Washington State Airport Pavement Management System

Washington State Department of Transportation

2018 EXECUTIVE SUMMARY

THIS DOCUMENT WAS PREPARED
UNDER THE GUIDANCE OF

Washington State Department of Transportation, Aviation Division
7702 Terminal Street
Tumwater, Washington 98501
(360) 709-8015
www.wsdot.wa.gov/aviation

Federal Aviation Administration
2200 South 216th Street
Des Moines, Washington 98198
(206) 231-3828
www.faa.gov/airports/northwest_mountain

PREPARED BY

Applied Pavement Technology, Inc.
115 West Main Street, Suite 400
Urbana, Illinois 61801
217-398-3977
www.appliedpavement.com

Key Findings

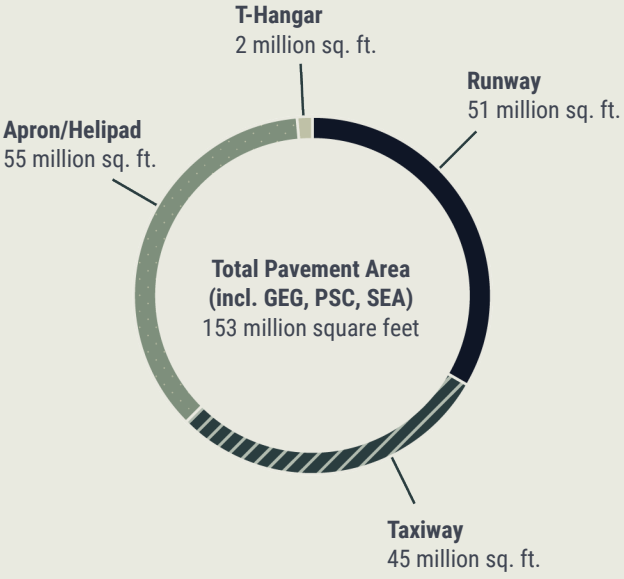
The principal objectives of this project were:

- Inventory the pavement infrastructure
- Assess the current pavement condition
- Update the existing Washington airport pavement management system (APMS)
- Develop cost-effective short- and long-term strategies for the preservation and rehabilitation of the Washington airport pavement system

The condition of pavements at ninety-five Washington airports was evaluated in 2018. In addition, the most current APMS data for Seattle-Tacoma International (SEA), Spokane International (GEG), and Tri-Cities Airports (PSC) were incorporated into the Washington State Department of Transportation (WSDOT) Aviation APMS database to obtain a comprehensive understanding of the overall pavement area and pavement condition for the entire state.

The overall pavement area of the ninety-eight airports included in the WSDOT Aviation APMS database is 153 million square feet. This can be further broken down into:

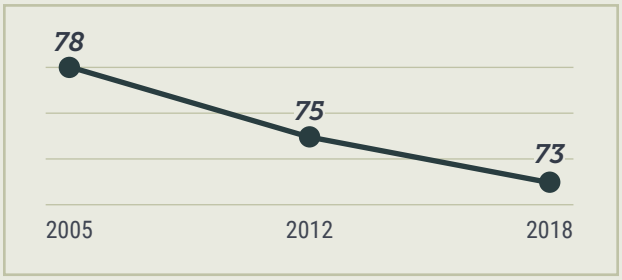
- 51 million square feet of runway pavement
- 45 million square feet of taxiway pavement
- 55 million square feet of apron/helipad pavement
- 2 million square feet of T-hangar pavement



The overall condition of the ninety-eight airports at the time of last inspection was an area-weighted Pavement Condition Index (PCI) of 77 on a scale of 100 (perfect) to 0 (failed). The area-weighted age of the entire pavement system was 25 years. If SEA, GEG, and PSC are excluded, the area-weighted 2018 PCI was 73, and the area-weighted age was 27 years.

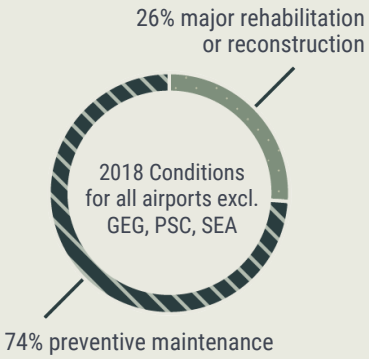
Overall, the condition of the pavement system (excluding SEA, GEG, and PSC) has been decreasing since 2005. In 2005, the area-weighted PCI was 78.

In 2012, the area-weighted PCI dropped to 75, and in 2018, the area-weighted PCI dropped further to 73.



2005 and 2012 PCIs excl. GEG, SEA, PSC, YKM, BFI
2018 PCIs excl. GEG, SEA, PSC

This steady rate of deterioration is cause for concern.

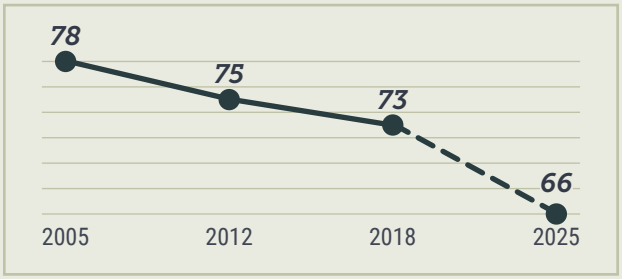


Based on the 2018 data, approximately 74 percent of the pavement area (excluding SEA, GEG, and PSC) would currently benefit from routine and preventive maintenance, and approximately 26 percent of the pavement area is at the point where major rehabilitation or reconstruction is needed. If no funding for pavement maintenance and rehabilitation (M&R) is expended, the overall PCI (excluding SEA, GEG, and PSC) is estimated to drop from the last PCI of 73 to 64 by 2025, with approximately 42 percent of the pavement area reaching the point where costly major rehabilitation or reconstruction will be required to restore the pavement integrity.

In terms of funding, approximately $395.4 million is needed over the next 7 years to fund all recommended pavement M&R projects at the airports (excluding SEA, GEG, and PSC). This can be further broken down into:

- $371.5 million for National Plan of Integrated Airport Systems (NPIAS) airports
  - $106.1 million for primary NPIAS airports
  - $265.4 million for non-primary NPIAS airports
- $23.9 million for non-NPIAS airports.

If a constrained budget of $4.5 million annually is expended over the next 7 years (excluding SEA, GEG, and PSC), a backlog of $474.1 million in pavement projects would accrue, and the area-weighted PCI would drop to a PCI of 66 by 2025.



2005 and 2012 PCIs excl. GEG, SEA, PSC, YKM, BFI
2018 PCIs excl. GEG, SEA, PSC
2025 Projected PCI if $4.5 million is applied annually

Comparing the long-term impact of different levels of funding over the next 20 years, the area-weighted 2038 PCIs for the ninety-five airports (excluding SEA, GEG, and PSC) are projected to be:

20-Year Funding Comparison

Funding Level	Projected PCI
No Funding	46
$4.5 Million Annual Funding	53
$56.5 Million Annual Funding	81

Overview

BACKGROUND

Pavements are one of the most important, if not the most important, parts of an airport's infrastructure. The condition of these pavements is important from both financial and safety perspectives. From a financial perspective, the timely preservation and rehabilitation of the pavement infrastructure is crucial because the pavements usually represent the largest capital investment at an airport and the cost for repairs typically increases significantly once a pavement deteriorates below a certain level. From a safety perspective, pavement distresses, such as cracks and loose debris, may pose safety risks in terms of the potential for aircraft tire damage and the ability of a pilot to safely control aircraft.

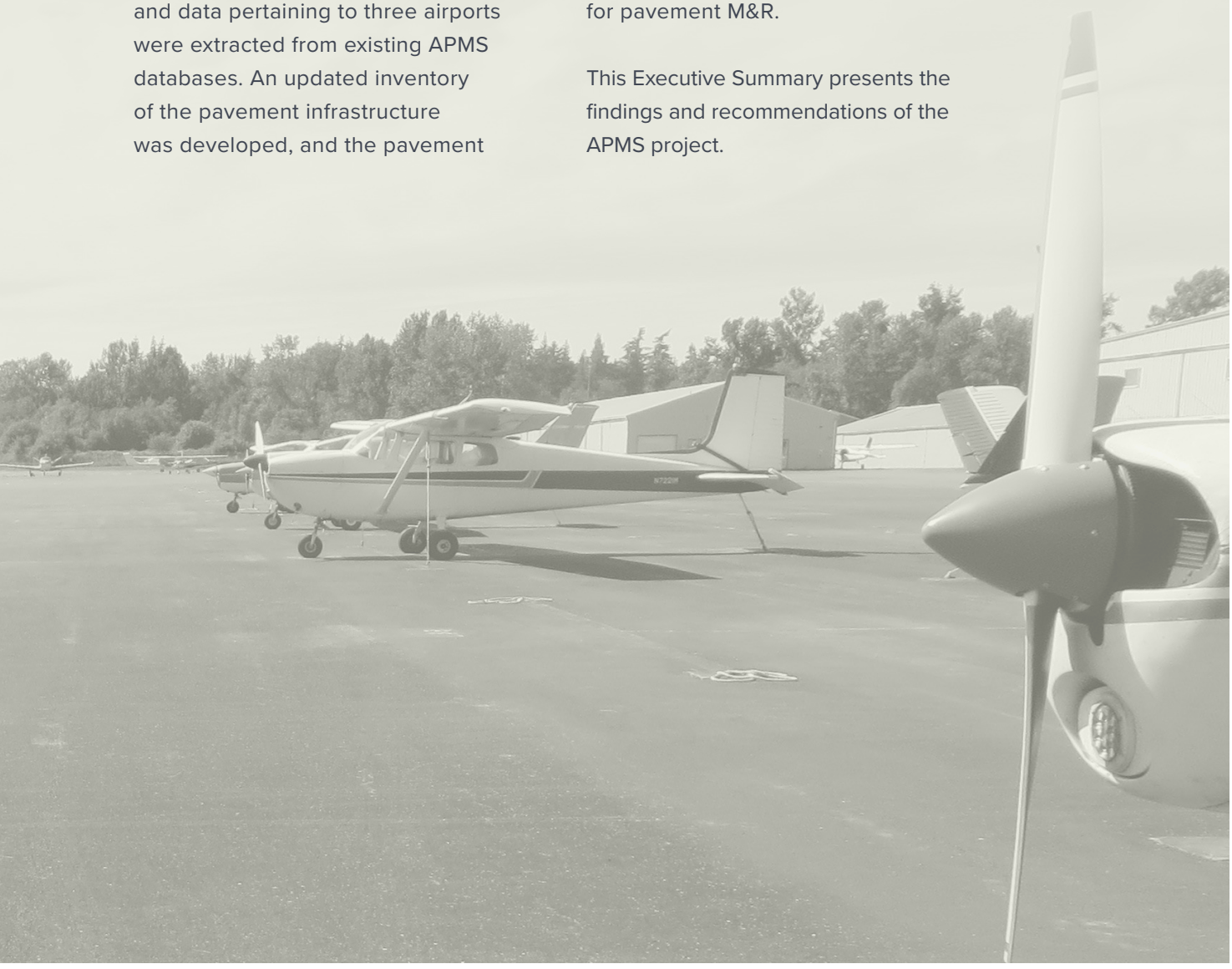
Recognizing a need to protect this critical capital investment and to maintain safe operational conditions at the airports, WSDOT Aviation established a statewide APMS in 2000. The APMS is used to monitor the condition of Washington's airport infrastructure and to proactively plan for its preservation and rehabilitation. Through the successful completion of this project, WSDOT Aviation, the Federal Aviation Administration (FAA), and airport sponsors have current data pertaining to the pavement infrastructure and its condition as well as the analytical tools needed to identify short- and long-term pavement-related needs, optimize the selection of projects and treatments for a multi-year

Pavements represent one of the largest capital investments in the Washington aviation system.

period, and evaluate the long-term impacts of pavement-related decisions.

The WSDOT Aviation APMS established in 2000 was updated in 2005, 2012, and again in 2018 as part of this project. Ninety-five airports were evaluated as part of this project, and data pertaining to three airports were extracted from existing APMS databases. An updated inventory of the pavement infrastructure was developed, and the pavement condition at each of the airports was determined. The inventory and condition data were used to update the existing APMS and then analyzed to determine the overall health of the pavement system and estimate short- and long-term needs. The APMS was used to develop recommendations for pavement M&R.

This Executive Summary presents the findings and recommendations of the APMS project.

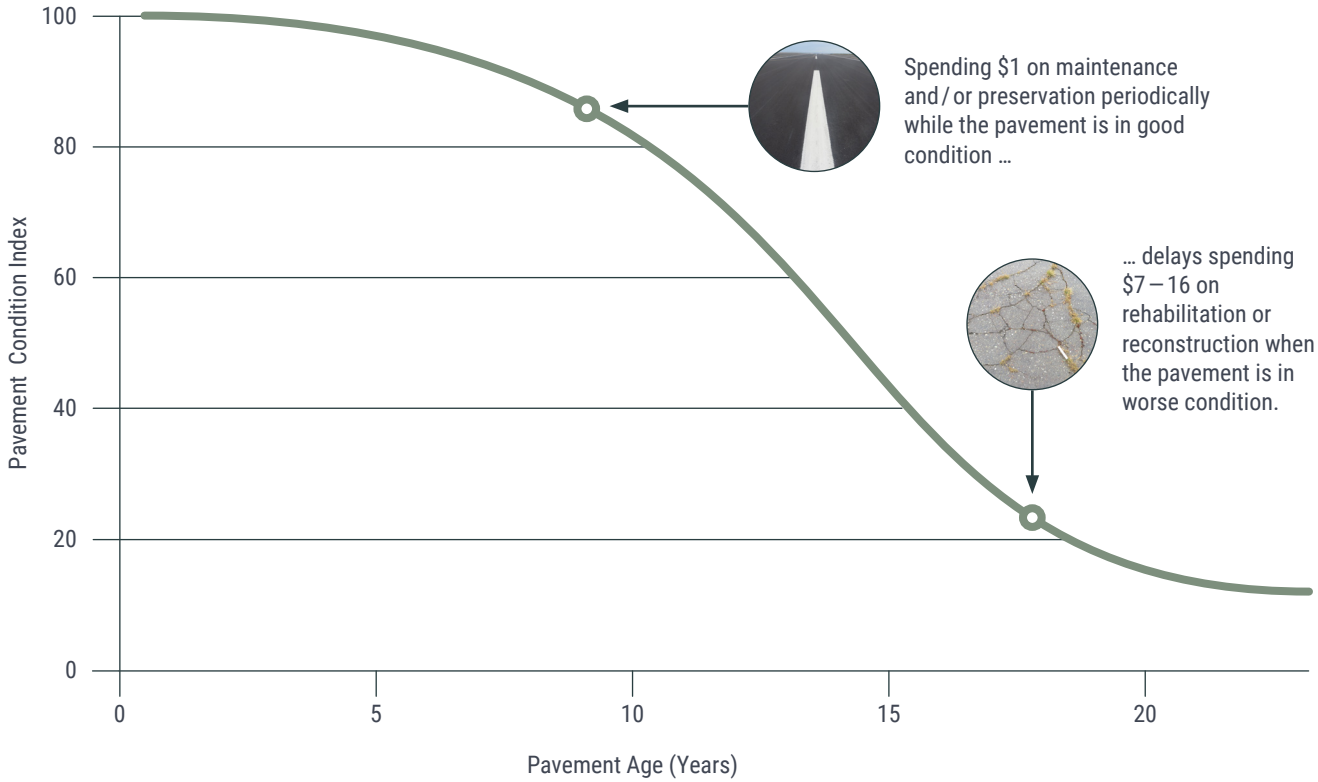


BENEFITS OF THE APMS

The Washington APMS yields many benefits. It provides WSDOT Aviation, the FAA, and airport sponsors with the ability to monitor the condition of the pavements and to make cost-effective decisions that consider the long-term impacts of those decisions about the M&R of the pavement infrastructure.

In addition, the APMS fulfills many of the NPIAS airport requirements (Public Law 103-305 and Grant Assurance 11) for maintaining an effective pavement maintenance management system and WSDOT Grant Assurance 12, Chapter 468-260 WAC.

The APMS can also be used to identify when different pavement strategies will be most appropriate. The timing of projects is important because preventive maintenance actions, such as crack sealing and surface treatments, can extend the life of a pavement cost effectively. Once preventive maintenance is no longer the appropriate repair, it is critical to program major rehabilitation, such as an overlay, as soon as possible. If delayed too long, the pavement structure may become so degraded that the only alternative is reconstruction. The financial impact of delaying repairs until this point is reached is severe, as reconstruction typically costs much more than major rehabilitation.



PROJECT AIRPORTS

The pavement conditions at ninety-eight airports shown on the map to the right were assessed, and the WSDOT Aviation APMS database was updated with the information. Applied Pavement Technology, Inc. (APTech), with assistance from Jacobs, inspected the pavement conditions at ninety-five airports.

Three airports (SEA, GEG, and PSC) operate their own APMS, and pavement information for these three airports was obtained from the existing databases and incorporated into the WSDOT Aviation APMS database.

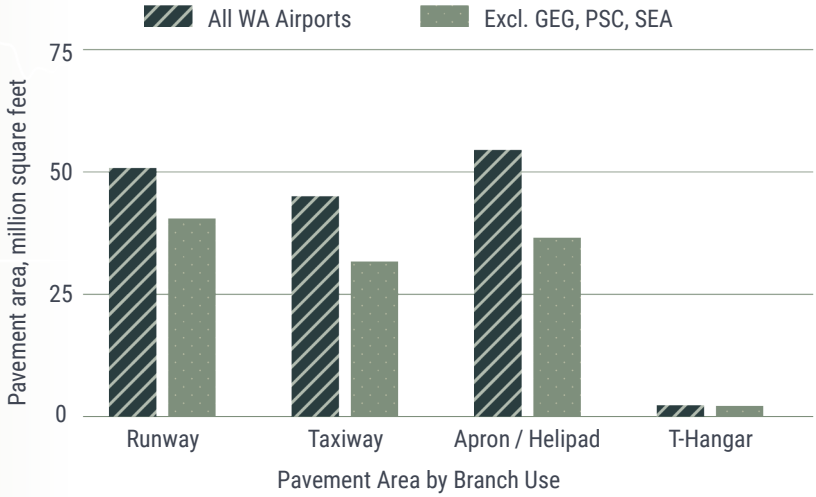

Dorothy Scott Municipal
WHATCOM
Tonasket Municipal
Ferry County
Ione Municipal
Mears Field
OKANOGAN
Methow Valley State
Omak Municipal
Colville Municipal
SKAGIT
PEND OREILLE
Darrington Municipal
Twisp Municipal
Okanogan Legion
FERRY
Chewelah Municipal
Anderson Field
SNOHOMISH
STEVENS
Deer Park Municipal
Grand Coulee Dam
Lake Chelan
Mansfield
Wilbur Municipal
CHELAN
Mead Flying Service
Felts Field
Waterville
Davenport Municipal
DOUGLAS
Cashmere-Dryden
Spokane International
KING
LINCOLN
Ephrata Municipal
Wilson Creek
Pangborn Memorial
Odessa Municipal
Cle Elum Municipal
SPOKANE
Quincy Municipal
Grant County International
Rosalia Municipal
Willard Field
De Vere Field
Moses Lake Municipal
Pru Field
Ranger Creek State
Bowers Field
KITTITAS
GRANT
Warden
Lind Municipal
WHITMAN
Port of Whitman Business Air Center
ADAMS
Othello Municipal
Packwood
Desert Aire
Pullman-Moscow Regional
Yakima Air Terminal
Sunnyside Municipal
Richland
FRANKLIN
GARFIELD
YAKIMA
Tri-Cities
WALLA WALLA
Prosser
COLUMBIA
Walla Walla Regional
Martin Field
BENTON
ASOTIN
Goldendale Municipal
KLICKITAT
WASP CLASSIFICATION
Major
Regional
Community
Local

PAVEMENT INVENTORY

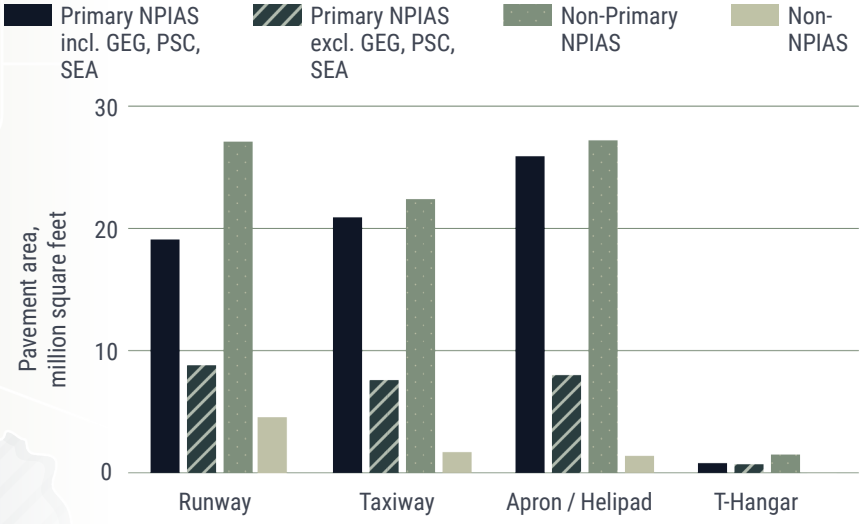
The ninety-eight airports (including SEA, GEG, and PSC) represent approximately 153 million square feet of pavement—the equivalent of a two-lane highway stretching from Seattle, Washington, to San Diego, California. This can be further broken down into:

Pavement Area by Branch Use (incl. GEG, PSC, SEA)

The figure on the right shows the pavement area by branch use breakdown for all ninety-eight airports included in the WSDOT Aviation APMS database, as well as for the ninety-five airports evaluated during this project. The figure below shows the pavement area separated by branch use and NPIAS/Non-NPIAS classification for all ninety-eight airports.



Pavement Area by Branch Use



Pavement Area by Branch Use and Airport Classification

The airport pavements included in this study are equal to a two-lane highway stretching from Seattle to San Diego.

Pavement Condition Assessment

PAVEMENT CONDITION INDEX

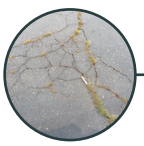
The pavements were evaluated using the PCI procedure documented in FAA Advisory Circular 150/5380-6C, *Guidelines and Procedures for Maintenance of Airport Pavements*, and ASTM D5340-12, *Standard Test Method for Airport Pavement Condition Index Surveys*. During a PCI survey, the types, severities, and amounts of distress present on a pavement surface are quantified. This information is then used to develop a composite index that represents the overall condition of the pavement in numerical terms, ranging from 100 (pavement in excellent condition) to 0 (pavement in failed condition). The PCI is a measure of overall condition and is indicative of the level of work that will be required to maintain or repair a pavement. Further, the distress information provides insight into what is causing the pavement to deteriorate, which is the first step in selecting the appropriate repair action.

Programmed into an APMS, PCI data are used to determine current pavement condition, predict future pavement condition, and identify the most cost-effective repair type and timing of that repair.

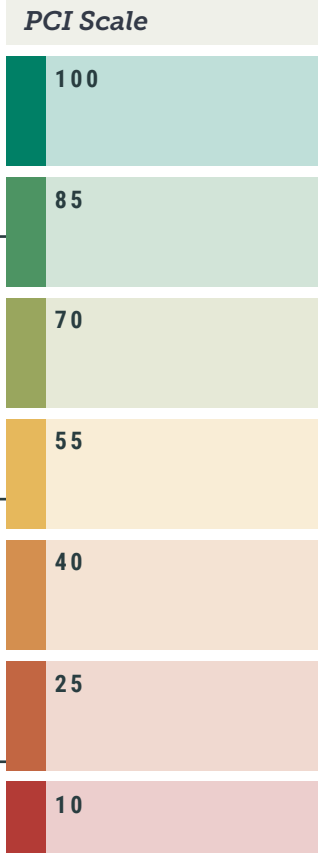
The relationship between a pavement's PCI and the typical type of repair recommended is shown below.

Pavements with high PCIs benefit from cost-effective **preventive maintenance,** such as crack sealing and surface treatments.

As the PCI drops, pavement may require more extensive **major rehabilitation,** such as an overlay.



Pavements below 40 may deteriorate to the point where **reconstruction** is the only option for restoring safe operating conditions.



TYPICAL DISTRESS TYPES AT WASHINGTON AIRPORTS

Following is a description of the most commonly observed pavement distresses at the Washington airports included in the project scope. The description is limited to asphalt-surfaced (AC) pavements because the majority of the airport infrastructure consists of this type of pavement.

Alligator Cracking

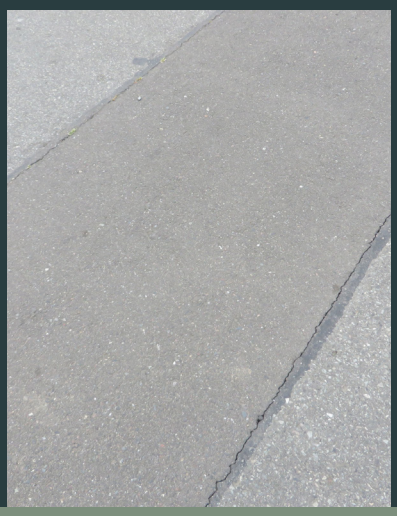
Alligator cracking is a load-related distress caused by excessive tensile strains at the bottom of the asphalt layer or stabilized AC base layer from repeated aircraft loadings. It typically shows up as a series of parallel cracks, which eventually connect to form a pattern resembling alligator skin.

Depression

Depressions are areas with elevations slightly lower than those of the surrounding pavement. They can be caused by settlement of the underlying base layers or soils. Depressions are often found in areas with insufficient drainage capacity, and soils are weakened due to water penetration or where underlying layers were not compacted enough during construction.

Longitudinal & Transverse (L&T) Cracking

L&T cracking can be caused by any of the following: separation of pavement at paving lane joints, shrinkage of AC pavement due to temperature differentials in older or brittle pavements, or reflection cracking from underlying existing cracking in overlaid pavements.



Patch / Utility Cut Patch

Patching is a localized repair of a distress. A patch is considered a defect, no matter how well it is performing.

Raveling

Raveling occurs as the coarse aggregate begins to dislodge and produce loose pieces of material, posing a safety hazard as it may be ingested by aircraft engines.

Weathering

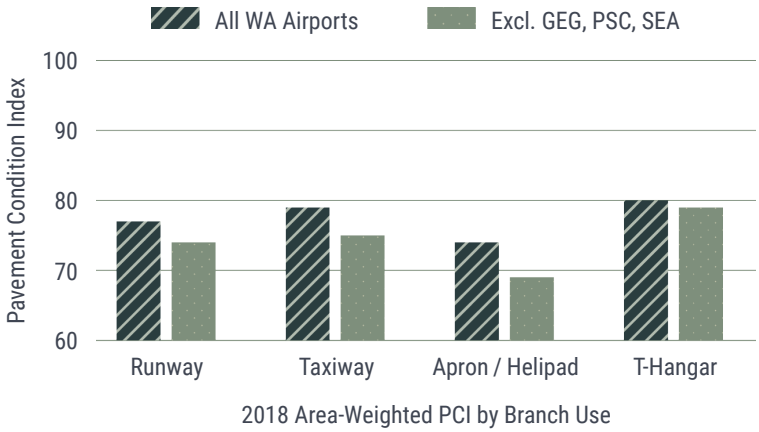
Weathering is the wearing away of the AC binder and/or fine aggregate that occurs as the AC pavement ages and hardens.

Pavement Condition Results

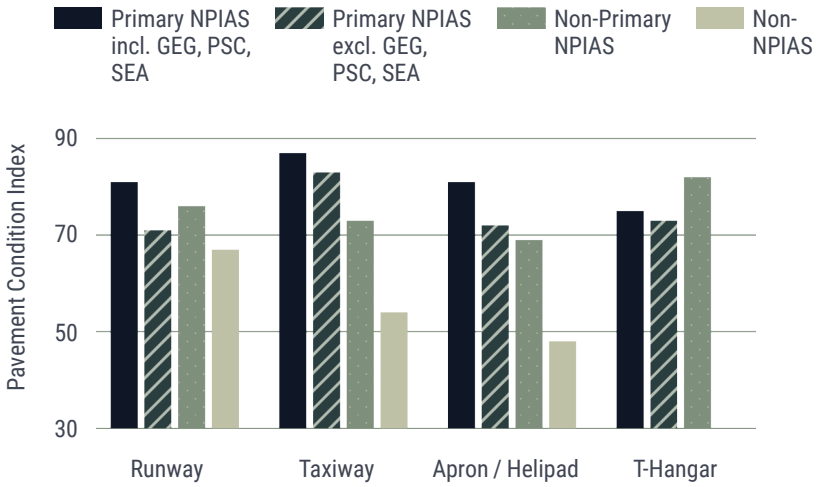
OVERALL PAVEMENT CONDITION

The overall area-weighted PCI (average PCI adjusted to account for the relative size of the pavement sections) of the ninety-eight airports (including SEA, GEG, and PSC) is 77. The overall area-weighted PCI of the ninety-five airports evaluated during this project (excluding SEA, GEG, and PSC) is 73.

The figures on the right show the 2018 condition of the pavement broken out by branch use (apron/helipad, runway, taxiway, and T-hangar), as well as by branch use and the NPIAS/Non-NPIAS airport classification for all ninety-eight airports and for the ninety-five airports evaluated by APTech during this project.



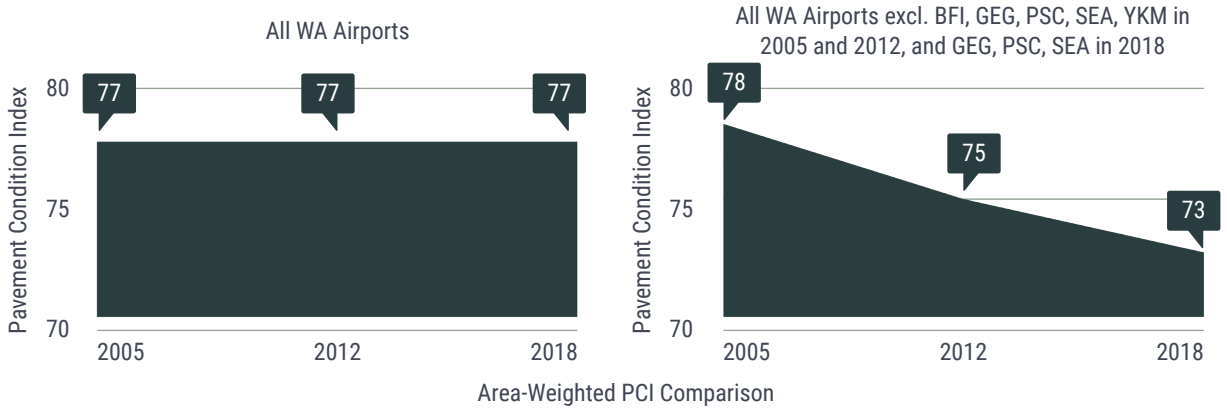
2018 Area-Weighted PCI by Branch Use



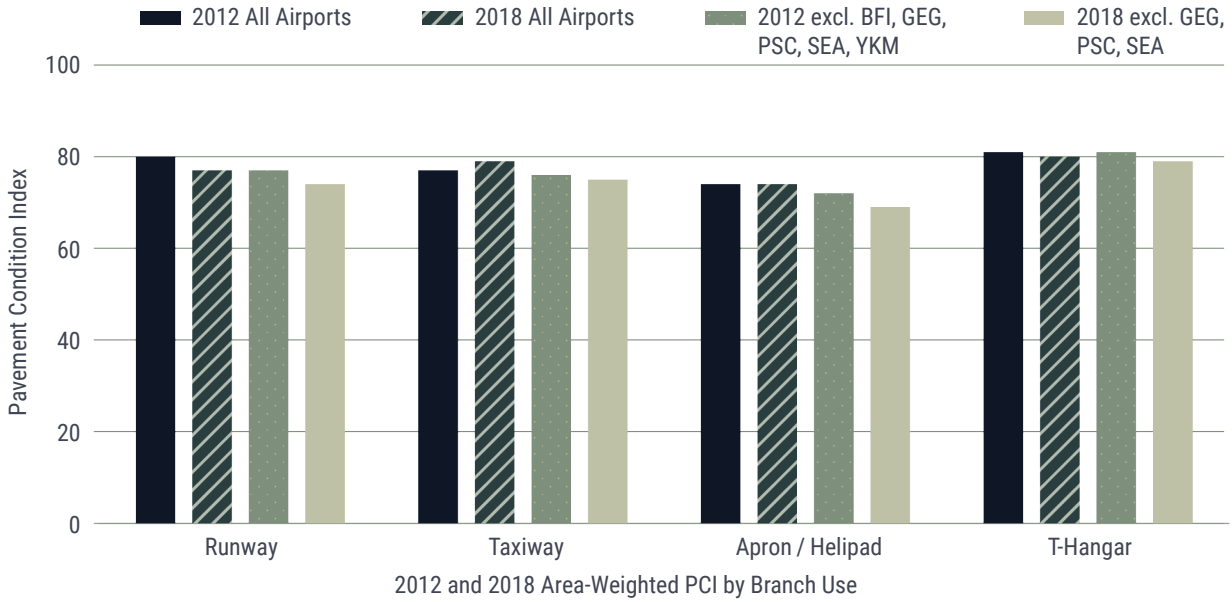
2018 Area-Weighted PCI by Branch Use and Airport Classification

HISTORICAL OVERALL PAVEMENT CONDITION

A comparison of the 2018 project results to the past conditions in 2012 is provided below. It is important to note that the values below are for the entire system of airports included during each update; therefore, a few of the airports may vary between the two years (Boeing Field/King County International Airport [BFI], GEG, PSC, SEA, Yakima Air Terminal Airport [YKM] were excluded in 2005 and 2012 and GEG PSC, SEA in 2018). The intent of these graphs is to show how the system is performing as a whole.



Area-Weighted PCI Comparison



2012 and 2018 Area-Weighted PCI by Branch Use

PAVEMENT CONDITION DISTRIBUTION

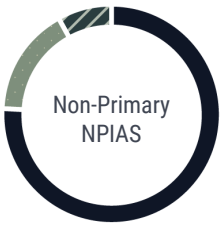
The following figures show, in general, the level of work needed depending on pavement condition. Approximately 80 percent of the pavement area at the ninety-eight airports included in the WSDOT Aviation APMS (including SEA, GEG, and PSC) are at the condition level where they will benefit from preventive maintenance actions, such as crack sealing, joint sealing, patching, and surface treatments. Approximately 13 percent of the pavement infrastructure needs more extensive rehabilitation, such as an overlay, while approximately 7 percent is in need of reconstruction to restore the pavement. If SEA, GEG, and PSC are excluded, approximately 74 percent of the pavement infrastructure will benefit from preventive maintenance actions, 17 percent from rehabilitation, and 9 percent from reconstruction.

- 80% Preventive Maintenance
- 13% Major Rehabilitation
- 7% Reconstruction

- 74% Preventive Maintenance
- 17% Major Rehabilitation
- 9% Reconstruction

- 87% Preventive Maintenance
- 8% Major Rehabilitation
- 5% Reconstruction

- 74% Preventive Maintenance
- 17% Major Rehabilitation
- 9% Reconstruction



- 76% Preventive Maintenance
- 16% Major Rehabilitation
- 8% Reconstruction

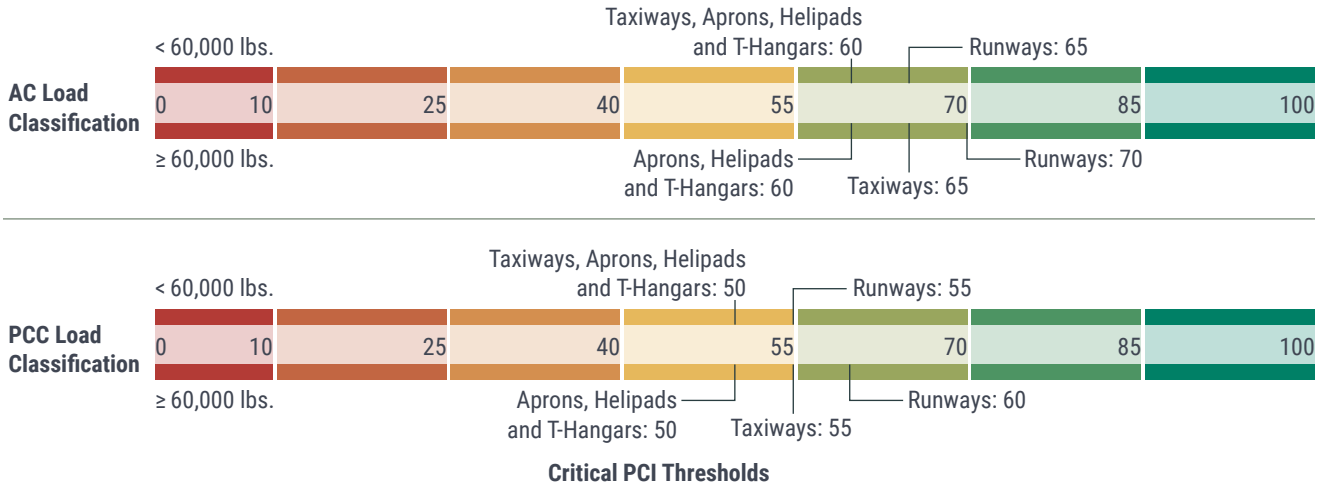
- 49% Preventive Maintenance
- 26% Major Rehabilitation
- 25% Reconstruction

Funding Assessment

CRITICAL PCIs

An M&R program was developed for the ninety-five Washington airports evaluated during this project (excluding SEA, GEG, and PSC) using the PAVER pavement management software. The analysis was prepared for 7 years (2019 through 2025). Preventive maintenance was considered in 2019 only, and major rehabilitation actions and global maintenance were determined during 2019 through 2025. An inflation rate of 3.5 percent was applied when calculating the future cost of work.

For each year of the analysis, the future conditions of the pavements were estimated, and a determination was made as to whether preventive maintenance, global maintenance, or major rehabilitation/reconstruction was the appropriate and most cost-effective strategy. The pavement was recommended for preventive or global maintenance if the forecasted condition was projected to be above the critical PCI thresholds shown in the figure below.



Critical PCI Thresholds

FUNDING LEVELS FOR WASHINGTON AIRPORTS

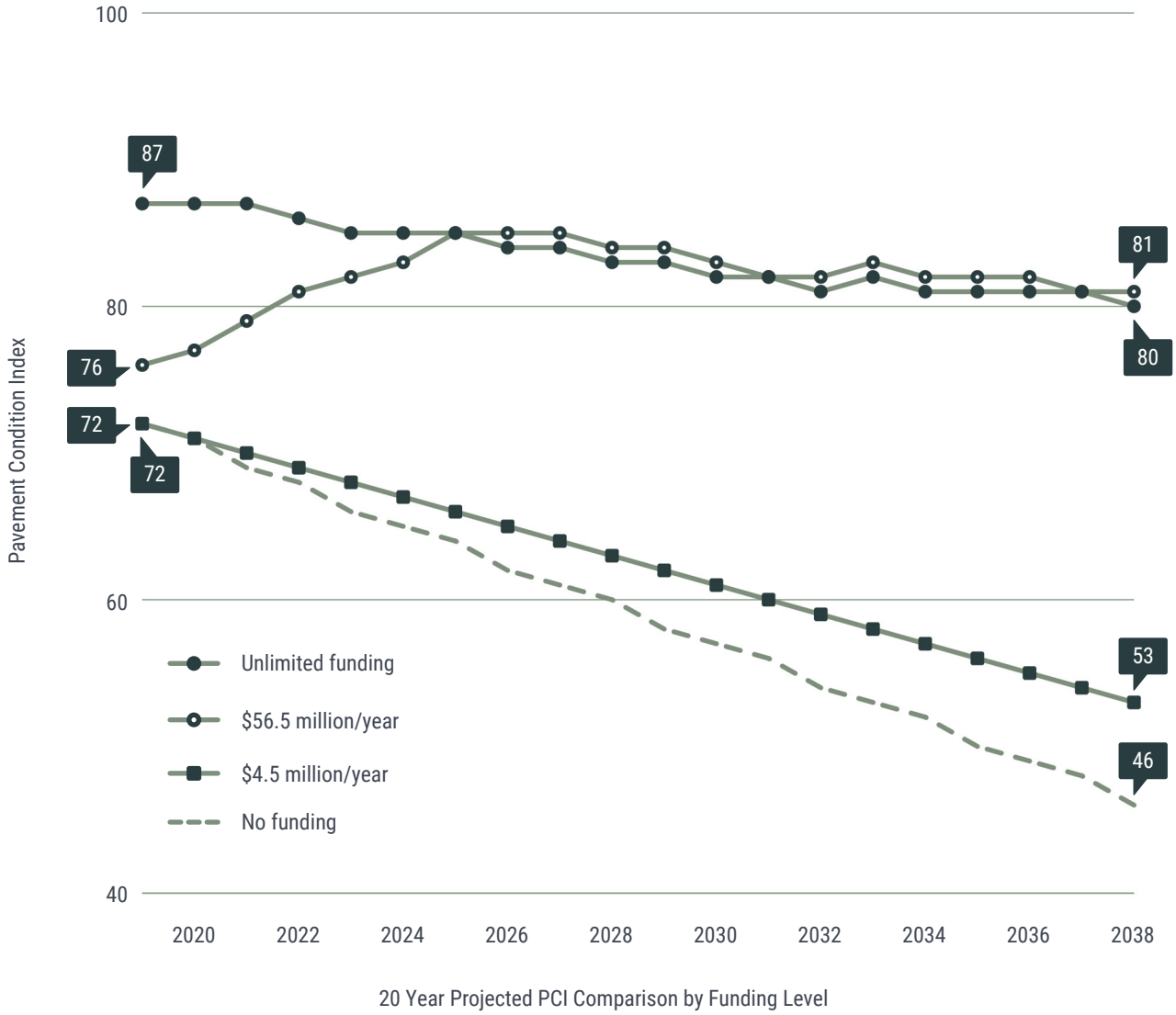
Three funding levels for pavement M&R were investigated during this project: no funding, unlimited funding, and $4.5 million annually. The funding analysis was run for the years 2019 through 2025 and addressed the needs of pavements at ninety-five airports evaluated during this project (excluding SEA, GEG, and PSC).

At one extreme end of the scale where no funding is provided for pavement M&R, the condition of the system of ninety-five airports is anticipated to decrease from 73 in 2018 to 64 by 2025. This lack of investment in the pavement infrastructure would result in an increased need for pavement rehabilitation and reconstruction, which in turn would substantially increase the costs to keep the pavement system in safe and serviceable condition. In fact, under this scenario, by the end of 2025, the backlog for pavement rehabilitation and reconstruction will increase by approximately 69 percent to $508.5 million.

At the other end of the scale, if all pavement M&R projects were funded under an unlimited budget scenario, the condition of the ninety-five-airport system is projected to increase from 73 in 2018 to 84 by 2025. In addition, the backlog of pavement rehabilitation and reconstruction projects would be eliminated. However, it would come at an estimated cost of $395.4 million ($106.1 million for primary NPIAS airports, $265.4 million for non-primary NPIAS airports, and $23.9 million for Non-NPIAS airports).

A third analysis looked at the ramifications of continuing to use the existing funding level of $4.5 million annually ($3.7 million annually for NPIAS airports and $0.8 million annually for non-NPIAS airports). Under this analysis, the pavement system deteriorates at a slower pace than under the no funding scenario, with the condition decreasing from 73 to 66 by 2025. The backlog of the pavement rehabilitation and reconstruction projects would increase by approximately 60 percent to $474.1 million by 2025.

To determine the long-term impacts of the different levels of funding, a fourth analysis looked only at the major rehabilitation/reconstruction needs at ninety-five airport pavements through 2038. As shown in the figure on the next page, it is estimated that the area-weighted 2038 PCIs for the ninety-five airports are projected to be 46, 53, 81, and 80 under the no funding, $4.5 million annual funding, $56.5 million annual funding, and unlimited funding scenarios, respectively. The $56.5 million in annual funding scenario is based on the estimated amount of current funding combined with the potential aviation fuel tax fund reallocation. Under $4.5 million annual funding levels, it is estimated that the backlog of major rehabilitation/reconstruction needs will grow to $1.475 billion by 2038 from the 2025 backlog of $474.1 million.



20 Year Projected PCI Comparison by Funding Level

Under the unlimited funding scenario, major rehabilitation projects are recommended for sections when their projected PCIs fall below the established critical PCI thresholds. Once the major rehabilitation project is completed, the PCI for that section is reset to 100. If a section's projected PCI is above the critical PCI, preventive maintenance is typically recommended which does not reset the PCI to 100. The overall PCI of the entire system is calculated as an area-weighted average of all sections' individual PCIs; therefore, under an unlimited funding scenario the overall system PCI will stay above the critical PCI thresholds but not reach a PCI of 100 since some sections will be in the PCI range where maintenance, rather than major rehabilitation, is the appropriate treatment. The overall projected PCI will vary each year, depending on whether sections are triggered for major rehabilitation or maintenance.

Needs through 2025

The funding needs through 2025 under an unlimited budget scenario for each of the ninety-five airports inspected during this project are summarized in the following table, broken down by WASP Classification.

Major

City	Airport Name	2018 Area-Weighted PCI	Estimated Funding Needs
Bellingham	Bellingham International	85	$5,384,000
Everett	Snohomish County (Paine Field)	75	$26,481,000
Moses Lake	Grant County International	64	$102,583,000
Seattle	Boeing Field/King County International	83	$9,174,000
Walla Walla	Walla Walla Regional	64	$51,709,000
Wenatchee	Pangborn Memorial	65	$13,164,000
Yakima	Yakima Air Terminal	73	$20,370,000
			Major Total: $228,865,000

Regional

City	Airport Name	2018 Area-Weighted PCI	Estimated Funding Needs
Arlington	Arlington Municipal	76	$8,446,000
Bremerton	Bremerton National	83	$3,947,000
Burlington	Skagit Regional	70	$9,831,000
Chehalis	Chehalis-Centralia	74	$3,832,000
Deer Park	Deer Park Municipal	77	$5,095,000
Ellensburg	Bowers Field	55	$20,194,000
Ephrata	Ephrata Municipal	66	$11,784,000

City	Airport Name	2018 Area-Weighted PCI	Estimated Funding Needs
Friday Harbor	Friday Harbor	76	$788,000
Hoquiam	Bowerman Field	74	$4,111,000
Olympia	Olympia Regional	77	$8,923,000
Port Angeles	William R. Fairchild International	65	$10,278,000
Pullman	Pullman/Moscow Regional	76	$5,486,000
Puyallup	Pierce County - Thun Field	72	$2,089,000
Renton	Renton Municipal	84	$3,770,000
Richland	Richland	89	$218,000
Shelton	Sanderson Field	70	$5,266,000
Snohomish	Harvey Field	59	$1,121,000
Spokane	Felts Field	79	$4,661,000
Tacoma	Tacoma Narrows	77	$6,268,000
Vancouver	Pearson Field	63	$1,980,000
			Regional Total: $118,088,000

Community

City	Airport Name	2018 Area-Weighted PCI	Estimated Funding Needs
Anacortes	Anacortes	76	$1,647,000
Auburn	Auburn Municipal	74	$1,642,000
Brewster	Anderson Field	75	$505,000
Camas	Grove Field	79	$378,000
Cashmere	Cashmere-Dryden	72	$392,000
Chelan	Lake Chelan	72	$964,000
Colfax	Port of Whitman Business Air Center	97	$27,000
College Place	Martin Field	36	$3,086,000
Colville	Colville Municipal	64	$733,000
Concrete	Mears Field	72	$666,000
Davenport	Davenport Municipal	58	$1,178,000
Eastsound	Orcas Island	76	$818,000
Kelso	Southwest Washington Regional	69	$2,864,000
Kent	Norman Grier Field	51	$1,113,000

City	Airport Name	2018 Area-Weighted PCI	Estimated Funding Needs
Lopez	Lopez Island	89	$91,000
Lynden	Lynden Municipal	64	$583,000
Mead	Mead Flying Service	54	$182,000
Monroe	First Air Field	29	$1,033,000
Moses Lake	Moses Lake Municipal	77	$413,000
Oak Harbor	AJ Eisenberg	12	$781,000
Okanogan	Okanogan Legion	86	$149,000
Oroville	Dorothy Scott Municipal	54	$1,117,000
Port Townsend	Jefferson County International	73	$1,627,000
Prosser	Prosser	83	$629,000
Sequim	Sequim Valley	39	$968,000
Silverdale	Apex Airpark	72	$216,000
Spanaway	Shady Acres	86	$15,000
Toledo	South Lewis County-Ed Carlson Memorial Field	84	$1,601,000
Tonasket	Tonasket Municipal	42	$1,906,000
Twisp	Twisp Municipal	48	$1,076,000
Wilbur	Wilbur Municipal	84	$279,000
Woodland	Woodland State	84	$53,000

Community Total: $28,732,000

Local

City	Airport Name	2018 Area-Weighted PCI	Estimated Funding Needs
Chewelah	Chewelah Municipal	53	$1,441,000
Cle Elum	Cle Elum Municipal	92	$1,000
Cle Elum	De Vere Field	54	$158,000
Darrington	Darrington Municipal	60	$495,000
Eatonville	Swanson Field	91	$58,000
Electric City	Grand Coulee Dam	82	$60,000
Forks	Forks Municipal	35	$1,972,000

City	Airport Name	2018 Area-Weighted PCI	Estimated Funding Needs
Goldendale	Goldendale Municipal	70	$509,000
Greenwater	Ranger Creek State	65	$190,000
Ilwaco	Port of Ilwaco	97	$55,000
Ione	Ione Municipal	77	$374,000
Langley	Whidbey Airpark	91	$26,000
Lind	Lind Municipal	70	$716,000
Mansfield	Mansfield	57	$461,000
Mattawa	Desert Aire	93	$122,000
Morton	Strom Field	5	$627,000
Ocean Shores	Ocean Shores Municipal	90	$404,000
Odessa	Odessa Municipal	62	$693,000
Omak	Omak Municipal	67	$3,999,000
Othello	Othello Municipal	96	$345,000
Packwood	Packwood	98	$21,000
Quillayute	Quillayute	77	$603,000
Quincy	Quincy Municipal	66	$708,000
Republic	Ferry County	92	$146,000
Ritzville	Pru Field	76	$270,000
Rosalia	Rosalia Municipal	88	$1,000
Sekiu	Sekiu	41	$1,122,000
South Bend (Raymond)	Willapa Harbor	95	$112,000
Stanwood	Camano Island Airfield	33	$388,000
Sunnyside	Sunnyside Municipal	88	$399,000
Tekoa	Willard Field	50	$542,000
Warden	Warden	64	$323,000
Waterville	Waterville	60	$630,000
Westport	Westport	92	$26,000
Wilson Creek	Wilson Creek	46	$831,000
Winthrop	Methow Valley State	89	$844,000

Local Total: $19,672,000