

**HARVEY FIELD AIRPORT**

SNOHOMISH, WA



*Foundation  
for the **Future***

# Harvey Field Airport Master Plan Open House

April 1, 2015

**JVIATION®**

[www.harveyfield.com](http://www.harveyfield.com)

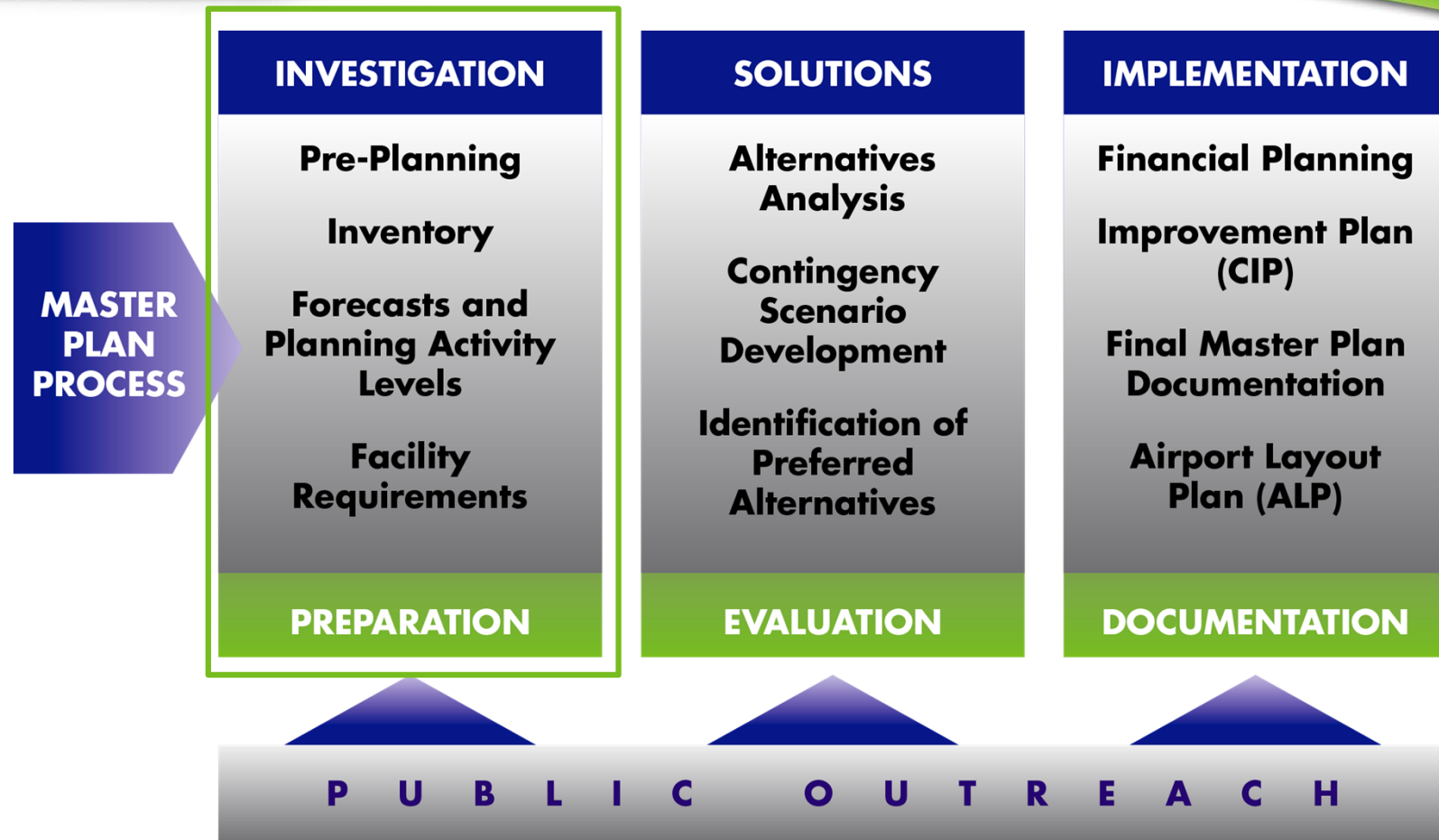
## Why do we Master Plan airports?

The Master Plan is a **20 year plan** to understand the needs of current and future users of the airport and to ensure the airport fulfills its role in the air transportation system. This is important **to ensure that FAA safety and design standards are met and orderly development** occurs in a manner that is **reflective of the community's values and goals**. The plan is developed through a **purposeful, inclusive, and educational process**.

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For future planning needs, the FAA recommends that Master Plans be revisited every 7-10 years unless circumstances have changed.

# Master Plan Process

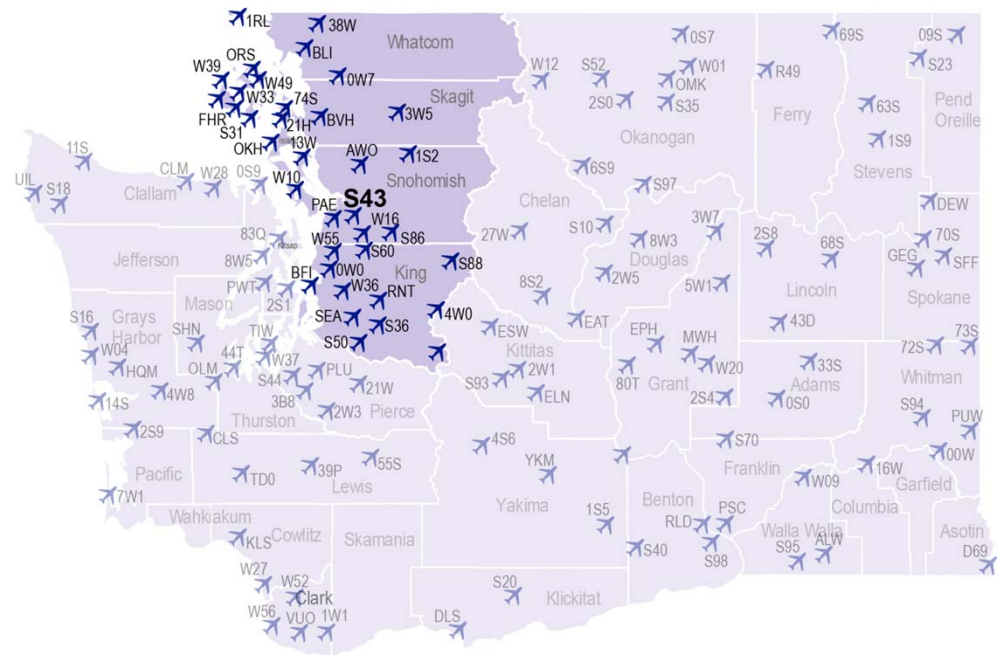




# Airport Overview



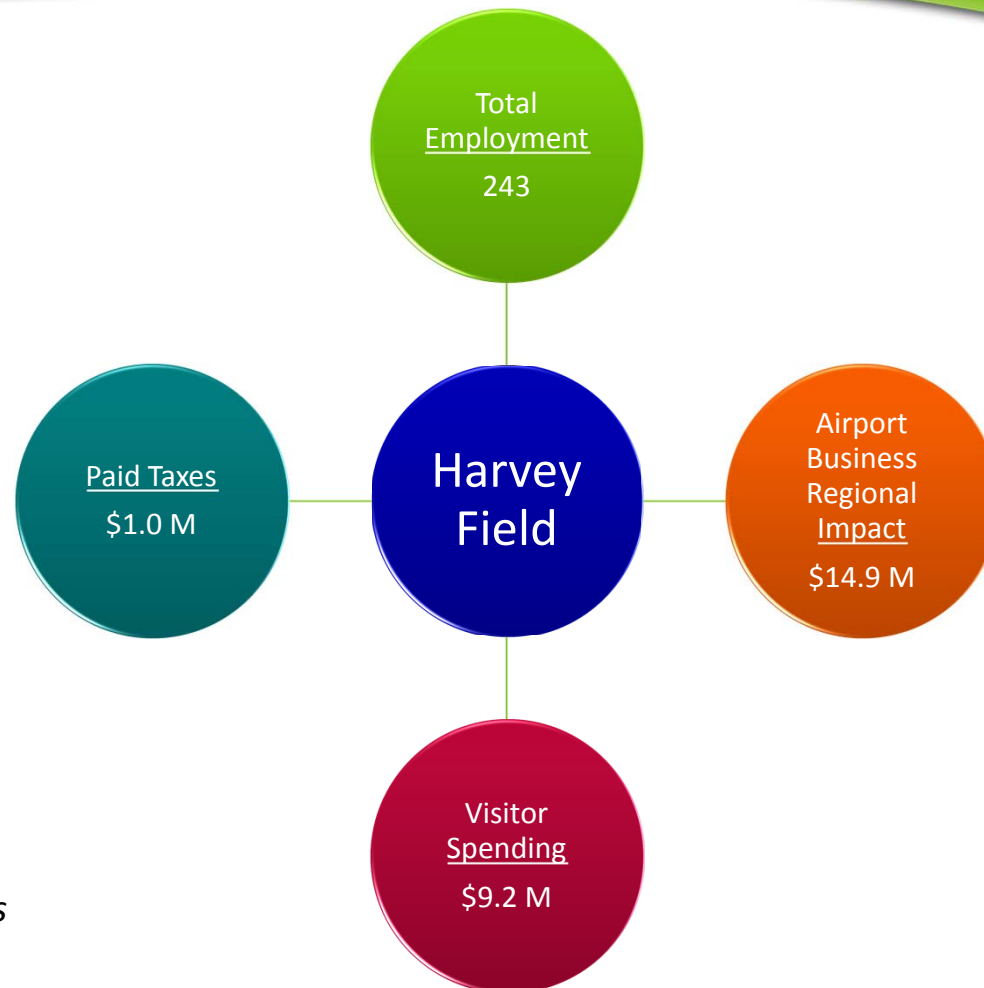
- ➔ Mission: To ensure a thriving central Puget Sound through planning for regional transportation (including airports, growth management, and economic development)
- ➔ PSRC NextGen study (2013)
  - ➔ Prepare the region's airports for emerging aviation technology



# Airport Economic Impact – 2012 WSDOT Economic Impact Data

## ***Multiplier Effect:***

Initial economic impacts from Airport enter economy and re-circulate which generate successive rounds of employment, taxes, spending, and output.



*Note: All impacts are shown in 2010 dollars*



- Planning Advisory Committee
- Website
- Public Open Houses
- Government Briefings
- Focus Groups (Stakeholders)
  - Pilot Group
  - Business Group
  - Noise
  - Floodplain/Hydrology



# Planning Advisory Committee (PAC)



- Vital to the success of the Master Plan
- Crucial perspective on questions such as:
  - *What do the citizens and visitors think of the airport and its future?*
  - *How can we assure that the airport is valued as an integral community asset?*

## PAC Composition

- Local residents
- Neighbors
- Tenants
- Airport Users
- Local Businesses
- Snohomish County & City

- Puget Sound Regional Council
- Washington State Department of Transportation (WSDOT), Division of Aeronautics
- FAA – Airports District Office





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# **Aviation Demand Forecasts**

# Why Prepare Activity Forecasts?

## *Forecasts are needed to define key Master Plan elements*

- Facility Requirements & Operational Needs
- Identify Design Aircraft
- Aeronautical & Non-Aeronautical Revenue
- Operation & Maintenance and Capital Costs
- Environmental Planning
- Capital Improvement Program (CIP)
- Airport Layout Plan (ALP)

## *Forecasting Sources & Methods*

- Airport Management Records
- FAA Form 5010-1, Airport Master Record
- FAA Terminal Area Forecast (TAF) - 2014
- WSDOT Aviation System Plan
- FAA Advisory Circular 150/5070-6B, Airport Master Plans
- FAA Aerospace Forecasts, 2014-2034 (Fiscal Years)
- Forecasting Aviation Activity by Airport, GRA, Inc.
- Local & Regional Demographic Trends

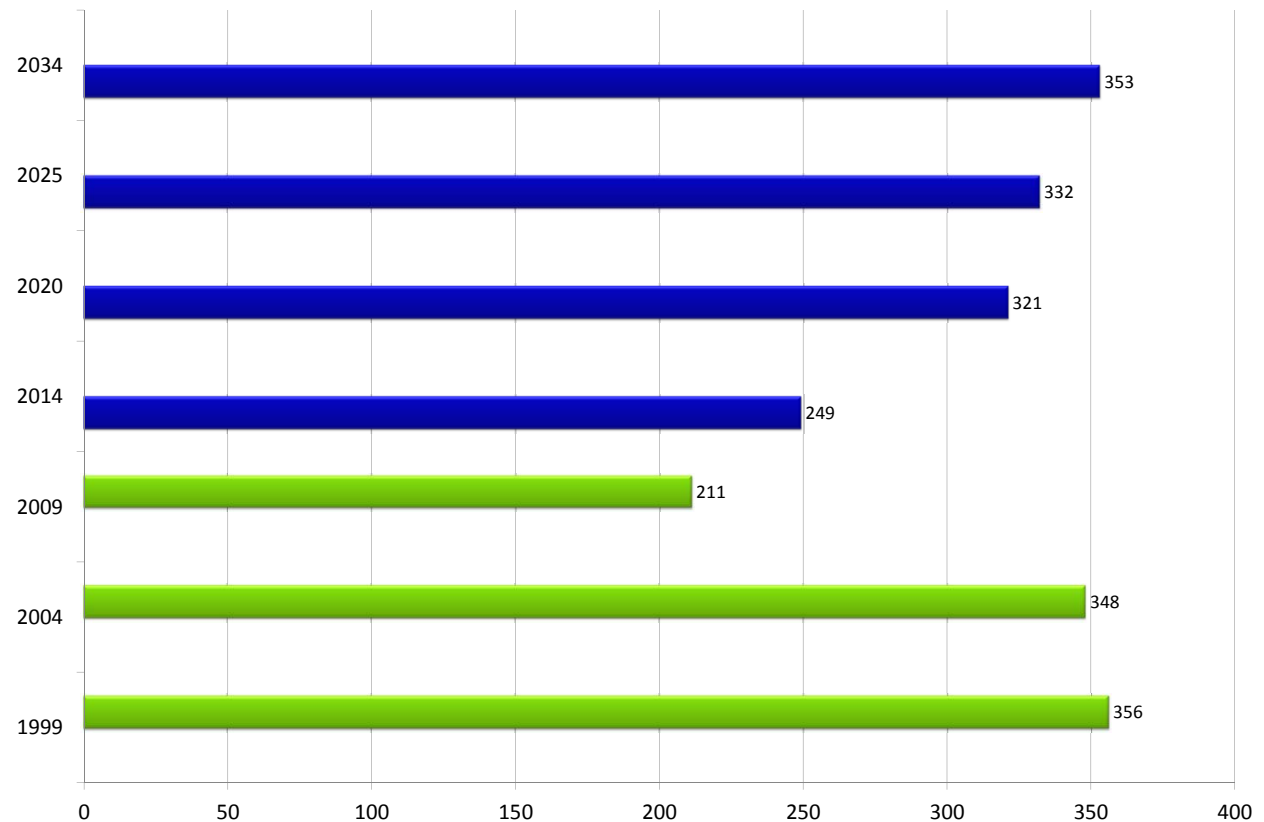
# Factors Influencing Aviation Activity at Harvey Field

- Aviation fuel prices
- Future availability of 100LL avgas
- Rising cost of new GA aircraft and parts
- Puget Sound Region's demographic indicators (employment, income, population) are projected to continue growing at a strong pace through 2040



# Based Aircraft Past & Forecast

- Growing at 2.1 percent annually
- 249 aircraft in 2014 to 353 in 2035
- Growth projected brings based aircraft to previous levels



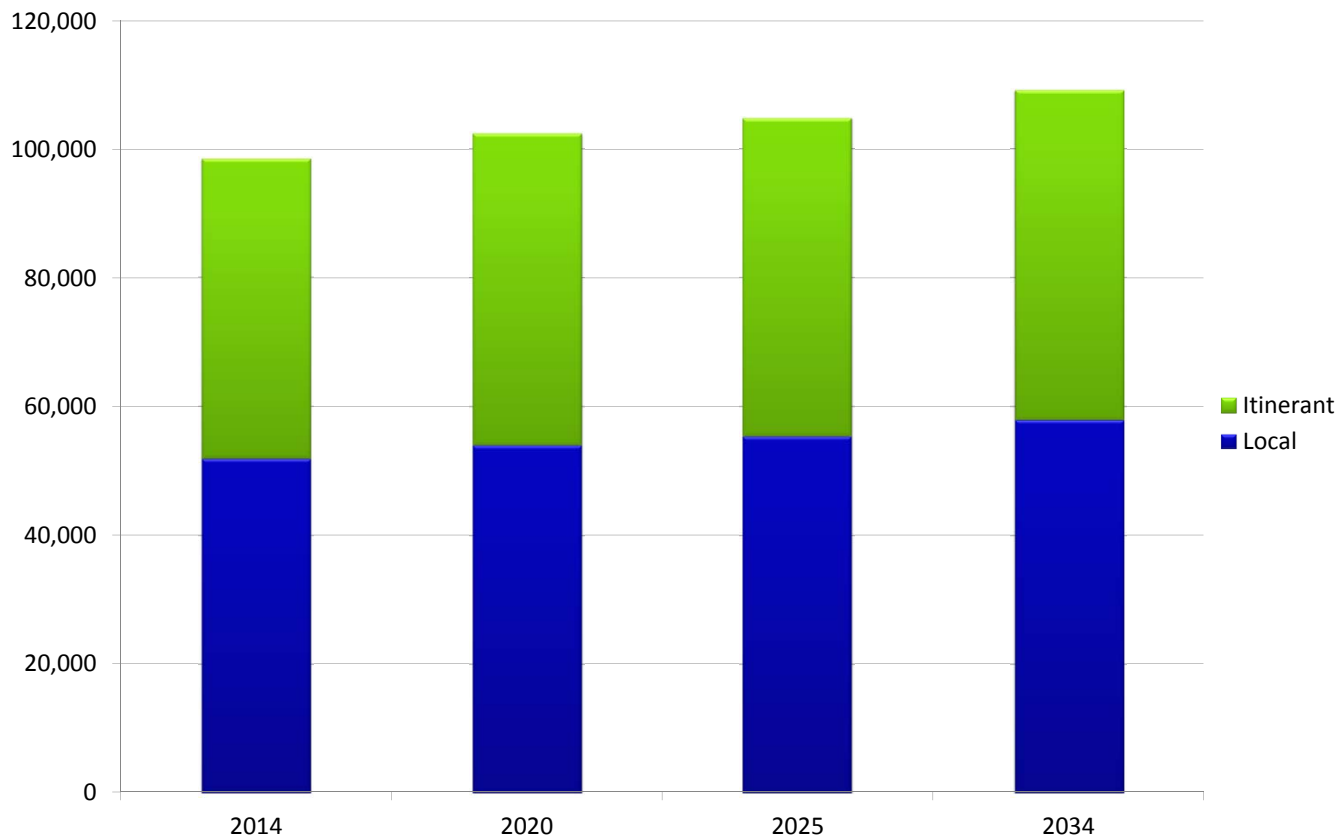
*Note: Forecast pending FAA review and approval*



## Based Aircraft History

- ➔ Additional tie-down area southwest of runway accommodated aircraft when at peak (1999-2007)
- ➔ The economic downturn which started in 2008 led to a drop in based aircraft
- ➔ Airport management, to maintain a well run facility, eliminated the southwest tie-down area

# Operations Forecast



- **Local Operation** – occur in the local traffic pattern or within sight of airport
- **Itinerant Operation** – all aircraft operations other than local (i.e. Portland to Harvey Field)

- Operations are anticipated to grow at 0.58 percent annually
- Local activity is expected to remain higher than itinerant



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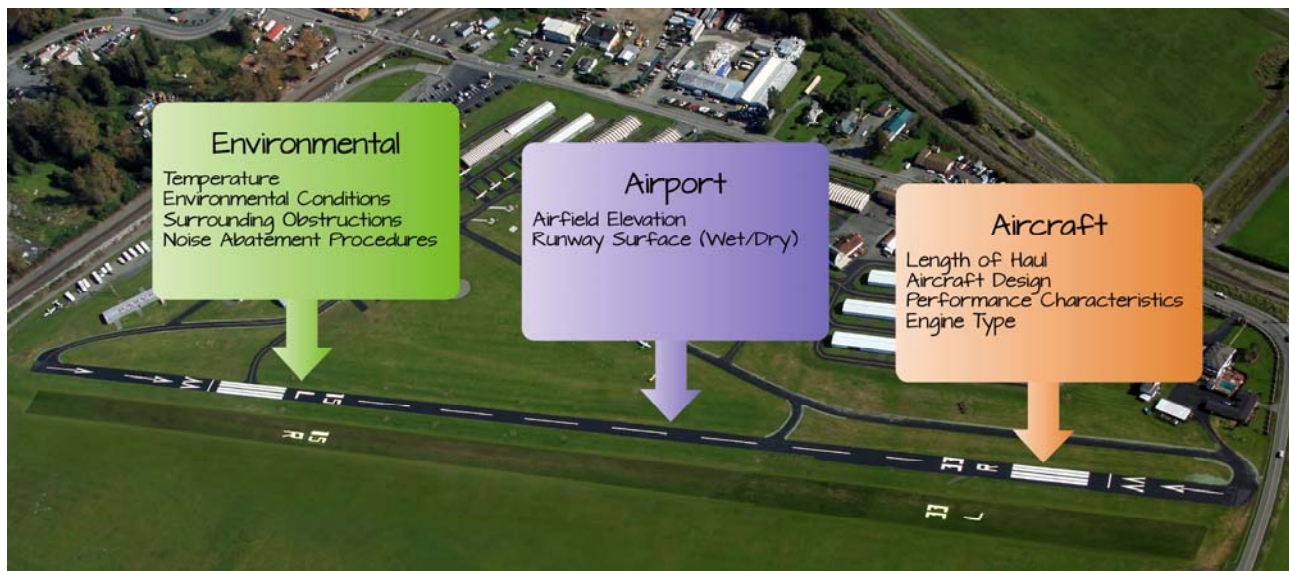
# **Inventory & Facility Needs**

# Runway Length

## ✈ Current Runway Length, Width, & Orientation:

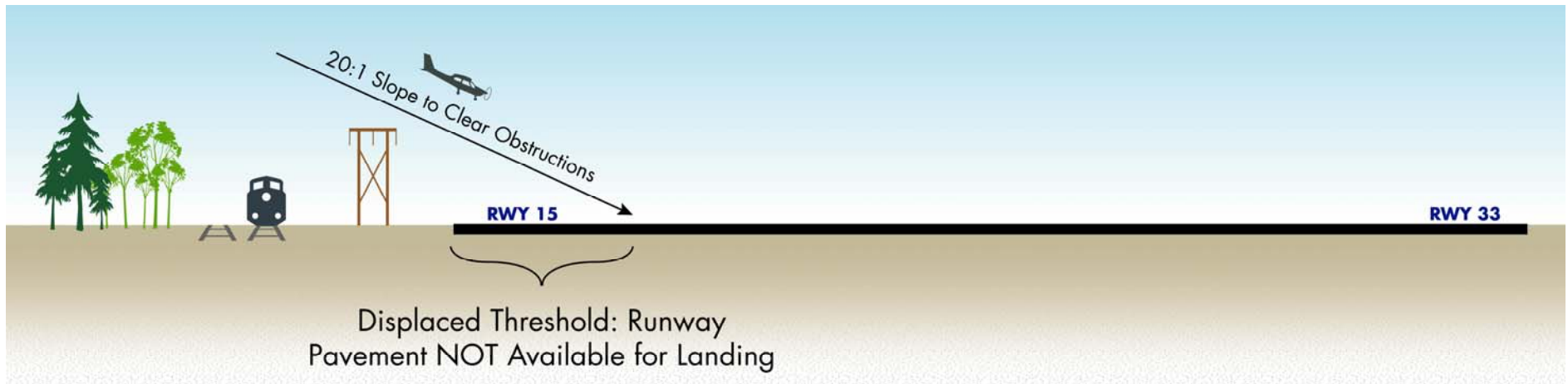
- 15L/33R - 2,671 feet x 36 feet
- Displaced Thresholds:
  - Runway 15 – 452' to south
  - Runway 33 – 241' to north

A displaced threshold is a runway threshold located at a point other than the physical beginning or end of the runway. The portion of the runway so displaced may be used for takeoff but not for landing.





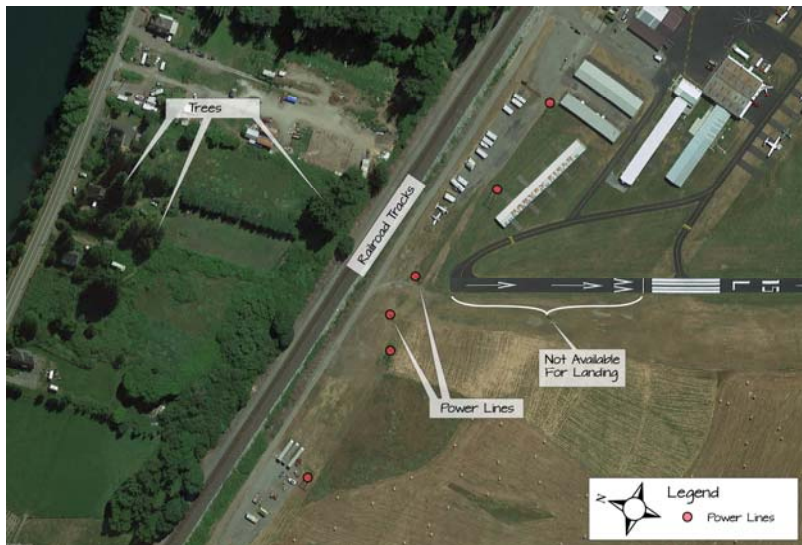
# Displaced Threshold



# Obstructions – Reason for Displaced Thresholds

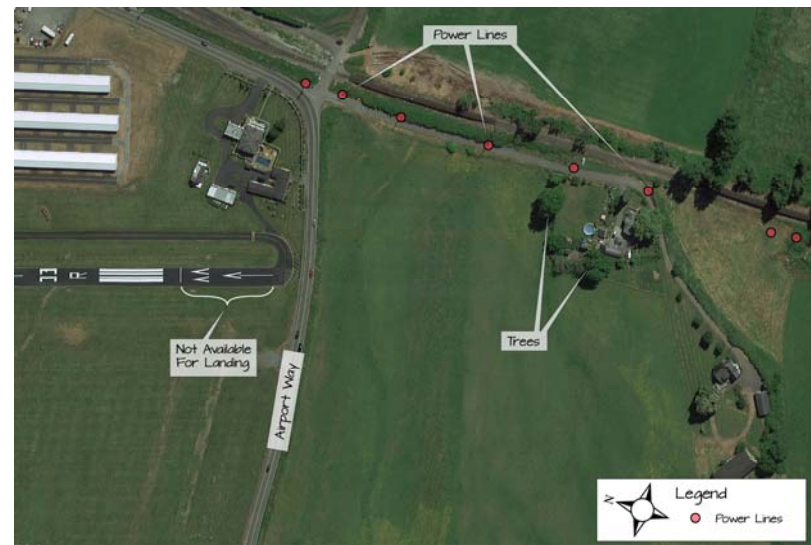
## *Runway 15L*

- ✈ Railroad tracks
- ✈ Power Lines
- ✈ Trees



## *Runway 33R*

- ✈ Airport Way
- ✈ Power Lines
- ✈ Trees



# Runway Length Requirement: 2,850'

- ✈ Per FAA Design Criteria:
  - ✈ 95% of small aircraft (<12,500 pounds maximum takeoff weight)
  - ✈ Approach Speed: 50 knots or greater
  - ✈ Airport Elevation: 24' above sea level
  - ✈ Mean Maximum High Temp (July/August): 73 degrees F.
- ✈ Required runway length 2,850', with clear approaches





# Larger Aircraft Using Harvey Field



DeHavilland Twin Otter (DHC-6)



Cessna Caravan 208B



DeHavilland DHC-2 Beaver



TBM 700



Quest Kodiak



KingAir 200



## *Runway Length:* **Existing & Design Target**

Existing  
15L/33R  
(aligning with  
prevailing  
winds)

2,671' x 36'

Approach Obstructions,  
Resulting in Displaced  
Thresholds

- Runway 15: 452' to south
- Runway 33: 241' to north

Design  
Target: Same  
Orientation

2,850' x 75'

Approaches Clear of  
Obstructions

# Existing Pavements

Item	Description
Runway 15L/33R	2,671 feet by 36 feet Asphalt Published Strength: 10,000 pounds Single Wheel (SW) Gear Good Condition
Taxiways	Partial Parallel Taxiway – Good condition Runway 15L & Midfield Connectors – Good condition
Taxilanes	South – Good condition North – Good condition Midfield – fair condition with several pads failing
Apron	Main Aircraft Parking Apron – Good condition

# Runway, Taxiway, & Apron Pavement Needs

## → ***Runway:***

- Routine maintenance – crack/joint sealing

## → ***Taxiway/Taxilane:***

- Full parallel taxiway (25 feet wide) – 240 foot runway to taxiway separation (centerline to centerline)
- Preventative/Routine maintenance
- Rehabilitate midfield taxilanes prior to 2020

## → ***Apron:***

- Preventative maintenance and maintenance plan



# Hangars





# Hangar, Apron, Helicopter Parking Needs

## → **Hangars:**

- Waiting list of 47 – includes 8 existing tenants wishing to have a different hangar type/size or move from tie-down to hangar
- Demand for additional conventional/box hangars

## → **Apron:**

- Existing paved tie-downs (14) are full
- Demand for additional paved tie-downs (based & transient aircraft)

## → **Helicopter Landing/Parking:**

- Congestion with fueling and skydiving operations
- Consider relocating activity to west side of runway



# Airfield Lighting and Navigational Aid Needs

- ➔ **Runway lights** – replace nonstandard Low Intensity Runway Lights with Medium Intensity Runway Lights
- ➔ **Taxiway lights** – replace nonstandard reflectors with Medium Intensity Taxiway Lights
- ➔ Installation of a Precision Approach Path Indicator (PAPI) on Runways 15L and 33R



## Airfield Lighting and Navigational Aid Needs

- ✈ Installation of an Omni-Directional Approach Lighting System (ODALS) on Runway 33
- ✈ Installation of a weather system such as a Automated Surface Observing System (ASOS)



# Parking, Airport Support Equipment, & Facility Needs

## → ***Auto Parking:***

- Paved and gravel lots often full
- Additional parking would alleviate constraints

## → ***Snow Removal Equipment:***

- Currently use truck with bucket/brush
- Truck with plow is needed





# Fuel Storage & Needs

**Jet A 12,000 gallon tank**



**AvGas (100LL) 12,000 gal tank**



- Fuel Storage volume is adequate
- Additional fuel storage may be needed on west side of runway to accommodate relocated helicopter operations
- Consider relocating fuel storage tanks to eliminate congestion with helicopter and skydiving operations



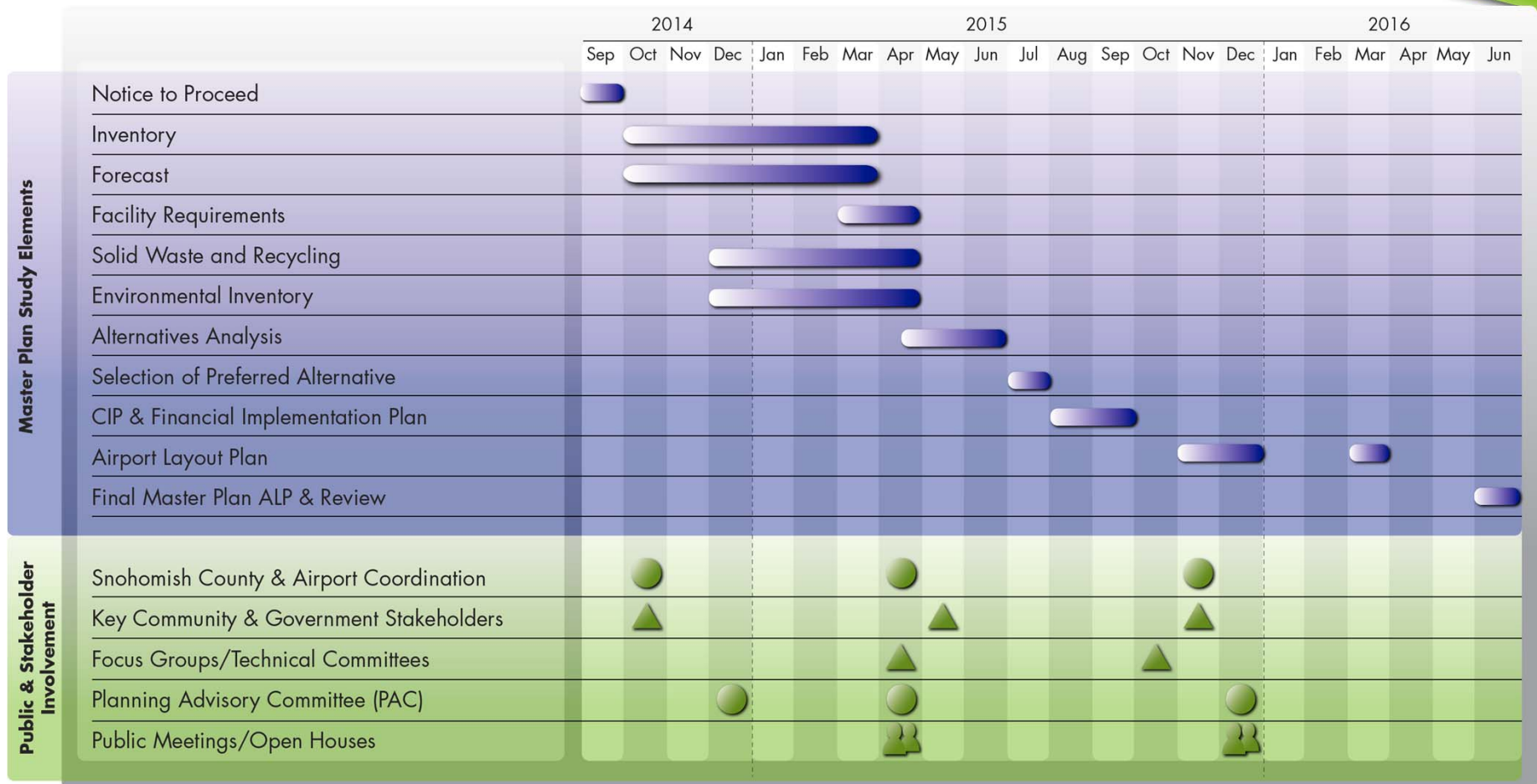
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# **Schedule & Next Steps**



- Finalize Facility Needs
- Environmental Inventory
- Initiate Alternative Analysis
  - Floodplain Analysis
  - Noise Analysis
  - Clear Approaches
  - Runway Needs
  - Hangar/Apron Needs
- Outreach
  - Planning Advisory Committee (PAC)
  - Stakeholders
  - Noise and Floodplain Focus Groups
  - Open House

# Project Timeline





*Thank You!*

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