



# Introduction

## ***WHAT IS A MASTER PLAN?***

The Federal Aviation Administration (FAA) recommends that airports update their long-term planning documents every seven to 10 years, or as necessary, to address local changes at the airport. The most recent master plan for Powell Municipal Airport (POY) was completed in 2010 and the airport layout plan (ALP) was approved in 2011. The City of Powell, the sponsor of the airport, received a grant from the FAA and the Wyoming Department of Transportation Aeronautics Division (WYDOT-Aeronautics) to update this airport master plan.

The city is responsible for funding capital improvements at the airport and obtaining FAA Airport Improvement Program (AIP) and WYDOT-Aeronautics development grants. In addition, the city oversees facility enhancements and infrastructure development conducted by private entities at the airport. The master plan provides guidance for future development and justification for projects for which the airport may receive funding through an updated capital improvement program (CIP) by demonstrating the future investment required by the city, the FAA, and WYDOT.

The airport master plan follows a systematic approach outlined by the FAA to identify airport needs in advance of the actual need for improvements to ensure the city can coordinate environmental reviews, project approvals, design, financing, and construction to minimize the negative effects of maintaining and operating inadequate or insufficient facilities. An important outcome of the master plan process is a recommended development plan, which reserves sufficient areas for future facility needs. Such planning will protect development areas and ensure they will be readily available when required to meet future needs. The intended outcome of this study is a detailed on-airport land use concept that outlines specific uses for all areas of airport property, including strategies for revenue enhancement.

The preparation of this study is evidence that the city recognizes the importance of the airport to the surrounding region and the associated challenges inherent in providing for its unique operating and improvement needs. The cost of maintaining an airport is an investment that yields impressive benefits to the local community.

With a sound and realistic master plan, the airport can maintain its role as an important link to the regional, state, and national air transportation systems. Moreover, the plan will aid in supporting decisions for directing limited and valuable city resources for future airport development. Ultimately, the continued investments in the airport will allow the city to reap the economic benefits generated by historical investments.

#### AN AIRPORT MASTER PLAN IS...

- ✓ A comprehensive, long-range study of the airport, including all air and landside components, that describes plans to meet FAA safety standards and future aviation demand.
- ✓ Required by the FAA to be conducted every 7-10 years to ensure plans are up to date and reflect current conditions and FAA regulations.
- ✓ Funded 90% by the FAA's AIP. The remaining 10% is split between the State of Wyoming (6%) and the City of Powell (4%).
- ✓ A local document that will ultimately be presented for approval from the City of Powell. The FAA approves only two elements of the master plan: the aviation demand forecasts and the airport layout plan (ALP) drawing set.
- ✓ An opportunity for airport stakeholders and the public to engage with airport staff on issues related to the airport, its current and future operations, and environmental and socioeconomic impacts. Two public information workshops were conducted during the master plan process to facilitate this public outreach effort.

#### AN AIRPORT MASTER PLAN IS *NOT*...

- ✗ A guarantee that the airport will proceed with any planned projects. Master plans are guides that help airport staff plan for future development; however, the need/demand for certain projects might never materialize.
- ✗ A guarantee that the City of Powell, WYDOT-Aeronautics, or the FAA will fund any planned projects. Project funding is considered on a case-by-case basis and requires appropriate need and demand. Certain projects may require the completion of a benefit-cost analysis.
- ✗ A binding or static plan. Elements of the master plan may be updated to reflect changes in aviation activity at the airport, economic conditions of the region, or the goals of the City of Powell.
- ✗ Environmental clearance for specific projects. Most planned projects will require a separate environmental study prior to construction.

### WHO IS PREPARING THE MASTER PLAN?

The city has contracted with Coffman Associates, Inc. to undertake the airport master plan. Coffman Associates is an airport planning and consulting firm that specializes in master planning and environmental studies. Coffman Associates will lead the planning team, with support from the following firms:

- M.C. Schaff & Associates – engineering support
- Martinez Geospatial – aerial photography, ground survey, and geographic information system (GIS) products to meet FAA 5300-18B requirements for Airports GIS data submittal

The airport master plan is being prepared in accordance with FAA requirements, including Advisory Circular (AC) 150/5300-13B, *Airport Design*, and AC 150/5070-6B, *Airport Master Plans* (as amended). The plan is closely coordinated with other planning studies relevant to the area and with aviation plans developed by the FAA and WYDOT. The plan is also coordinated with the City of Powell, as well as other local and regional agencies, as appropriate.

## GOALS AND OBJECTIVES

The primary goal of this master plan is to develop and maintain a financially feasible long-term development program that will satisfy aviation demand of the region; be compatible with community development, other transportation modes, and the environment; and enhance employment and revenue for the local area. Accomplishing this goal requires an evaluation of the existing airport to decide what actions should be taken to maintain a safe, adequate, and reliable facility.

Specific objectives of the study include the following:

- To research and analyze factors likely to influence general aviation demand in the Powell region over the next 20 years. The analysis will lead to the formulation of forecasts of annual aircraft operations and basing demand at Powell Municipal Airport.
- To determine projected needs of airport users for the next 20 years, taking into consideration recent revisions to FAA design standards and the airport's conformance/compliance requirements, global positioning system (GPS) approaches or other new technology, and the impact of general aviation fleet transitions on design standards.
- To analyze the existing airfield system based on FAA design standards. This analysis includes a thorough evaluation of existing primary Runway 13-31 and turf/dirt Runways 17-35 and 3-21, as well as associated taxiway pavement/access. The analysis also takes into consideration previous planning efforts, which included an extension to Runway 13-31, the construction of a new paved crosswind runway, and the ultimate closure of the turf/dirt runways. Finally, the analysis evaluates the potential need for the airport to meet a higher level of safety standards in accordance with runway design code C/D-II, as has been previously planned, or if it is more appropriate to plan to a B-II standard.
- To produce accurate base maps of existing and proposed facilities and updated ALP drawings consistent with FAA Standard Operating Procedure (SOP) No. 2.0. This project includes capturing and submitting airport geographical information system (AGIS) data, which is used to supplement existing FAA and WYDOT Aeronautics Division data for ALP preparation.
- To determine existing and ultimate needs for additional aviation business and hangar storage spaces. The analysis factors based aircraft and operational demands to provide a recommendation to the City of Powell for future aviation business and storage hangar development.
- To review existing and future land uses in the vicinity of the airport for incompatibilities with approaches and/or environmental factors (i.e. noise, incompatible land uses, etc.).

- To establish a schedule of development priorities and a program for improvements proposed in the master plan, consistent with FAA and WYDOT Aeronautics Division capital improvement program planning.
- To evaluate the airport's compliance with FAA grant assurances and other relevant and pertinent standards, rules, and/or regulations.

## ***BASELINE ASSUMPTIONS***

A long-range planning study requires several baseline assumptions, which are used throughout this analysis. The baseline assumptions for this study are as follows:

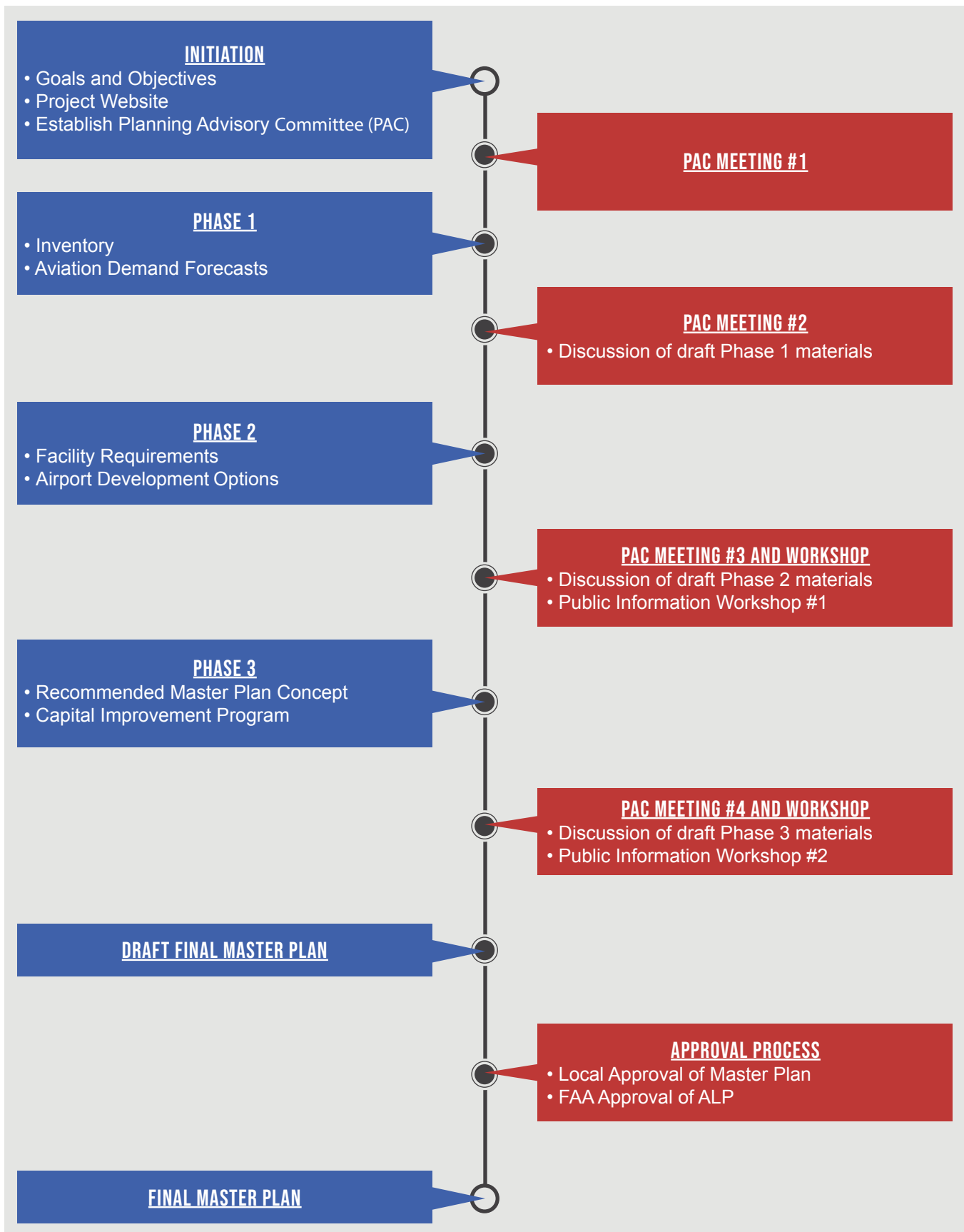
- Powell Municipal Airport will continue to operate as a local general aviation airport through the 20-year planning period.
- The airport will continue to accommodate general aviation tenants, as well as itinerant and/or local aircraft operations by air taxi, general aviation, and military operators.
- The aviation industry will develop through the planning period as projected by the FAA (specifics of projected changes in national aviation industries are described in Chapter Two).
- The socioeconomic characteristics of the region will generally change as forecasted (see Chapter Two).
- A federal and state airport improvement program will be in place through the planning period to assist in funding future capital development needs.

## ***MASTER PLAN ELEMENTS AND PROCESS***

The master plan includes nine elements that are intended to assist in the evaluation of future facility needs and provide the supporting rationale for their implementation. **Exhibit i** provides a graphical depiction of the process involved in the study.

**Element 1 – Study Initiation and Organization** includes the development of the scope of services and schedule, as well as the establishment of a planning advisory committee (PAC). General background information will be established which includes outlining the goals and objectives to be accomplished during the master plan. A project-specific website will also be developed to house draft materials and allow for the receipt of comments.

**Element 2 – Inventory of Existing Conditions** focuses on collecting and assembling relevant data pertaining to the airport and the area it serves. Information on existing facilities and operations is collected. Local economic and demographic data are collected to define the local growth trends that might affect future improvements. Planning studies that may have relevance to the master plan are also collected.



**Element 3 – Aviation Demand Forecasts** examines the potential aviation demand at the airport. The analysis utilizes local socioeconomic information and national air transportation trends to quantify the levels of aviation activity that can reasonably be expected to occur at Powell Municipal Airport over a 20-year period. An existing and ultimate critical aircraft are also established to determine future planning design standards, based on AC 150/5000-17, *Critical Aircraft and Regular Use Determination*. The results of this effort are used to determine the types and sizes of facilities that will be required to meet the projected aviation demand at the airport through the planning period. This element is one of two elements that are submitted to the FAA for approval.

**Element 4 – Facility Requirements** determines the available capacities of various facilities at the airport, whether they conform with FAA standards, and what facility updates or new facilities will be needed to comply with FAA requirements and/or the projected 20-year demand.

**Element 5 – Airport Development Options** considers a variety of solutions to accommodate projected airside and landside facility needs through the long-term planning period. An analysis is completed to identify the strengths and weaknesses of each proposed development option, with the intention of determining a single direction for development.

**Element 6 – Recommended Master Plan Concept** provides both a graphic and narrative description of the recommended plan for the use, development, and operation of the airport. This plan forms the basis of the ALP drawing set. Existing zoning ordinances and other land use management documentation will be reviewed and summarized, and land use management techniques in the airport vicinity will be outlined.

**Element 7 – Financial Management and Development Program** includes a 20-year capital improvement program (CIP). The CIP is established to define the schedules, costs, and funding sources for the recommended development projects.

**Element 8 – Geographical Information System (GIS) and Data Collection Services** consists of data collection, which includes high resolution aerial photography, high precision surveys of safety critical airport data (runway ends, NAVAIDS, airport elevation, airspace, obstructions, and others), and additional feature collection. The primary objective is to provide a digital dataset of the airport and surrounding environment to be used for ALP development and submission into the FAA's Airport Data and Information Portal (ADIP).

**Element 9 – Final Reports and Approvals** provides documents that depict the findings of the study effort and present the study and its recommendations to appropriate local organizations. The final document incorporates the revisions to previous working papers prepared under earlier elements into a usable master plan document.

## **COORDINATION AND OUTREACH**

The Powell Municipal Airport master plan is of interest to many within the local community and region, including local citizens, local businesses, community organizations, city officials, airport users/tenants, and aviation organizations. As a component of the regional, state, and national aviation systems, the airport is of importance to both state and federal agencies responsible for overseeing the air transportation system.



To assist in the development of the master plan, a PAC was established to act in an advisory role during preparation of the study. Committee members are scheduled to meet four times at designated points during the study to review study materials and provide comments to help ensure the development of a realistic, viable plan.

Draft working paper materials will be prepared at various milestones in the planning process. The working paper process allows for timely input and review during each step in the master plan to ensure all issues are fully addressed as the recommended program develops.

Two open-house public information workshops will also be conducted as part of the study coordination and outreach efforts. Workshops are designed to allow all interested persons to become informed and provide input concerning the master plan process. Notices of meeting times and locations will be advertised through local media outlets and all draft reports, meeting notices, and materials will be made available to the public on the project website at <https://powell.airportstudy.net>.

## SWOT ANALYSIS

A SWOT analysis is a strategic business planning technique used to identify **Strengths**, **Weaknesses**, **Opportunities**, and **Threats** associated with an action or plan. The SWOT analysis involves identifying an action, objective, or element, and then identifying the internal and external forces that positively and negatively impact that action, objective, or element in a given environment. A SWOT analysis was conducted with the PAC in October 2023. A summary of this exercise and discussion is included below.

### SWOT DEFINITIONS

This SWOT analysis groups information into two categories:

- **Internal** – attributes of the airport and market area that may be considered strengths or weaknesses for the action, objective, or element
- **External** – attributes of the aviation industry that may pose opportunities or threats for the action, objective, or element

The SWOT further categorizes information into one of the following:

- **Strengths** – internal attributes of the airport that are helpful to achieving the action, objective, or element
- **Weaknesses** – internal attributes of the airport that are harmful to achieving the action, objective, or element
- **Opportunities** – external attributes of the aviation industry that are helpful to achieving the action, objective, or element
- **Threats** – external attributes of the aviation industry that are harmful to achieving the action, objective, or element

It is important to note that some attributes may fit into multiple categories. An attribute might be considered both a strength and a weakness, depending on the perspective of the person or entity describing it. **Exhibit ii** summarizes the SWOT exercise that was conducted with the PAC.

<p><b>S</b></p> <p><b>STRENGTHS</b></p>	<ul style="list-style-type: none"> <li>Primary Runway 13-31 is 6,200' long and 100' wide and capable of accommodating a wide range of GA aircraft, including jets</li> <li>Airfield pavement and facilities are in good condition</li> <li>Uncomplicated arrival and departure in terms of terrain (i.e., no mountains in immediate vicinity)</li> <li>Full parallel taxiway supporting Runway 13-31</li> <li>Runway 13-31 width and separation from parallel taxiway exceed current design standards</li> <li>POY is situated well outside of town, so land use compatibility adjacent to the airport is a non-issue</li> <li>The airport encompasses more than 800 acres, so there is room to develop</li> <li>FAA-approved Unmanned Aircraft System (UAS) Flight Operations Area for UAS research and development (R&amp;D) and Flight Training</li> <li>FAA-Approved aerobatics box for aerobatic training, demonstration, and competition</li> <li>Airport supports both manned and unmanned activity</li> </ul>
<p><b>W</b></p> <p><b>WEAKNESSES</b></p>	<ul style="list-style-type: none"> <li>The distance from town can be viewed as a weakness in terms of access and lack of utility infrastructure</li> <li>The crosswind runway is unpaved</li> <li>Congress has not increased the amount of funding available through the FAA Reauthorization Act in more than 20 years, while inflation has significantly increased.</li> <li>Local funding availability may be limited</li> </ul>
<p><b>O</b></p> <p><b>OPPORTUNITIES</b></p>	<ul style="list-style-type: none"> <li>POY has potential to serve air cargo</li> <li>Hangar occupancy stands at 100% and there is demand for more hangars</li> <li>Areas in which POY can grow include: Advanced Air Mobility (AAM), sustainable aviation fuels, aircraft maintenance facilities, flight training, increased medical services</li> <li>Powell has a community college; opportunity exists to expand manned and unmanned flight training in conjunction with the college</li> <li>City-owned, non-aviation airport land may be available for an industrial park</li> <li>Commerical/Department of Defense (DoD) manned and unmanned flight training and UAS R&amp;D</li> </ul>
<p><b>T</b></p> <p><b>THREATS</b></p>	<ul style="list-style-type: none"> <li>AAM has many unknowns regarding its integration into existing operational practices, including the electric need to support it</li> <li>Congress has not increased the amount of funding available through the FAA Reauthorization Act in more than 20 years, while inflation has significantly increased.</li> <li>Unknowns associated with sustainable aviation fuels and impacts to existing infrastructure and distribution</li> <li>Shortage of pilots and aircraft mechanics</li> </ul>