Executive Summary

Background

Airports are a vital component of the U.S. and Washington State transportation infrastructure. They serve as essential links and provide for the movement of people and cargo throughout the country and world. As such, they are a critical economic engine, providing direct and indirect jobs and facilitating commerce locally, regionally, nationally, and globally.

In 2012, the Washington State Department of Transportation’s (WSDOT) Aviation Economic Impact Study identified the economic benefits of aviation to the state. **Washington State airports support 248,500 jobs, and generate nearly $51 billion in economic output.**

Further, airports in Washington State provide aviation services that are unique to each airport and its surrounding community. These services are essential to many communities and support critical life-saving needs, property protection, commerce, recreation and tourism. These services contribute significantly to state tax revenues. In 2009, aviation activities in Washington generated $792 million in tax revenues.

Recent Indicators

Washington State has 134 public use airports, located in 36 of the 39 counties (see Exhibit 1-1). As Washington State’s steward for statewide public-use airports, WSDOT Aviation has studied the state airport system for a variety of purposes, and some notable results emerged:

- WSDOT’s Long-Term Air Transportation Study (LATS) (2009) identified a significant funding shortfall and determined that $600 million is needed to bring all public-use airports into compliance with state performance objectives.
- WSDOT’s 2012 update to the statewide Airport Pavement Management System indicated an overall degradation in pavement conditions (since 2005), and a resulting increase of the pavement maintenance backlog from $163 million to $257 million.
- WSDOT’s Statewide Capital Improvement Program (SCIP) database contains airports 5-year capital plans. For the 2014 to 2018 time period, the SCIP identifies over 500 unique capital projects totaling more than $400 million.

WSDOT’s Airport Aid Grant program provides state funding for capital projects. Over the past ten years (2004 to 2013), grant requests have fluctuated, but generally trend upward, while the allocated aid has remained relatively flat (Exhibit 1-2). **On average, requests have exceeded allocated funds by 226 percent, and the gap is widening.** In 2012, WSDOT’s Airport Aid Grant program, which typically has $1.1 million available per year, fell far short of funding the $4 million requested by Washington State Airports. In 2013, a one-time additional allocation of $1.5 million in grant aid was made available to help reduce the gap.
EXHIBIT 1-1
Washington State’s Public Use Airports
Airports are located in 36 of 39 counties.

EXHIBIT 1-2
WSDOT Airport Aid Grant Program – Funding Requests vs. Funds Allocated
Allocated funds fall short of requests.

LEGEND:
- State Airport Aid Allocated
- State Airport Aid Requested

$ Millions

Purpose
WSDOT Aviation initiated the Airport Investment Study in an effort to identify short- and long-term statewide airport infrastructure needs, understand past and current funding mechanisms and levels to support airport capital projects, and understand the impacts of gaps between forecast funding and needs. Findings from this study will help to communicate the magnitude of gaps and associated consequences to decision makers and legislators in order to adequately plan for the future.

Goals and Objectives
The overall goal of the study is to develop a comprehensive basis of the past, current and forecast conditions for Washington State’s public-use airport infrastructure investments in order to identify and define potentially significant gaps and consequences.

Key Study Objectives include:
- Evaluate current investment levels for airport preservation and safety projects
- Assess short-term and long-term statewide airport improvement needs
- Determine consequences of doing nothing in terms of economic and aviation system impacts

Approach Summary

Study Process
A tailored transportation planning study process was developed to successfully accomplish the study, based on the project’s goals and objectives. The process provided for integrated and meaningful touch points with aviation stakeholders, a Study Advisory Committee, and interested parties, focused on crucial two-way dialogue on key project issues at the points in the process where those issues should be vetted. The four primary steps are summarized as follows.

- **Project Initiation** – Established and validated project goals, objectives, risks, and success factors.
- **Baseline Conditions** – Researched historic and current status with regard to both airport investments and airport needs.
- **Baseline Forecast Analyses** – Forecasted the current federal, state and local funding levels for the 20 year planning horizon. Applied forecast funding to prioritized statewide needs to determine the gap. Estimated consequences of perpetuating current funding levels into the future in terms of economic impacts (jobs, wages, economic activity and tax revenues), impacts to airport users, and impact to airport facilities and operations.
- **Documentation** – Documented the study methodology and findings.

Study Advisory Committee Overview
As part of the Airport Investment Study, WSDOT Aviation Division (WSDOT) assembled a Study Advisory Committee to serve throughout the study process to:

- Provide representation for a broad cross-section of aviation sectors
- Act as a sounding board for understanding of project research and analyses
- Be a conduit for external project communications

The Committee was comprised to represent a wide array of aviation stakeholder groups in Washington State, including:

- Airport Associations and Operators
- Aerospace
- Commercial Aviation and Airlines
- Business Aviation
- Emergency Medical Air Transport
- Aerial Agriculture Industries
- General Aviation
- State and Local Agencies
- Transportation Planning Organizations

The perspectives of each of these groups were invaluable to providing a study that both listens to and speaks to all of the key aviation stakeholders in the state.
Summary of Findings

Federal, State and Local Investments

Federal Funds

Federal funds for airport preservation and improvement capital projects are authorized by Congress and managed by the Federal Aviation Administration (FAA) via the Airport Improvement Program (AIP). Revenue sources for the AIP program include a number of taxes and fees, primarily associated with domestic and international commercial air travel, as well as taxes on general aviation and jet fuels.

Despite tumultuous economic conditions, over the past 10 years the AIP program has remained fairly consistent. Congress has maintained the AIP program levels by supplementing revenues with general fund monies. From 2004 to 2013, Washington State received an average of 52 federal AIP grants per year, for an average total of $100 million per year.

Federal grants are only available for eligible projects at airports that are included in FAA’s National Plan of Integrated Airport Systems (NPIAS). This plan includes commercial service airports and reliever airports, as well as strategic general aviation airports across the country. In Washington State, 64 of our 134 airports are in the NPIAS and eligible for federal AIP funds.

From 2004 to 2013 (Exhibit 1-3), 73% of AIP funds were distributed to Washington State’s primary commercial service airports (16 of our 134 airports), leaving the remaining 27% to be split between NPIAS general aviation, reliever, non-primary commercial, and state-sponsored airports.

The Study forecasted AIP allocations to Washington State for the 20-year planning horizon. Legislative policy-driven allocations to the AIP program are anticipated through 2015. Beyond 2015, FAA Aerospace forecasts are used to apply anticipated growth to the revenue sources for the AIP program. Beyond 2015, a 2% growth factor has been applied to reflect the same amount of growth in domestic enplanements, which comprise over 72% of the revenues. With this forecast growth, Washington State would see annual AIP allocations growing from $88 million (2013) to over $120 million in the next 20 years.

State Funds

WSDOT Aviation administers the Airport Aid Grant Program, which provides critical financial support to public-use airports in the preservation of Washington’s system of airports. The annual competitive grant program provides airports the opportunity to receive funds to help support critical safety, pavement, maintenance, security and planning projects.

EXHIBIT 1-3
Washington State AIP Grant Breakdown by Service Type
Averaged from 2004 to 2013

An aeronautics account was established in 1967 to provide funds for the administration of the Aviation Division. These funds are used to:

- Provide grants to local airports
- Provide aviation system and land use planning
- Maintain state-owned airports
- Provide aviation emergency services
- Manage aircraft registrations
A number of revenue sources are leveraged to fund the aeronautics account. Taxes and fees that currently fund the aeronautics account include motor vehicle fuel tax, aircraft fuel tax, aircraft excise tax, aircraft dealer license fees, aircraft registration fees, FAA funding, state-managed airport income, and interest earnings.

In the past ten years, aviation fuel taxes have provided 95% of the revenues for the aeronautics account. From 2004 to 2013, aeronautic account revenues have ranged between $2.7 million and $5.5 million, with an average of just over $3.7 million annually. Program revenues include FAA grants for planning studies and improvements at the Methow Valley State Airport.

Over this same time period, approximately 52% of state expenditures have been to the airport aid grant program, providing an average of $1.9 million program funds annually. Annually, approximately $1.1 million on average has been leveraged by Washington State Airports for preservation and improvement projects during this timeline, and the remaining $800k provided for program administration, aviation planning and studies.

Revenues and expenditures over the past 10 years are skewed higher, due to federal grant monies received for planning studies and improvements at the Methow Valley State Airport.

The Study leveraged Washington State’s Transportation Revenue Forecast Council (TRFC)’s forecast for each of the revenue sources for the aeronautics account to determine how much state funding may be available during the planning horizon, assuming no changes to the current funding allocations and resources. The forecast is relatively flat, topping out at $3 million annually to the aeronautics account.

Relating this forecast back to the funds available for grant-in-aid in Washington State is accomplished by assuming that the historic 51.7% of total revenue deposited into the Aeronautics Account, less program administration (historically ~10%) is expended on the airport aid program. Applying this to the ~$3.0 million annual forecast for the Aeronautics Account funding, it is estimated that ~$1.4 million may be available for airport grants on an annual basis, totaling approximately $28 million for the 20-year planning horizon.

Federal and state funding programs work together to meet the needs of the airports in the Washington State aviation system. Using state airport aid funds to leverage millions of dollars in federal funding at NPIAS airports is a crucial component of the state Airport Aid program.

Local Funds
The Study identified typical local funding methods, and surveyed Washington State’s airport sponsors to better understand the reliability and order-of-magnitude for revenues generated. It then viewed the results through the lens of the state airport classifications to generally ascertain applicability, reliability, and revenues available to each airport type.

Local funding sources identified include:

- Aeronautical revenues such as Passenger Facility Charges (PFC), terminal building leases, landing/ramp fees, cargo fees, fuel flowage fees, and hangar/building leases.
- Non-aeronautical revenues, such as automobile parking and ground transportation, airport concessions, advertising and sponsorships, rental cars, land and building leases
- Non-airport revenues, such as airport or municipal bonding, general funds from sponsor-generated tax revenues, and applicable non-aviation grants

Commercial service airports leverage the high number of enplanements, operations, and passengers to utilize more types of revenue sources and to a much greater degree than airports without commercial service.

Commercial service airports in Washington State can generate hundreds of thousands to millions of dollars in revenues to fund capital needs. The disparity between airports is great due to the number of enplanements and operations.
The extent to which general aviation airports have access to revenue sources depends on the proximity of the airport in relation to significant population centers, and associated number of aircraft operations. Without commercial air service, these airports rely on general aviation activity, aviation and non-aviation related land/building leases, and contributions from their jurisdiction’s general funds.

Washington state airports across all categories are typically reliant on state and federal grants to accomplish preservation and improvement projects.

State Aviation Taxes

In order to understand common and unique methods for generating state-level tax revenues for aviation programs, the Study selected a sample or cross-section of representative states with alternative aviation taxation methods to compare with Washington State. The following states were selected for evaluation based on the study team’s understanding of the industry, input from the Aircraft Owners and Pilots Association (AOPA), and those that stand out as having unique taxation methods worth investigating:

- **Colorado**: 100% of aviation fuel taxes are reinvested in airports and aviation programs. No exemptions for airlines.
- **Florida**: Large and progressive airport system, supported solely by fuel taxes (motor vehicle and aviation).
- **Indiana**: Eliminated sales tax on aircraft parts/labor, lowered aviation fuel taxes and fuel excise taxes to spur economic growth.
- **Louisiana**: Increased aviation funding program from $8 to $30 million per year.
- **Ohio**: Increasing exemptions on flight training equipment and aircraft parts/labor to spur economic growth in these sectors.
- **Texas**: Aviation system supported solely by motor vehicle taxes. No aviation fuel tax.
- **Wyoming**: Mineral taxes and aviation fuel taxes support aviation system.

Each state compared uses a different combination of common taxation methods. Exhibit 1-4 summarizes the overall aviation program funding comparison.

Of the states compared, Washington State is the only state with more non-NPIAS airports than NPIAS airports. Washington State has one of the highest number of based aircraft per NPIAS airport. There are dramatic differences in aviation funding between the states.

**Of the states compared, Washington aviation funding is among the lowest, based on number of airports and aircraft.**

**EXHIBIT 1-4**
State Aviation Funding Analysis

<table>
<thead>
<tr>
<th>State</th>
<th>NPIAS Airports</th>
<th>NON-NPIAS Airports</th>
<th>Based Aircraft</th>
<th>Annual Aviation Program Funding</th>
<th>Funding per Airport</th>
<th>Funding per Aircraft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>49</td>
<td>27</td>
<td>4,565</td>
<td>$20,100,000</td>
<td>$264,400</td>
<td>$4,400</td>
</tr>
<tr>
<td>Florida</td>
<td>100</td>
<td>29</td>
<td>10,931</td>
<td>$130,000,000</td>
<td>$1,008,000</td>
<td>$11,900</td>
</tr>
<tr>
<td>Indiana</td>
<td>65</td>
<td>42</td>
<td>3,064</td>
<td>$2,400,000</td>
<td>$22,400</td>
<td>$780</td>
</tr>
<tr>
<td>Louisiana</td>
<td>56</td>
<td>19</td>
<td>2,164</td>
<td>$28,800,000</td>
<td>$348,000</td>
<td>$13,300</td>
</tr>
<tr>
<td>Ohio</td>
<td>100</td>
<td>69</td>
<td>4,395</td>
<td>$1,100,000</td>
<td>$6,500</td>
<td>$250</td>
</tr>
<tr>
<td>Tennessee</td>
<td>69</td>
<td>12</td>
<td>2,724</td>
<td>$4,000,000</td>
<td>$49,400</td>
<td>$1,500</td>
</tr>
<tr>
<td>Texas</td>
<td>209</td>
<td>187</td>
<td>11,535</td>
<td>$10,800,000</td>
<td>$27,300</td>
<td>$900</td>
</tr>
<tr>
<td>Washington</td>
<td>64</td>
<td>70</td>
<td>5,963</td>
<td>$1,100,000</td>
<td>$8,200</td>
<td>$180</td>
</tr>
<tr>
<td>Wyoming</td>
<td>33</td>
<td>8</td>
<td>938</td>
<td>$8,500,000</td>
<td>$207,300</td>
<td>$9,000</td>
</tr>
</tbody>
</table>
Statewide Need

The goal of the airport investment needs portion of the Airport Investment Study was to develop and document a clear, objective and transparent method for establishing an overall total capital need for the short-term (0-5 years) and long-term (6-20 years) planning periods. The most credible method for building the total need is from the ground-up, project-by-project, airport-by-airport. Acknowledging conditions and priorities change over time, this study identified a 20-year list of project needs based on current conditions and priorities.

Short- and long-term projects were identified from readily available data sources including:

- Statewide Capital Improvement Program (SCIP)
- Available Airport Master Plans and Airport Layout Plans
- WSDOT 2012 Airport Pavement Management System (APMS) Update
- Puget Sound Regional Council’s NextGen Study, Preparing Busy GA Airports for Next Generation Technologies, May 2013
- FAA Master Record Form 5010 – identified airport standards deficiencies to be addressed

The Study derived projects for continuity to ensure that master plan updates are programmed every 7 years for airports, and that the near-term pavement management strategies from the APMS are projected throughout the 20-year planning horizon.

The study validated the draft project lists by surveying each airport sponsor. Airport sponsors validated and/or refined the project lists.

Planning-level cost estimates are included for much of the project data available. Costs are generated using traditional planning-level construction cost methods for the few projects missing cost data.

The project data yields over 4,300 unique projects, $1.31 billion short-term, and $1.66 billion long-term projects, for a total of $2.97 billion in statewide 20-year need. In order to focus on the portion of the need that may be addressed by current federal and state funding programs, $1.82 billion of ineligible projects are deducted to establish a total baseline program need of $1.82 billion.

The study recognized that long-term project data is not as robust as the short-term data, such that clarity in planning is significantly reduced with each year further into the future. As such, an alternative method to determine overall program need was introduced by projecting the $1.31 billion short-term need out an additional 15 years to identify the projected total 20-year need of $5.24 billion. Projected ineligible projects were deducted to identify the statewide projected program need of $3.56 billion. Of which, the State’s funding share is over $241 million. With only $28 million of forecasted State funding available, a significant gap will exist in CIP projects being implemented. Exhibit 1-5 illustrates the approach to determine baseline and projected program need.

Funding Gap

In order to discover the potential funding gap, the forecasts for federal and state funding was applied to the statewide program need to ascertain both NPIAS and non-NPIAS projects that are likely or unlikely to be funded in the short- and long-term. The process for discovering the gap includes:

- **Project Definition** – assigning NPIAS/non-NPIAS, eligible/non-eligible, and short- and long-term definition to each unique project.
- **Project Prioritization** – applying FAA and WSDOT project codes and prioritization formulas.
- **Available Funding Application** – application of available federal, state and local funds to NPIAS eligible projects, and application of available state and local funds to non-NPIAS eligible projects. Project costs were divided by eligible federal and state share, based on current match requirements.
Exhibit 1-6 summarizes the results. The 20-year funding gap is significant, and may be as high as $1.7 billion. Of the projected need, only 36% of the projects are likely to be funded, and the other 64% are split evenly between ineligible and unlikely to be funded.

The short-fall in State funding creates a greater requirement for local funding. In many cases, the study finds that the State is unable to contribute its 5% match for eligible projects at NPIAS airports under the State Grant Aid Program.

While ineligible projects are excluded from the analyses, it is important to understand that eligibility requirements can change over time. In particular, the State recognizes the value in adjusting its aid eligibility requirements to support projects beyond just basic infrastructure needs that can spur economic development and create revenue for airports. However, it is not expected that project eligibility for Federal funding will change substantially to include revenue producing projects. With that, the State’s support for ineligible project needs could assist local airport sponsors with implementing these projects.
Consequences of Perpetuating the Status Quo

The study articulated the impact of the projected program aviation funding gap in Washington State in terms of economic and revenue impacts, impacts to aviation-related activities that provide benefit to airport users and communities, and impacts to airport operations and facilities.

Economic Impacts

The study identified the economic impacts associated with possible future airport development options and their employment, annual payroll, and total economic activity (output) impacts.

The study calculated economic impacts for projects likely to be funded, unlikely to be funded, and ineligible projects to best measure the impacts of construction categories identified above using an input-output modeling process found in the WSDOT Aviation Economic Impact Calculator. The WSDOT Aviation Economic Impact Calculator is designed to assist users in estimating an airport’s change in regional economic impacts based on potential changes in activity or capital development at an airport. The calculations in this model are high-level estimates designed to give a sense of magnitude of economic impacts.

The calculator projects direct, indirect/induced and total estimates for the following three separate components of Washington’s economy:

- **Employment** – Employment is based on the total number of full-time jobs attributed to construction projects.
- **Labor Income** – Payroll represents the annual salary, wages, and benefits paid to all employees working on the projects identified.
- **Total Output** – Output for construction activities is the sum of annual gross sales for materials and services related to capital expenditures.

Each project carried out at a Washington airport contributes to the Washington state tax base. The study categorized contributions in tax revenue as follows:

- **Sales/Use Tax on Development** – The cost of materials, equipment, supplies, and other goods needed to construct airport projects is subject to sales/use tax.
- **Sales Tax on Jobs** – The Internal Revenue Service provides estimates for sales taxes paid annually by workers.
- **Business & Occupational (B&O) Tax** – The state B&O tax is a gross receipts tax, measured on the value of products, gross proceeds of sale, or gross income of a business.

By calculating the estimated tax revenue from the categories of projects discussed earlier, it is possible to measure and compare the tax revenue implications of performing or not performing projects.

Exhibit 1-7 provides the economic impact results. *Unlikely to be funded projects result in an opportunity cost of $2.0 billion in total economic output, 13,600 jobs not provided, and $74 million in tax revenues not received.*

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**EXHIBIT 1-7**
Summary of Economic Impacts

<table>
<thead>
<tr>
<th></th>
<th>Program Need ($3.6B)</th>
<th>Likely Funded Projects ($1.9B)</th>
<th>Consequences ($1.7B)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economic Impacts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jobs</td>
<td>29,144</td>
<td>15,538</td>
<td>13,606</td>
</tr>
<tr>
<td>Labor Income</td>
<td>$1.6 Billion</td>
<td>$0.9 Billion</td>
<td>$0.7 Billion</td>
</tr>
<tr>
<td>Total Output</td>
<td>$4.2 Billion</td>
<td>$2.2 Billion</td>
<td>$2.0 Billion</td>
</tr>
<tr>
<td>Tax Revenues</td>
<td>$159 Million</td>
<td>$85 Million</td>
<td>$74 Million</td>
</tr>
</tbody>
</table>
Impacts to Aviation-Related Activities

This study addresses potential or perceived impacts to airport provided services and/or community impacts associated with those services from insufficient capital improvement project funding in terms of the 17 aviation-related activities identified in WSDOT’s Aviation Economic Impact Study (2012). Those 17 aviation-related activities are:

- Commercial Passenger Service
- General Aviation: Business and Corporate Travel
- General Aviation: Personal Transportation
- Pilot Training and Certification
- Air Cargo
- Blood, Tissue and Organ Transportation
- Medical Air Transport
- Search and Rescue
- Firefighting
- National Security
- Emergency Preparedness and Disaster Response
- Scientific Research
- Aerial Photography
- Aircraft Manufacturing
- Agriculture
- Aerial Sightseeing
- Skydiving

The study used a four-step methodology to determine the impacts of the ability to be able to fund projects that would support each of the activities. The method is summarized as follows:

1. Associating projects in need list by project component (runway, taxiway, apron, terminal, etc.) and purpose
2. Assigning weighting to each project based on its importance to a particular aviation-related activity
3. Assigning weights to airport category and size based on WSDOT’s SCIP program
4. Determining relative percent of projects funded for each aviation-related activity

The Study evaluates impact to the aviation-related activities by comparing a weighted percent of funded projects over the projected program period for each airport and ranks the impact of the resulting ability to fund those projects from “minimally affected” to “completely affected” as is defined in Exhibit 1-8.

EXHIBIT 1-8
Definition of Funding Consequences

<table>
<thead>
<tr>
<th>Impact</th>
<th>Definition</th>
<th>Consequences Narrative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimally Affected</td>
<td>(81 - 100% of Projects Funded)</td>
<td>Airport can afford to implement their planned capital improvement plan. Airport is able to maintain their current operations and facilities at a high level. Airport is also able to plan and construct improvements to fully meet projected 20-year demands.</td>
</tr>
<tr>
<td>Moderately Affected</td>
<td>(61 - 80% of Projects Funded)</td>
<td>Airport can largely afford to implement their planned capital improvement plan. Airport is able to maintain their current operations and facilities at a moderate-to-high level. Airport may need to defer the planning and construction of some improvements needed to fully meet projected 20-year demands.</td>
</tr>
<tr>
<td>Largely Affected</td>
<td>(41 - 60% of Projects Funded)</td>
<td>Airport can only partially afford to implement their planned capital improvement plan. Airport is able to maintain their current operations and facilities at a moderate level. Airport will have to defer lower priority maintenance projects and will need to defer the planning and construction of most improvements needed to meet projected 20-year demands.</td>
</tr>
<tr>
<td>Seriously Affected</td>
<td>(21 - 40% of Projects Funded)</td>
<td>Airport cannot afford to implement the majority of their planned capital improvement plan. Airport is able to maintain their current operations and facilities at a low level. Airport will have to defer most maintenance projects and will not be able to plan or construct improvements to meet projected 20-year demands.</td>
</tr>
<tr>
<td>Completely Affected</td>
<td>(0 - 20% of Projects Funded)</td>
<td>Airport cannot afford to implement their planned capital improvement plan. Airport is not able to maintain their operations and facilities. Airport will have to defer all but a few maintenance projects and will not be able to plan or construct improvements to meet projected 20-year demands.</td>
</tr>
</tbody>
</table>
Exhibit 1-9 summarizes the results. All aviation-related activities will be moderately to largely affected as a result of projects not being funded. While the variance between aviation-related activities are subtle, projects associated with promoting commercial passenger service and life safety activities rank highest. Projects supporting non-commercial passenger service, aviation-related business and recreational activities suffer as infrastructure degrades or is not expanded.

Impacts to Airport Facilities and Operations

The study evaluated impacts to the State’s airport facilities. The study separates airport impacts into the following groups for evaluation:

- Airport Operations
- Airport Capacity
- Airport Sustainability
- Airport Facilities

Similar to the airport user analysis, the study evaluates impact to the airport facilities by comparing the percent of funded projects over the projected program period for each airport and ranks the impact of the resulting ability to fund those projects from “minimally affected” to “completely affected”.

The study used a similar 4-step methodology for determining impacts to aviation-related activities was deployed to ascertain impacts to airport facilities and operations. The method is summarized as follows:

1. Associating projects in the needs list by FAA Purpose Code (capacity, environment, other, planning, reconstruction, safety/security, standards)
2. Assigning weighting to each project purpose based on its importance to a particular group being evaluated
3. Assigning weights to airport category and size based on WSDOT’s SCIP program
4. Determining relative percent of projects funded for each group being evaluated

Exhibit 1-10 summarizes results for Airport Operations, Airport Capacity, and Airport Sustainability. Due to the funding gap, airport capacity and sustainability projects will continue to be strained and will defer to more critical safety-related projects. Projects associated with promoting current, safe, and regulatory compliant airport operations rank higher than airport sustainability and capacity.
Exhibits 1-11 and 1-12 summarize results for Airport Facilities. **Airports are only able to focus on the core infrastructure such as runways and taxiways.** Other infrastructure is maintained at a significantly reduced level. **Non-NPIAS and smaller general aviation airports cannot afford to implement the majority of their planned capital improvements, resulting in minimal maintenance of facilities.**

**EXHIBIT 1-11**
**Summary of Impacts to Airport Facilities**

<table>
<thead>
<tr>
<th>Airport Component (Facility)</th>
<th>Projected Program Need Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP - Apron</td>
<td></td>
</tr>
<tr>
<td>BD - Building</td>
<td></td>
</tr>
<tr>
<td>EQ - Equipment</td>
<td></td>
</tr>
<tr>
<td>FI - Financing</td>
<td></td>
</tr>
<tr>
<td>GT - Ground Transportation</td>
<td></td>
</tr>
<tr>
<td>HE - Heliport</td>
<td></td>
</tr>
<tr>
<td>HO - Homes</td>
<td>NA</td>
</tr>
<tr>
<td>LA - Land</td>
<td></td>
</tr>
<tr>
<td>NA - New Airport</td>
<td>NA</td>
</tr>
<tr>
<td>OT - Other</td>
<td></td>
</tr>
<tr>
<td>PB - Public Building</td>
<td></td>
</tr>
<tr>
<td>PL - Planning</td>
<td></td>
</tr>
<tr>
<td>RW - Runway</td>
<td></td>
</tr>
<tr>
<td>SB - Seaplane Base</td>
<td></td>
</tr>
<tr>
<td>TE - Terminal</td>
<td>NA</td>
</tr>
<tr>
<td>TW - Taxiway</td>
<td></td>
</tr>
<tr>
<td>VT - Vertiport</td>
<td>NA</td>
</tr>
</tbody>
</table>

**EXHIBIT 1-12**
**Summary of Impacts to Airports by Classification**

<table>
<thead>
<tr>
<th>Airport Classification</th>
<th>Projected Program Need Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPIAS</td>
<td></td>
</tr>
<tr>
<td>NON-NPIAS</td>
<td></td>
</tr>
<tr>
<td>Commercial Service</td>
<td></td>
</tr>
<tr>
<td>Regional Service</td>
<td></td>
</tr>
<tr>
<td>Community Service</td>
<td></td>
</tr>
<tr>
<td>Local Service</td>
<td></td>
</tr>
<tr>
<td>Rural Service</td>
<td></td>
</tr>
<tr>
<td>Seaplane Base</td>
<td></td>
</tr>
</tbody>
</table>
Summary – By the Numbers

In order to put the study findings into context, Exhibit 1-13 provides a summary of the funding gap. The results are for the projected program need which the study recognized as the most likely scenario.

The study recognized that some of the larger commercial service airports (specifically Bellingham, Boeing Field, SeaTac, Spokane and Tri-Cities) in the State have not been requesting grants from WSDOT. Exhibit 1-14 summarizes the gap, excluding these five airports.

The study also identified ineligible projects, many of which could provide funding for revenue producing infrastructure on airports that may increase jobs, wages, economic output and tax revenue. Exhibit 1-15 summarizes ineligible project need, with and without the aforementioned primary airports.

Exhibit 1-16 captures the statewide need with these ineligible projects included.

**EXHIBIT 1-13**

Gap Summary – Projected Program Need

<table>
<thead>
<tr>
<th></th>
<th>20-year Statewide Need</th>
<th>20-year Statewide Need State Share*</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-year Statewide Need</td>
<td>$3,557,790,248.00</td>
<td>$241,839,079.20</td>
</tr>
<tr>
<td>20-year Gap</td>
<td>$1,659,770,124.00</td>
<td>$168,903,834.00</td>
</tr>
<tr>
<td>Average Annual Need</td>
<td>$177,889,512.40</td>
<td>$12,091,953.96</td>
</tr>
<tr>
<td>Average Annual Need State Share</td>
<td>$12,091,953.96</td>
<td></td>
</tr>
<tr>
<td>Average Annual Gap State Share</td>
<td>$8,445,191.70</td>
<td></td>
</tr>
</tbody>
</table>

*Excludes SeaTac Airport Projects

**EXHIBIT 1-14**

Gap Summary – Projected Program Need, Excluding Specific Primary Airports

<table>
<thead>
<tr>
<th></th>
<th>20-year Statewide Need</th>
<th>20-year Statewide Need State Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-year Statewide Need</td>
<td>$2,938,151,284.00</td>
<td>$229,587,731.00</td>
</tr>
<tr>
<td>20-year Gap</td>
<td>$1,244,116,336.00</td>
<td>$161,115,544.60</td>
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<tr>
<td>Average Annual Need</td>
<td>$146,907,564.20</td>
<td>$11,479,386.55</td>
</tr>
<tr>
<td>Average Annual Gap State Share</td>
<td>$62,205,816.80</td>
<td></td>
</tr>
</tbody>
</table>

**EXHIBIT 1-15**

Ineligible Need Summary

<table>
<thead>
<tr>
<th></th>
<th>20-year Statewide Ineligible Need (All Airports)</th>
<th>20-year Statewide Ineligible Need (Does not include Bellingham, Boeing Field, SeaTac, Spokane and Tri-Cities)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-year Statewide Ineligible Need (All Airports)</td>
<td>$1,688,675,684.00</td>
<td>$827,454,636.00</td>
</tr>
</tbody>
</table>

**EXHIBIT 1-16**

Gap Summary – Projected Need, Including Ineligible Projects

<table>
<thead>
<tr>
<th></th>
<th>20-year Statewide Need</th>
<th>20-year Statewide Need State Share*</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-year Statewide Need</td>
<td>$5,246,465,932.00</td>
<td>$241,839,079.20</td>
</tr>
<tr>
<td>20-year Gap</td>
<td>$3,348,445,808.00</td>
<td>$168,903,834.00</td>
</tr>
<tr>
<td>Average Annual Need</td>
<td>$262,323,296.60</td>
<td>$12,091,953.96</td>
</tr>
<tr>
<td>Average Annual Need State Share</td>
<td>$12,091,953.96</td>
<td></td>
</tr>
<tr>
<td>Average Annual Gap State Share</td>
<td>$8,445,191.70</td>
<td></td>
</tr>
</tbody>
</table>

*Excludes SeaTac Airport Projects