aviation facilities
- Opportunity for longer runway in the future

Impacts of a “No Action” scenario:
- Loss of current commercial air service
- Permanent operation restrictions that restrict airport operations
- No opportunity to extend runway length
- Limited improvements in all-weather reliability
- Limited landside development potential
## PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Years</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>Airport master plan – Complete</td>
</tr>
<tr>
<td>2007</td>
<td>Airport master plan update, Phase I – Complete</td>
</tr>
<tr>
<td>2012</td>
<td>Airport master plan update, Phase II – Complete</td>
</tr>
<tr>
<td>2012-2014</td>
<td>Environmental assessment – Complete</td>
</tr>
<tr>
<td>2014-2015</td>
<td><strong>Engineering design/Land acquisition/Utilities – In progress</strong></td>
</tr>
<tr>
<td>2016</td>
<td>Phase I construction – Waiting on FAA Grant Offer</td>
</tr>
<tr>
<td>2017</td>
<td>Phase II construction</td>
</tr>
<tr>
<td>2018</td>
<td>Phase III construction</td>
</tr>
<tr>
<td>2019</td>
<td>Phase IV construction</td>
</tr>
</tbody>
</table>

## PROJECT FUNDING

The airport is responsible for 8.125 percent of all project costs, rather than 10 percent. The FAA will provide funds for 91.875 percent.

**FAA issued the first grant in 2015 for $16 million and has programmed the remainder of the project funding as follows:**

- FY 16 $25 million
- FY 17 $17 million
- FY 18 $23 million

## COMMUNITY PARTNERSHIP

The success of this program thus far has not been by accident, but rather a premeditated, extremely well-organized strategy, implemented corroboratively between two cities, two counties, two states, two universities, a port district and other important local partners.
An estimate of probable cost was completed during Phase II of the Airport Master Plan. The estimate was $66.6 million in 2011 dollars. Cost estimates are refined at specific intervals in the planning, environmental, and design process. Moving through the process, project requirements can change, more information becomes available, and refinements to the estimate of probable cost are necessary.

The Environmental Assessment (EA) process included preliminary engineering to better define the project scope and associated costs. The EA estimate was completed once all of the analysis was complete and is being vetted through the Federal Aviation Administration (FAA). The level of analysis completed for this EA is unique and was completed because of the complexity of the project requirements, and to provide a refined estimate of probable cost to support the development of the local funding strategy.

Below is a summary of the project refinements that have occurred since the completion of the Master Plan Phase II estimate of probable cost:

- Runway width was increased from 100’ to 150’ to comply with changes to FAA design standards (150’ runway width with 25’ paved shoulders). This results in 30% increase in pavement, floodplain and storm water management requirements.
- Avista utility relocation was anticipated to be an in-kind replacement of above ground facilities. During the EA, it was determined that a partial underground alternative needed to be considered. Underground transmission lines are 2.5 times more expensive than above ground alternatives. The higher cost was included for budget planning purposes. The preferred Avista Alternative has not been selected.
- The floodplain for the Airport is unmapped by FEMA. During the planning process it was assumed that a similar floodplain and storm water management technique being utilized today would be sufficient. However, after modeling the floodplain during the EA, it was determined that a more comprehensive storm water management system was needed to avoid flooding of the terminal building and aircraft storage areas.
- Land acquisition cost estimates during planning were based on limited information within the WSU agricultural research area west of the Airport. A detailed analysis was completed during the EA and determined that the land acquisition costs could be higher due to the nature of the research activities occurring in this location.
- To enhance the all-weather reliability of the new runway, the FAA and Sponsor are including runway centerline lighting and remote visual range capabilities.
- Inflation has resulted in an 11.1% increase from 2011-2015 (based upon Construction Price Indeces, and projected inflation). The project is estimated to begin in 2015 and be completed in 2019 with costs increasing with inflation throughout.
- The fluctuating cost of oil will influence the final project cost because of the large amount of paving and grading required for the project.
- The EA estimate of probable cost has been prepared conservatively. A column including a 25% contingency has been added to the EA estimate to account for inflation and potential project modifications.
Construction costs for the project have been estimated based on the completed analysis and cost data gathered from similar projects. The estimates have been prepared conservatively. Overall project construction costs by project elements are presented below.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
<th>Contingency</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Acquisition</td>
<td>$9.0 million</td>
<td>$3.0 million</td>
<td>$12.0 million</td>
</tr>
<tr>
<td>Wetlands/Stream Relocation</td>
<td>$0.9 million</td>
<td>$0.3 million</td>
<td>$1.2 million</td>
</tr>
<tr>
<td>Floodplain Relocation</td>
<td>$7.2 million</td>
<td>$2.4 million</td>
<td>$9.6 million</td>
</tr>
<tr>
<td>Power Line Relocation</td>
<td>$6.7 million</td>
<td>$2.2 million</td>
<td>$8.9 million</td>
</tr>
<tr>
<td>Mobilization, Etc.</td>
<td>$5.0 million</td>
<td>$1.7 million</td>
<td>$6.7 million</td>
</tr>
<tr>
<td>Site Prep / Earthwork</td>
<td>$21.9 million</td>
<td>$7.3 million</td>
<td>$29.2 million</td>
</tr>
<tr>
<td>Drainage Earthwork</td>
<td>$1.9 million</td>
<td>$0.6 million</td>
<td>$2.5 million</td>
</tr>
<tr>
<td>Pavement</td>
<td>$21.3 million</td>
<td>$7.1 million</td>
<td>$28.4 million</td>
</tr>
<tr>
<td>Drainage</td>
<td>$4.5 million</td>
<td>$1.5 million</td>
<td>$6.0 million</td>
</tr>
<tr>
<td>Airfield Lighting</td>
<td>$1.6 million</td>
<td>$0.6 million</td>
<td>$2.2 million</td>
</tr>
<tr>
<td>NAVAIDS and Weather Reporting Equipment</td>
<td>$2.2 million</td>
<td>$0.7 million</td>
<td>$2.9 million</td>
</tr>
<tr>
<td>Fencing</td>
<td>$1.0 million</td>
<td>$0.3 million</td>
<td>$1.3 million</td>
</tr>
<tr>
<td>Runway Centerline Lighting</td>
<td>$1.6 million</td>
<td>$0.6 million</td>
<td>$2.2 million</td>
</tr>
<tr>
<td>Remote Visual Range</td>
<td>$0.4 million</td>
<td>$0.1 million</td>
<td>$0.5 million</td>
</tr>
<tr>
<td>Future Terminal Storm System Improvements</td>
<td>$3.1 million</td>
<td>$1.1 million</td>
<td>$4.2 million</td>
</tr>
<tr>
<td>Future Terminal Deicing System Improvements</td>
<td>$0.4 million</td>
<td>$0.2 million</td>
<td>$0.6 million</td>
</tr>
<tr>
<td>GA Deicing System Improvements</td>
<td>$0.4 million</td>
<td>$0.2 million</td>
<td>$0.6 million</td>
</tr>
<tr>
<td><strong>Total Project Cost</strong></td>
<td><strong>$89.1 million</strong></td>
<td><strong>$29.9 million</strong></td>
<td><strong>$119.0 million</strong></td>
</tr>
</tbody>
</table>

* Contingency was rounded to the nearest hundred thousand, therefore the contingency percentage is not always an exact 25%.
For more information, contact Tony Bean, Executive Director, tony.bean@pullman-wa.gov, 509 338-3223