

Evaluation of Funding Needs for Montana's General Aviation Pavements (2013 – 2022)

Presented to: MAMA

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Federal Aviation
Administration

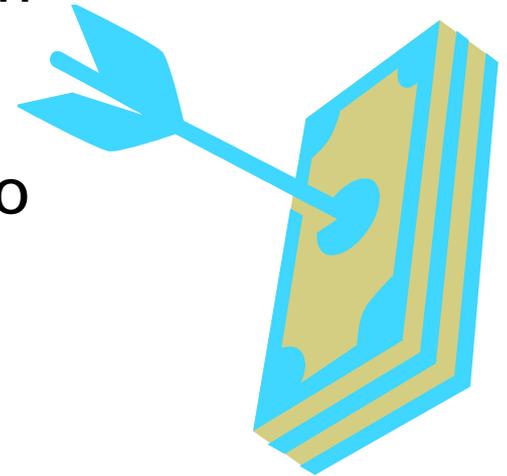


Topics

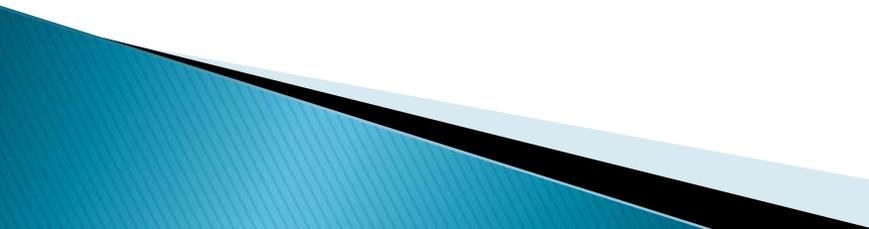
- ▶ Goals
 - ▶ Assumptions and Methods
 - ▶ Pavement Funding Model
 - ▶ Dollars and Cents
 - ▶ Findings
 - ▶ Recommendations
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Goals

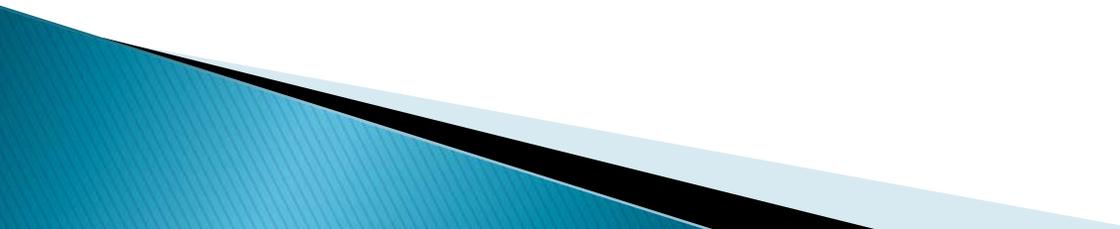
- ▶ Clearly present the future costs for maintenance, rehab, and construction of runways, taxiways, and aprons.
- ▶ Provide the Helena ADO with a tool to evaluate pavement funding needs.
- ▶ Identify funding issues.
- ▶ Explore solutions for pavement funding early.



Assumptions & Methods

- ▶ Pavement Funding Model based on current (2011) PCI Survey and pavement performance history
 - ▶ Cost based on FY-2012 bid tabs (no inflation adjustment)
 - ▶ Maintenance – crack sealing (every 4 to 6 years) ; fog sealing and marking (every 8 years), and engineering
 - ▶ Rehabilitation – milling, crack sealing, overlay, marking, engineering (approximately every 15 years)
 - ▶ Reconstruction/New Construction – unclassified excavation, new pavement section, drainage, marking, engineering
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Assumptions & Methods *(cont.)*

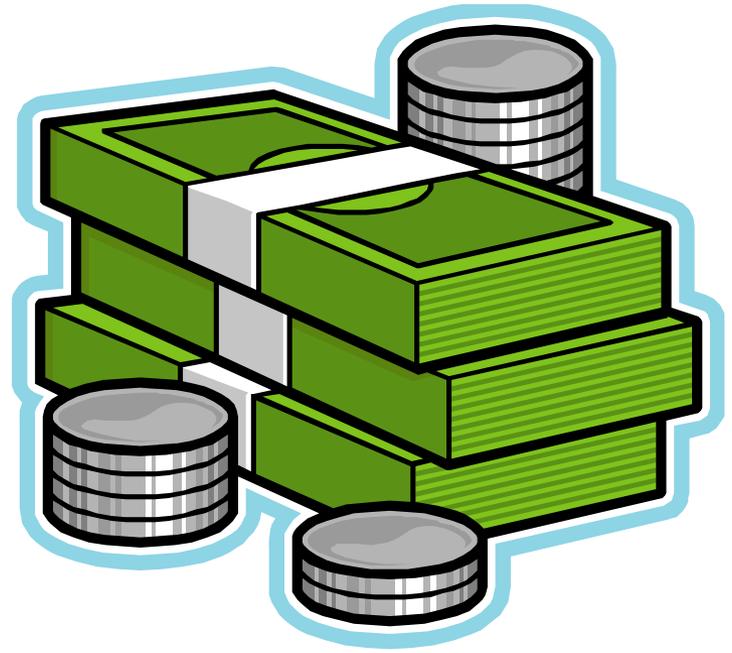
- ▶ Costs do not include planning, land, lighting, equipment, etc.
 - ▶ Assume \$5 million/year State Apportionment and \$9 million/year nonprimary funding
 - ▶ Assume \$1.5 million/year Discretionary funding
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Pavement Funding Model

- ▶ Brief description of the Model
- ▶ How cost estimates were constructed

Dollars & Cents (2013–2022)

- ▶ Estimated Funding
- ▶ Pavement Area
- ▶ Maintenance Total
- ▶ Rehabilitation Total
- ▶ New Construction
- ▶ Grand Total



Dollars & Cents (2013–2022) – cont.

- ▶ Estimated funding
 - State Apportionment = \$50 million
 - Nonprimary Entitlements = \$90 million
 - Discretionary = \$15 million
 - Total funding anticipated (2013–2022): \$155 million

Dollars & Cents (2013–2022) – cont.

▶ Pavement Area

- Total number of GA airports = 58 in Montana
- Total Runway Area (S.Y.) = 2,953,800
- Total Taxiway Area (S.Y.) = 972,800
- Total Apron Area (S.Y.) = 767,300

- ▶ **Approximately 4.7 million Square Yards of General Aviation pavement in MT!**
- ▶ **We intend to do a similar study for ID airports.**

Dollars & Cents (2013–2022) – cont.

▶ Maintenance

◦ Total Runway Maintenance Cost = \$ 22.3 million

◦ Total Taxiway Maintenance Cost = \$ 7.4 million

◦ Total Apron Maintenance Cost = \$ 6.0 million

◦ **Total Maintenance Cost = \$ 35.7 million**

Dollars & Cents (2013–2022) – cont.

▶ Rehabilitation

- Total Runway Rehabilitation Cost = \$ 81.6 million
- Total Taxiway Rehabilitation Cost = \$ 34.9 million
- Total Apron Rehabilitation Cost = \$ 25.3 million
- **Total Rehabilitation Cost = \$141.8 million**

Dollars & Cents (2013–2022) – cont.



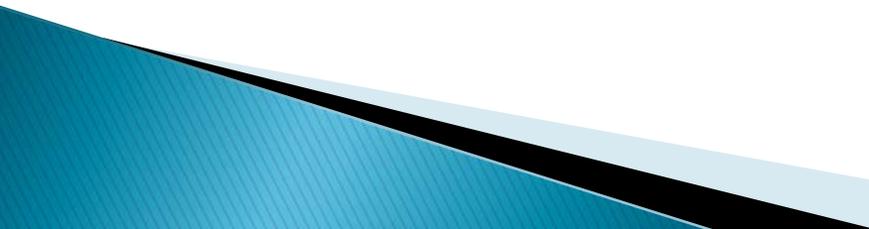
▶ Grand Total

- Total Maintenance (16%) = \$ 35.7 million
 - Total Rehabilitation (64%) = \$ 141.8 million
 - Total New Construction(20%) = \$ 43.0 million
 - **Grand Total (100%) = \$ 220.5 million**
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- ▶ **Will preserve and construct 4.5 million Square Yards of General Aviation pavement!**

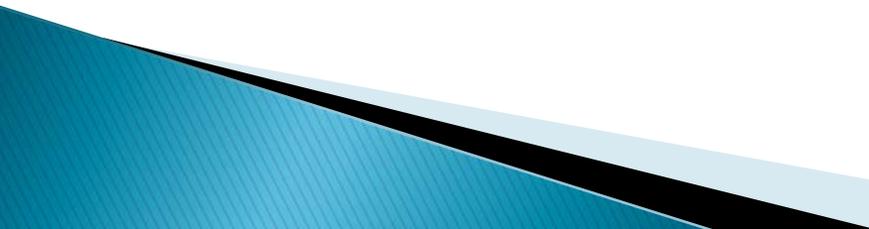
Dollars & Cents (2013–2022) – cont.

- ▶ Anticipated Funding (2013–2022): \$155 million
- ▶ Amount needed for just pavement: \$220.5 million
- ▶ **Leaves a shortfall of \$65.5 million for just pavement**

Findings

- ▶ The projected cost for pavement work alone exceeds anticipated funding by \$65M.
 - ▶ Other high priority work such as lighting, fencing, land, etc. still must be accomplished
 - ▶ Pavement costs were 85% of AIP annually over the last 10 years.
 - ▶ Therefore the total shortfall is near \$90M
 - ▶ The 10 year estimate for high priority runway maintenance projects exceeds the estimated available State Apportionment
 - ▶ Maintenance has limits and due to harsh weather conditions, pavement must be over laid and/or reconstructed to extend the life .
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Recommendations

- ▶ Maximize the use of maintenance to extend pavement life.
 - ▶ Consider using AIP funds cycle for runway and taxiway maintenance and rehabilitation and extend time for apron maintenance.
 - ▶ Reevaluate actual pavement needs (runways, taxiways, aprons).
 - ▶ Encourage sponsors to pool nonprimary entitlements 4 years prior for major projects.
 - ▶ Defer new construction as much as possible.
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Planning needs to take place now before pavements get to the “edge of the waterfall”