

Wyoming Priority Rating Model for Project Evaluation



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Revised

Priority Rating Model for Airport Project Evaluation

**Provided by the
Aeronautics Division of the Wyoming Department of
Transportation**

**At the request of the
Wyoming Aeronautics Commission**

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Population of Airport Service Areas

**Wyoming Aeronautics Commission
Mission:**

“To Enhance the Economic Well-Being and Quality of Life in Wyoming by Working With Public and Private Partners to Produce a Safe and Efficient Aviation System.”

Statement of Intent

The Wyoming Aeronautics Commission, by authorization of Wyoming Statute, 10-3-201:

“May designate the airports to be built and maintained with the assistance of state or federal funds and is the sole authority to determine the disbursement of funds for the state’s airports.”

Furthermore, as stated in Wyoming Statute, 10-3-402:

“Expenditure of state funds shall be made under the discretion of the commission.”

Therefore, the Wyoming Aeronautics Commission is responsible for dispersing state funds for airport improvements.

Since only a limited amount of state funding exists for airport improvements, decisions to approve funding of projects must be made carefully. Therefore, the Commission has designated the priority rating system as a tool to maximize the use of state resources.

In February 2003, the Wyoming Aeronautics Commission approved the creation of a taskforce to update the priority rating model. The taskforce consisted of two Commissioners, two Aeronautics Division staff, two commercial service airport managers, two general aviation airport managers, and two airport managers from non-federally funded airports. In addition, two alternates were chosen to substitute for airport managers unable to attend the meetings.

The taskforce designated the purpose of the priority rating system:

“The purpose of the priority rating system is to rank projects for planning, budgeting, and granting by utilizing objective information to make subjective decisions considering the collective needs of the state’s aviation system.”

The taskforce decided the best way to maximize funds was to match the objectives of the model with the objectives of the Commission, while being cognizant of what was best for the state aviation system as a whole. As a result, the taskforce reached some conclusions:

- Projects involving federal funds should be a very high priority;**
- Safety and security projects are important;**

- **Some components of an airport should have precedence over others. For example, a primary runway construction project should be given priority over a similar apron construction project;**
- **Projects which have special needs require different consideration;**
- **Size and activity levels at airports are not the most important factors when making funding decisions;**
- **The public investment in facilities should be secured by promoting airport land use protections and pavement maintenance programs; and,**
- **Specific airport history factors should be included as a consideration:**
 - **Airport's past project history with WYDOT Aeronautics Division**
 - **Commercial airports have a larger impact on Wyoming than general aviation airports, and therefore should be given a slightly higher priority; and**
 - **If basic ground transportation is provided at the airport.**

The priority rating model systematically ranks the projects based on these priorities for the Aeronautics Commission, who then use the model as a tool to assist with project funding decisions.

For the model to be a credible and valuable tool, project evaluations must be fair and consistent. To ensure the model maintains effectiveness, it will be periodically assessed and updated. In addition, the taskforce will meet annually to re-evaluate the model.

The priority rating model assists the Wyoming Aeronautics Commission with very difficult airport improvement funding decisions. Therefore, the model is an essential instrument for analyzing numerous factors of airport improvement projects. Combining all the variables into a simple rating allows the Aeronautics Commissioners an efficient means to compare needs and make strategic decisions.

Priority Rating Model for Project Evaluation

The Wyoming Aeronautics Commission designates the priority rating system as a major tool for airport project funding decisions. Since the amount of available airport improvement funding is limited, the Commission must make difficult decisions when approving the budget. The priority rating model alleviates many dilemmas by focusing on factors that were identified by the Aeronautics Commission, the Aeronautics Division, and the state's public airports as important for prioritizing projects.

Realizing that not all factors can be taken into account by the model, the priority rating model taskforce determined the model should be used as a tool, and not as the only deciding factor. Therefore, the Aeronautics Commission takes the priority rating model under specific consideration when making funding decisions, but reserves the authority to make appropriate subjective decisions when special circumstances arise.

The priority rating model uses a simplistic matrix structure to determine the rating. The matrix configuration allows the Commission to view the project, the score in each category, and the final rating (please see figure 1 on page 8). The projects are analyzed in seven different weighted categories:

<u>Category</u>	<u>Weight</u>
1. Type of Federal Funding	6
2. Purpose	5
3. Component	4
4. Special Needs	3
5. Airport Protection	2
6. Airport History	1
7. Airport Usage	1

A project's evaluation in each category is multiplied by the assigned weight and added together. Projects with the largest number receive the highest priority.

Formula For Wyoming Priority Rating Model

f = Federal Funding	p = Purpose
c = Component	s = Special Needs
a = Airport Protection	h = Airport History
u = Airport Usage	

$$\text{Project Priority Rating} = 6f + 5p + 4c + 3s + 2a + 1h + 1u$$

Figure 1. Sample of Priority Rating Model Matrix

<h1>Sample</h1>			FEDERAL FUNDING	PURPOSE	COMPONENT	SPECIAL NEEDS	AIRPORT PROTECTION	AIRPORT HISTORY	AIRPORT USAGE	TOTAL
			6	5	4	3	2	1	1	
AIRPORT	PROJECT	WEIGHTING FACTOR →								
Evanston	Improve R/W 5/23 Safety Area, PH IIIB	Points (0 - 4)	3	4	4	4	3	4	2	
		Points x Weighting Factor	18	20	16	12	6	4	2	78
Torrington	Rehab R/W 10/28 Lights	Points (0 - 4)	1	4	4	0	0	4	2	
		Points x Weighting Factor	6	20	16	0	0	4	2	48
Sheridan	Restripe R/W 14/32 and 5/23	Points (0 - 4)	0	3	4	0	3	4	3	
		Points x Weighting Factor	0	15	16	0	6	4	3	44
Sheridan	Fog Seal/Crack Seal R/W 14/32	Points (0 - 4)	0	3	4	0	3	4	3	
		Points x Weighting Factor	0	15	16	0	6	4	3	44
Gillette	Rehab Electrical Vault	Points (0 - 4)	1	3	2	0	3	4	3	
		Points x Weighting Factor	6	15	8	0	6	4	3	42
Gillette	Install Electric Security Gate, S. Ramp	Points (0 - 4)	0	4	1	0	3	4	3	
		Points x Weighting Factor	0	20	4	0	6	4	3	37
Casper	Acquire Security Equipment	Points (0 - 4)	0	4	1	0	2	4	4	
		Points x Weighting Factor	0	20	4	0	4	4	4	36
Casper	ARFF Training	Points (0 - 4)	0	4	1	0	2	4	4	
		Points x Weighting Factor	0	20	4	0	4	4	4	36
Big Piney	Apron Expansion	Points (0 - 4)	1	3	2	0	0	4	2	
		Points x Weighting Factor	6	15	8	0	0	4	2	35
Dubois	Master Plan Update	Points (0 - 4)	1	2	1	0	3	4	2	
		Points x Weighting Factor	6	10	4	0	6	4	2	32
Greybull	Acquire Private Land	Points (0 - 4)	1	3	1	0	1	3	2	
		Points x Weighting Factor	6	15	4	0	2	3	2	32
Shoshoni	Install Utilities	Points (0 - 4)	0	1	2	3	0	4	1	
		Points x Weighting Factor	0	5	8	9	0	4	1	27
Rock Springs	Airport Marketing	Points (0 - 4)	0	1	1	0	4	4	3	
		Points x Weighting Factor	0	5	4	0	8	4	3	24
Cheyenne	Purchase New Airfield Mower	Points (0 - 4)	0	1	1	0	1	4	4	
		Points x Weighting Factor	0	5	4	0	2	4	4	19
Hulett	Terminal	Points (0 - 4)	0	0	2	1	0	1	1	
		Points x Weighting Factor	0	0	8	3	0	1	1	13
Maximum Points Possible			24	20	16	12	8	4	4	88

Type of Federal Funding (Weight of 6)

The type of federal funding category receives a weight of 6, and therefore is the most important individual category in the priority rating model. Federal funds provide the majority of financial assistance to airport sponsors for airport improvement projects. Federal funding is out-of-state funding for in-state projects and should be matched. The number of points awarded in this category is by type of federal funding:

- 4 = Congressional Allocation (place named funding)**
- 3 = Discretionary Funding**
- 2 = State Apportionment Funding**
- 1 = Entitlement Funding**
- 0 = No Federal Funds**

Congressional allocation funding is given priority over all other federally funded projects due to its extreme rarity. Discretionary funding is also difficult for an airport to obtain because the airports within the FAA region compete for funding based on federal priorities. State apportionment funding is an annual lump sum that is assigned to each state for general aviation (GA) airports; the state's 23 GA airports compete for these funds. Lastly, entitlement funding is guaranteed to all airports in the federal NPIAS (National Plan of Integrated Airport Systems) plan. Entitlement funding is non-competitive, and therefore assigned one point.

The federal funding category is issued a weight of 6, thus an airport's project can receive between 0 – 24 points, depending on the type of federal participation.

Any project that receives multiple types of federal funding is evaluated by the type of funding that receives the most points.

Purpose of Project (Weight of 5)

The purpose category divides a project into 5 distinct purposes:

- 4 = Safety and Security**
- 3 = Maintenance, Design, and Standards**
- 2 = Planning and Capacity**

1 = Economic, Facilities, Equipment (that is not safety or security), and Utilities
0 = Other

Safety and security are the most important project purposes. Safety and security projects include many different types of projects:

- **Severe pavement deterioration that impairs the safe operation of aircraft**
- **New lighting**
- **Snow and ice control**
- **Aircraft Rescue and Fire Fighting (ARFF) equipment and training**
- **Traffic and wind direction indicators**
- **Airfield security such as fencing and signage**
- **Wildlife hazard management**
- **Hazard removal/markings**

In addition, safety and security includes items that cannot be accommodated by any other operational procedures to achieve or maintain an acceptable level of safety or security. The Aeronautics Division also maintains the right to declare any project as safety or security. If the project's safety or security purposes are not evident, the airport sponsor should submit documentation supporting this claim.

Maintenance, design, and standards are all significant types of projects. Not only do these projects commonly receive federal funds, but most importantly they are also essential projects that accomplish the airport's main objective—to facilitate the operation of aircraft. Standards projects are intended to accomplish recommended airport design standards based on the current design category of an existing airport.

Capacity issues are those items that improve an airport for the primary purpose of accommodating more passengers, cargo, aircraft operations, or based aircraft. For example, an expansion project that increases pavement strength or lengthens the runway would be categorized under capacity.

Airport Layout Plans, Master Plans, Environmental Assessments, and Noise Studies are all examples of planning projects. Capacity and planning projects receive 2 purpose points.

Economic, equipment, and utility projects receive 1 purpose point. The purpose of these projects is seen with less significance. Examples of these projects are tow behind brooms, marketing, mowers, and AWOS.

A project is considered "other" if it is not identified on the list as any specific purpose. Initially, some projects may not appear to have a purpose that is listed, but the reason for the project should identify its correlating purpose.

Project Component (Weight of 4)

Maintaining and improving some parts of an airport is more imperative than others. Therefore, project component is included in the priority rating model. The project component gives preference to runway and taxiway projects:

- 4 = Primary Runway or Taxiway**
- 3 = Secondary Runway or Taxiway**
- 2 = Aprons, Ramps, and Structures**
- 1 = Landside and Other**

"Other" components are those that are not identified on the list as a specific item. For example, an Airport Layout Plan or equipment purchase would be considered "other".

Special Needs (Weight of 3)

The taskforce recognized some projects possess special needs and therefore designed a category to account for these uncommon factors:

- 4 = Phased Project**
- 3 = Non-Federally Eligible Airport**
- 2 = Unfunded Federally Mandated Project**
- 1 = Previously Delayed Project**

The funding of phased projects is extremely important. If a multi-year project was in the middle of completion, but the following year's phase was not funded, the work that had already taken place may have to be completed again, causing the Commission to unnecessarily spend funds on the same project again.

Only construction projects that are Phase II or later are considered phased projects. Projects that are in the Phase I and Design stages do not receive priority rating points for being phased since the urgency of these projects is not dependent on work that was previously completed.

Airports that are not eligible for federal funding are given extra points, since they are severely limited in ability to fund large, essential projects. Airports in the Wyoming State Aviation System, which are non-NPIAS (National Plan of Integrated Airport Systems) airports, belong in this category.

Sometimes the federal government mandates projects, but federal funding to implement these changes is often unavailable:

- **Americans with Disabilities Act (ADA) compliance**
- **Security improvements**
- **Aircraft Rescue and Fire Fighting (ARFF) training**

Previously delayed projects are given a small amount of points in special needs. A previously delayed project means that a project was programmed by WYDOT but delayed due to funding constraints. If a project has been delayed multiple years, the project still only receives 1 point.

If a project meets more than one special need, then the project will be evaluated by the special need with the highest points.

Airport Protection (Weight of 2)

Implementing land use protection is a means of safeguarding an airport from development of non-compatible land uses. Non-compatible land uses around an airport can diminish the utility of the airport, reduce safety for both aircraft in the air and persons on the ground, reduce the value of the public's investment in the airport, and potentially risk both state and FAA funding for the airport.

Note: To obtain the maximum points, all supporting documents must be submitted to the WYDOT Aeronautics Division. The total of all points will be rounded to the nearest whole number.

1. Land – 4 points possible

- a. **Airport owns all land in Runway Protection Zones (RPZ) in fee title. 4 Points**

- If ownership is less than 100%, the number of points shall be apportioned at the same ratio as the number of acres owned relative to the total acreage in the RPZs.
- b. Airport owns avigation easements in all of the RPZs which limit the height of vegetation and structures and limit allowable land uses within the boundaries of the easements.
3 Points
 - If ownership is less than 100%, the number of points shall be apportioned at the same ratio as the number of acres covered by easement(s) relative to the total acreage in the RPZs.

Documents to submit: Copies of deeds identifying the individual parcels owned in fee title and copies of easements identifying boundaries of easements and restrictions contained.

2. Airspace – 2.5 points possible

- a. Airport owner has adopted a zoning ordinance approved by WYDOT Aeronautics based on the most recent approved Airport Master Plan or Airport Layout Plan (ALP) and restricts the use of property within an ultimate Airport Influence Area (AIA). 2.5 Points
 - If the zoning ordinance covers a smaller area, the number of points shall be proportionately reduced based on acreage.
- b. Airport owner has adopted a zoning ordinance based on the most recent approved Airport Master Plan or ALP and limits the height of vegetation and structures under the approach surfaces defined in FAA Part 77, Objects Affecting Navigable Airspace, for a minimum of one half nautical mile and up to 6 nautical miles from the ultimate end of each runway. 2 Points

Documents to submit: Copy of the adopted zoning ordinance.

3. Noise – 0.5 points possible

Airport owner has purchased all property within the boundary of the 65DNL noise contour. 0.5 Points

Documents to submit: Copy of the adopted zoning ordinance and a map showing the 65DNL contour and property boundaries for parcels within the contour.

4. Plan Integration – 0.5 points possible

The airport zoning ordinance is incorporated into a city and/or county comprehensive land use plan and the zoning ordinance is administered by the same entity that administers the comprehensive land use plan. The zoning administrator shall

provide an opportunity for the airport board/authority to review and comment on all variance requests for properties located within and up to one half mile beyond the boundary of the AIA.

0.5 Points

Documents to submit: Copy of the adopted city/county comprehensive land use plan with an integrated airport zoning ordinance and a copy of a resolution assigning responsibility for administering the airport zoning ordinance to the city/county zoning administrator.

5. Disclosure Statement – 0.5 points possible

City/County has passed a resolution and adopted an ordinance requiring that a Real Estate Disclosure Statement be provided to the purchaser of any property within the boundary of the AIA.

0.5 Points

Sample wording for an ordinance requiring a Real Estate Disclosure Statement:

Owners of real property located within the Airport Influence Area as identified by the (airport name) Zoning Ordinance shall provide the following notice to each prospective buyer and, unless such notice is previously recorded, shall cause such notice to be recorded with the clerk of (name of county):

Sample Real Estate Disclosure Statement:

The property known as (legal description and address) is located within the Airport Influence Area identified in the (name of airport) Zoning Ordinance and may be subject to aircraft overflights both now and in the future. Airport operations are expected to increase and the fleet mix of aircraft is subject to change as industry and community needs change.

Documents to submit: Copies of the resolution, adopted ordinance, and Real Estate Disclosure Statement.

Definitions:

Runway Protection Zone (RPZ) – The RPZ is a trapezoidal area centered on the extended runway centerline. Dimensions of the RPZ for each runway end are shown on the approved Airport Master Plan or ALP for the airport.

Airport Influence Area (AIA) – All lands within one half mile of the airport boundary and all lands under the approach surfaces defined in FAA Part 77, Objects Affecting Navigable Airspace, and as shown on an approved Airport Master Plan or ALP. The approach surfaces shall not extend more than 6 nautical miles from the end of the runway.

65 DNL Contour – The contour is a continuous line enclosing an area having a 24 hour average sound level of 65 decibels or greater, measured in accordance with FAA Part 150, Airport Noise Compatibility Planning.

Airport History (Weight of 1)

Airport history assesses three main areas: past projects with the state, airport maintenance, and ground transportation availability at the airport.

Past state projects status examines the timely submittal of documents, the sponsor’s performance on past projects, communication with the Aeronautics Division, and the airport’s response to informational requests.

The airport can receive two points if the airport has implemented a WYDOT approved maintenance plan and the airport’s past activities reflect a “maintain before build” strategy. As WYDOT is still in the process of implementing a maintenance program, airports currently receive these points as long as they are maintaining their airport. Also, an airport’s federally approved maintenance program may be utilized if it aligns with basic state goals.

The priority rating model encourages airports to provide basic ground transportation from the airport to town, a service that is vital. Therefore, if ground transportation—a courtesy car, rental car, or taxi—is available, an airport will receive one point.

The three criteria are added together to determine the total airport history points:

- 4 = 4 points**
- 3 = 3 points**
- 2 = 2 points**
- 1 = 1 point**
- 0 = 0 points**

Although the weight of this category is only 1, an airport can still receive 4 total points, which are significant. The intention of this category is to encourage airports to maintain their airport, to sustain a professional working relationship with the Aeronautics Commission and Division, and to provide basic ground transportation for airport users.

Airport Usage (Weight of 1)

Airport usage assumes larger airports with a substantial amount of activity benefit the most citizens. Therefore, this category prioritizes projects based on the activity of an airport. Airports are evaluated using population of service area for general aviation (GA) airports and annual commercial enplanements for commercial airports:

4 = Commercial airport with more than 15,000 annual enplanements

3 = Commercial airport with less than 15,000 annual enplanements

2 = GA airport with more than 2,500 population in service area

1 = GA airport with less than 2,500 population in service area

The supporting populations of GA airports were determined by using the activities of an airport to calculate the size of the service area and its corresponding population.

The information that is applied to airport usage is intended to be as objective as possible. Therefore, the information used to determine the supporting population of the GA airports is taken from the U.S. Census. Commercial enplanement reporting is provided by the Federal Aviation Administration (FAA).

Aeronautics Division staff will recalculate airport usage determinations annually.

Project Requests That Include More Than One Project

Sometimes the Wyoming Aeronautics Division receives project requests that list multiple projects in the scope. The priority rating model solves this conundrum by separating the projects, determining the individual priority rating, and then averaging the projects. The average is not weighted.

Priority Rating Model Project Evaluation Process

WYDOT Aeronautics Division staff will evaluate projects as the Wyoming Aviation Capital Improvement Plan (WACIP) is updated with additional projects.

APPENDIX

Rationale for Formulating a New Priority Rating Model

The Aeronautics Commission determined the priority rating model should be updated or replaced as the former priority model lost credibility among its many users. The former model was replaced for many reasons:

- **Parts of the model were complicated and difficult for airport managers to interpret;**
- **The model was designed to take into account the Federal Aviation Administration (FAA) priority rating system. However, the FAA's system changed, and was not being used in the calculations for Wyoming's priority model;**
- **Based aircraft were used as one of the measuring tools for airport usage, and many felt based aircraft was not an accurate tool to depict the utilization or impact of an airport;**
- **Airports were assigned points for the number of services provided, airport attendance, adequate airport maintenance (adequate was not defined), and availability of local funding. Many felt some or all of these factors should not be considered.**
- **The former model provided a category for project types. However, not all project types were taken into account and the list needed to be updated.**

Evolution of the Priority Rating Model Update

As stated earlier, the Aeronautics Commission approved funding for a taskforce to update the priority rating model. The taskforce's first step to creating a new priority rating model was to draft a purpose. Then, the team discussed the deficiencies and potential solutions of the current model.

After much discussion about the mechanics of the future model, the taskforce decided the old model should be replaced with a new one. Many preferred the matrix structure of calculating the priority rating, which several states have implemented for priority rating systems. Therefore, the taskforce elected for the matrix.

Next, the taskforce prepared an extensive list of potential priorities, and studied the priority rating systems from numerous states around the country. The information derived from these items assisted in the development of the categories for the new model.

Lastly, the Aeronautics Division simulated and ranked all 2004 programmed projects using the new model. These results were compared to all 2004 programmed projects using the existing priority rating model. After intense evaluation by the taskforce, minor modifications were made to correct some deficiencies of the model.

Population of Airport Service Areas

Airport	Population Served By Airport
Afton	3,828
Big Piney	3,150
Buffalo	6,095
Casper	78,585
Cheyenne	87,503
Cody	34,862
Cokeville	879
Cowley	3,638
Dixon	561
Douglas	7,915
Dubois	4,454
Evanston	15,365
Ft. Bridger	4,377
Gillette	41,153
Glendo	585
Green River	N/A
Greybull	5,438
Guernsey	2,357
Hulett	5,004
Jackson	26,532

Airport	Population Served By Airport
Kemmerer	8,690
Lander	16,578
Laramie	32,798
Lusk	2,197
Medicine Bow	1,680
Newcastle	6,644
Pine Bluffs	2,910
Pinedale	3,947
Powell	9,511
Rawlins	10,571
Riverton	43,260
Rock Springs	37,613
Saratoga	2,790
Sheridan	32,655
Shoshoni	1,508
Thermopolis	4,537
Torrington	10,918
Upton	1,142
Wheatland	6,108
Worland	12,826

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