



CITY OF
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ALTO**

City Council Staff Report

From: City Manager

Report Type: STUDY SESSION

Lead Department: Public Works

Meeting Date: September 16, 2024

Report #:2408-3410

TITLE

Update and Receive Council Input on Airport Long-Range Plan Project

RECOMMENDATION

Staff recommends that Council receive an update on the Airport Long-Range Planning process and provide input to support development of a preferred alternative.

EXECUTIVE SUMMARY

Since March 2023, staff has been engaged in developing the Long-Range Facilities and Sustainability Plan (Long-Range Plan) for the Palo Alto Airport. This initiative aims to align Federal Aviation Administration (FAA) criteria with other City of Palo Alto planning documents, including the 2030 Comprehensive Plan, Baylands Master Plan, and Sustainability and Climate Action Plan. The project is also intended to prepare the airport for an expected transition to electrified aircraft, taking advantage of opportunities for solar electricity generation and underground infrastructure already installed during the multi-year apron reconstruction project. This project is federally funded by the FAA and adheres to federal guidelines for updating the Airport Layout Plan (ALP) and overall airport planning. The ALP is the guiding document that depicts future projects at the airport, and is an FAA required document.

The project began with a comprehensive assessment of the current airport conditions and facilities. This was followed by forecasting airport operations to project demand over the next 20 years and identifying the critical aircraft for the airport. Based on these forecasts and the critical aircraft, potential facility improvements were developed based on FAA criteria. The potential improvements include extending the runway length from 2,443 feet to 3,500 feet. Additional FAA criteria highlighted a deficiency in runway width by 5 feet and a shortfall in runway-to-taxiway separation by 100 feet. Although the FAA criteria suggest considering a second runway due to current operational levels, the City of Palo Alto's 2030 Comprehensive Plan restricts the airport to a single runway, and thus, a second runway was not evaluated in this project.

Five alternatives were developed with the FAA criteria and potential improvements in mind. While the City is not obligated to adopt a plan that meets the FAA criteria, the Long-Range Plan process is required to develop and consider alternatives that include them. The alternatives are intended to facilitate conversations, illustrate various impacts, and gather community and Council input.

As part of the alternative development, staff reviewed the possibility of solar and the accommodation of eVTOL (electric vertical takeoff and landing) aircraft to support the transition to alternative fuels and a more sustainable future of aviation. Airport and Utilities Department staff are currently working to evaluate solar and microgrid technology on the airfield.

Staff does not have a preferred alternative at this time. One will be developed after Council input from this Study Session. The preferred alternative will be presented at additional public meetings and presentations to neighboring jurisdictions before coming back to City Council for acceptance. Environmental review will follow.

Community engagement and public information sharing included five public meetings, a dedicated project website, opt in to an email list sharing regular updates, and an online survey. Input was solicited at the public meetings and through email. A 94-octane unleaded fuel option has been available at the airport since January 2024, but not all aircraft based at the airport can use it. Since that time, staff has been working on a plan to promote that fuel and safely transition to a 100-octane unleaded fuel as soon as possible.

Staff seeks input from the Council on the proposed alternatives, next steps, and other elements before developing a preferred alternative. Specific questions of interest include Councilmembers' support or lack thereof for extending the runway, implementing runway safety improvements, relocating the terminal building, providing a vertiport location to support future eVTOL operations, and transitioning the airport to a generator of renewable energy to support an electric future.

BACKGROUND

On March 6, 2023, staff conducted a study session¹ with the City Council that provided a comprehensive airport update. This update included information on the Long-Range Plan project that was beginning. Council provided feedback on topics including the airport's voluntary noise abatement program, opportunities with solar and microgrid, potential release of airport land for parkland dedication, and community benefits of the airport.

¹ City Council, May 17, 2023; Agenda Item #4; SR#2302-0948, <https://www.cityofpaloalto.org/files/assets/public/v/1/public-works/palo-alto-airport/information-study-report-airport-march-2023-1.pdf>

To date, the Long-Range Plan project team conducted five public meetings. The Long-Range Plan project web page² includes summaries and presentations from each of the meetings.

The first public meeting on May 17, 2023 at the Palo Alto Art Center introduced the project goals and steps. The meeting gathered feedback through comment cards and an online form. Key topics included the need for an Instrument Flight Rule (IFR) holding spot, potential expansion or extension of the runway, and diverse land uses like homes on the hangars. Attendees also requested better public access for community events, improved noise abatement, and addressing sea level rise. Concerns were raised about maintenance and funding. Suggestions also included integrating conference spaces with the terminal, ensuring availability of alternative fuels, and maintaining airport operations.

The second public meeting was held on August 24, 2023 in East Palo Alto at Bloomhouse. Due to limited participation, the same information was shared at additional meetings in Menlo Park and East Palo Alto on September 21, 2023. The second meeting provided an overview of existing conditions and inventory at the airport, the forecast of future operations, and the selection of the critical aircraft. An interactive exercise was included, asking participants to consider aspirational news headlines for the airport in 10 years. Proposed headlines included “Commercial Service is Brought to PAO”, “Airport Closes and Baylands Expands to Address Climate Change and Sea Level Rise”, “PAO Is a Hub for Innovation Aviation” and “Welcome Community – It’s a Public Airport.” Key topics from the meeting included East Palo Alto’s inclusion in the Long-Range Plan, environmental concerns such as pollution and noise, the relationship between the airport and the Baylands, and proposals for new hangars and extended runways.

On October 18, 2023, the project team hosted the third public meeting at the Baylands Café to outline the FAA criteria and facility needs. Attendees participated in a visioning activity where they picked their top two sustainability priorities for the airport's long-term goals. Key priorities identified included electrification, noise reduction, a new terminal, remodeled hangars, potential runway extension, amenities like a restaurant and observation deck, solar panels, and addressing climate change and sea level rise. Public questions addressed topics such as the future of Reid-Hillview Airport, project funding, runway safety margins, and the role of the City of Palo Alto in the process. Concerns and suggestions from attendees included the need for more vehicle parking, alternative fuel options, wider roads, a new terminal with community amenities, solar implementation, and the potential impact of Long-Range Plan projects on noise and public engagement.

On November 14, 2023, the project team conducted a sustainability charrette with stakeholders of the airport including community members surrounding the airport. The charrette was designed to allow a broad range of airport stakeholders an opportunity to provide input and feedback on airport sustainability objectives and visioning to date, as well as

² Long-Range Plan web page, <https://www.cityofpaloalto.org/Departments/Public-Works/Palo-Alto-Airport/Palo-Alto-Airport-Long-Range-Facilities-Sustainability-Plan-LRFSP>

brainstorm new sustainability goals and possible strategies for implementation that are consistent with the airport's vision and long-term planning. Participants were provided in advance with a briefing document and some key questions for discussion at the event. Key components included a flooding simulation, a brief overview of aviation sustainability, a brainstorming exercise, and a roadmap of next steps. Participants engaged in interactive breakout sessions where they were guided through the four-pronged Economic, Operational, Natural Resources, and Social (EONS) approach to aviation sustainability. Participants were asked to brainstorm sustainability goals for each category of EONS and identify actionable steps to achieve each goal. The workshop outcomes³ were shared with stakeholders and participants in a summary document via email.

The fourth public meeting was held at the Palo Alto Art Center on February 21, 2024. Initial alternatives were introduced with various runway lengths demonstrating how the airport could potentially meet FAA criteria. The meeting also introduced the Vision, Mission, and Goals of the airport and the results of the sustainability charrette. Discussion focused on the benefits of the airport to nearby communities, such as emergency services and economic impacts, and concerns about the critical aircraft definition and its implications for airfield operations. Public meeting comments covered a range of issues including noise control, preferred runway options, environmental documentation, and considerations for helicopter and eVTOL (electric vertical takeoff and landing vehicle) aircraft. Suggestions included banning high-noise private aircraft, expediting the shift to unleaded fuels, and integrating rotorcraft and eVTOL planning. Participants also proposed improvements like better parking solutions, facilities for technical support, and increased hangar space, alongside a more comprehensive approach to noise mitigation and environmental impact.

On June 20, 2024, the project team conducted the fifth public meeting to share updated alternatives based on comments received at the fourth meeting. Attendees voiced a variety of strong concerns and questions. Key issues included a need for better maps highlighting the airport's proximity to East Palo Alto, and dissatisfaction that local concerns, such as historic sites and pollution from leaded fuel, were not fully addressed. Some residents questioned the rationale behind proposed levee plans and the FAA and National Environmental Protection Act (NEPA) processes, expressing mistrust and confusion. There was a call for clearer explanations, particularly about flight operations, the difference between vertiports and heliports, and alternative plans that avoid major runway changes. Additionally, attendees expressed concerns about increased aircraft operations, noise impacts, and the airport's effects on neighboring communities that do not have jurisdiction over airport decisions. Requests included better communication overall, including through social media, additional meetings in East Palo Alto, and more accessible information about environmental and noise impacts. There were also

³ Sustainability Charrette Summary, https://www.cityofpaloalto.org/files/assets/public/v/1/public-works/palo-alto-airport/lrfsp/pao-sustainability-charrette_whatweheardsummary_nov2023_final_1.pdf

specific comments about vertiport placements, potential noise from new aircraft types, and the need for cost transparency and environmental considerations.

ANALYSIS

The Long-Range Plan process for the Palo Alto Airport has the following key objectives:

- Assess the airport's issues, opportunities, and constraints.
- Evaluate the effects of recent national and local aviation trends.
- Determine the capacity of existing airport infrastructure.
- Identify the need for new improvements.
- Estimate costs and explore potential funding sources.
- Develop a timeline for implementing proposed projects.
- Ensure compliance with federal, state, and local regulations.

When completed, the Long-Range Plan will include a detailed report on current and anticipated conditions, an Airport Layout Plan (ALP), and a schedule for prioritizing improvements and securing funding. The FAA requires the City to keep the ALP up to date at all times, and a current ALP is one of the requirements for grant funding. Any City-approved projects will need to be depicted on the ALP and receive FAA approval from the standpoint of safety, utility, and efficiency of the airport.

An economic impact analysis was conducted to identify the economic impacts of aviation activity on the airport and surrounding community. Activity by aviation and non-aviation employers on the airport creates jobs, payrolls, and revenues. PAO serves as a dynamic hub for a range of valuable services and contributions that extend beyond numerical metrics. These include emergency services, medical transportation, education, and air mobility. Analysis completed demonstrated a total economic benefit of 176 jobs supported, and an annual output of \$37.8 million. Direct on-airport economic benefits resulted from the activity of 12 businesses, City of Palo Alto staff, FAA Air Traffic Control Tower staff, and capital improvement projects. Direct on-airport output was determined to be \$27.7 million, with support for 129 jobs.

This initial phase of long-range planning for Palo Alto Airport focuses on gathering and organizing information about the current state of the airport and its surrounding community. It includes an overview of existing airport facilities, the surrounding airspace environment, and the airport's role within the broader aviation network. Additionally, it provides a comprehensive inventory of airside, landside, and support facilities, as well as details on airport access, wayfinding, and parking. The information collected during this initial phase serves as the foundation for further analysis and planning.

This initial phase considered other City plans such as the Baylands Master Plan, the 2014 Airport Layout Plan, the City of Palo Alto Comprehensive Plan 2030, the draft Baylands

Comprehensive Conservation Plan, the Sustainability and Climate Action Plan, and the 2006 Palo Alto Airport Master Plan developed by the County of Santa Clara.

Key issues and needs were identified through the inventory of existing conditions and discussions with airport staff, users, stakeholders, and the general public, and are summarized below:

- Sea level rise and levee obstructions may require a shift in the ultimate runway configuration.
- Analyze locations to site permanent helipad/vertiport.
- Demand for additional hangar space
- The possibility of the closure of nearby Reid-Hillview Airport may impact the demand and capacity for airside infrastructure at PAO.
- Need for a more permanent and user-friendly airport terminal.
- Repairs or upgrades to Building 17 to make it more attractive to tenants, possibly incorporated with new terminal facility.
- Create dedicated and permanent space for the Civil Air Patrol, Palo Alto Airport Association, and CalDART.
- Provide additional parking at the airport, as it is currently near capacity.
- Use existing airfield electrical infrastructure to support solar panels.
- Assess opportunities for Electric Vehicle (EV) and eVTOL charging stations.
- Confirm existing easements in place at the airport.
- Enhance airport's community relations and better establish its role as a community resource/amenity.
- Continue the growth and branding of the airport as a hub to EV/tech companies.
- As per individual contracts, all airport tenants are billed for utilities by the City of Palo Alto, through the airport, which charges each tenant a specific percentage. Meter all facilities so that tenants will be charged for exact usage.
- A fire rescue boat and electric truck with emergency response capabilities will better enhance the safety of airport fire rescue operations.
- Provide more wayfinding signage for the airport; particularly, co-locate airport signage with existing municipal signage for Baylands Golf Links.
- Incorporate bicycle racks for tenants.
- Integrate facilities with the adjacent Baylands Golf Links and Baylands Nature Preserve, both of which are also city-owned.
- Aging equipment in the electrical vault may need replacement.

Forecast

The Forecast projects the future aviation demand for the airport through 2042, based on standards set by the FAA. It is an evaluation of historical trends in activity, industry trends, and local socioeconomic trends to understand what the demand on the airport could look like in 20

years. The forecasted activity is not intended to suggest a specific growth target or activity level for the airport, but to serve as a guide for future planning.

The forecast estimates a 1.13% annual increase in the number of based aircraft at the airport over the 20-year planning period. With 330 based aircraft in 2022, this would rise to 413 by 2042, though still below the historical peak of 527 aircraft in 2007.

For airport operations, the forecast predicts a 1.07% annual increase during the first decade (2022-2032) and a 1.5% annual increase during the subsequent decade (2032-2042). This would result in operation levels reaching 181,995 by 2032 and 220,372 by 2042. The ten-year intervals are designed to account for potential future technologies that may utilize the airport, such as eVTOL companies, and to allow the airport flexibility in adjusting its plans for the second decade. The growth rate aligns with national trends at towered airports, and planning for this projection will enable the airport to accommodate the expected growth. Even with this projected growth, the forecasted levels would remain below the historical peak of 232,789 operations in 1992.

As part of the forecast, the critical aircraft of the airport was determined to be the Pilatus PC-12, which is a single engine turboprop aircraft. The airport's critical aircraft, or design aircraft, represents the largest or most demanding aircraft currently using the airport facilities regularly for at least 500 operations annually. The Pilatus PC-12 had 842 IFR operations in 2022. There were more flights from the PC-12 under Visual Flight Rules (VFR), but those operations are not currently tracked. The airport has entered into a contract to use flight tracking software that will allow tracking of all flights. The critical aircraft influences key design aspects, including the sizing of runways and taxiways, as well as the placement of aircraft parking areas, hangar facilities, and protected airspace surfaces.

Potential Improvements Based on FAA Criteria

The Potential improvements were developed by analyzing the forecast, critical aircraft, and existing inventory to determine the facility and infrastructure improvements that should be made at the airport. This process involves evaluating the potential improvements across several major components, including airfield, airspace, landside facilities, general aviation, airport support facilities and equipment, utilities and infrastructure, and environmental impacts, shaping the alternatives development process by addressing the anticipated demands for each of these key areas.

The review shows that the airport is currently operating at 71% of capacity and is expected to reach 96% of its capacity by 2042. Normally, the FAA would encourage an additional runway at those levels, but due to geographic constraints and the 2030 Comprehensive Plan the project team did not evaluate alternatives for a second runway.

Based on the criteria applicable to the critical aircraft, it was determined that that runway was 5 feet deficient in width and 1,057 feet deficient in length. Additionally, the runway safety area

currently does not meet the 300-foot recommendation at the end of each runway. The runway to taxiway separation is also deficient by 100 feet.

The airport has a demand for additional hangars, vehicle parking spaces, and a larger terminal. The airport should also work to integrate itself with the [City of Palo Alto Bicycle and Pedestrian Transportation Plan](#)⁴.

Alternatives

Staff developed five alternatives to demonstrate how the airport could incorporate the potential improvements based the FAA criteria for critical aircraft and address future demand as projected by the forecast. Other City plans such as the 2030 Comprehensive Plan and Sustainability and Climate Action Plan were also incorporated, and potential Santa Clara County Water District (Valley Water) and United States Army Corps of Engineers (USACE) projects were considered.

The 2030 Comprehensive Plan states that the airport should be limited to one runway and only minor expansion should be considered to meet Federal and State airport design and safety standards. None of the alternatives evaluated an additional runway, but longer expansions were evaluated to show how the airport could meet FAA safety standards. The Plan also advises relocating the terminal away from the runway clear zone. Alternatives 2 through 4 relocate the terminal away from the runway protection zone. The 2030 Comprehensive Plan and the S/CAP include protection for sea level rise. Alternatives 2, 4, and 5 raise the runway to the new levee height to protect the City from sea level rise. The alternatives also attempt to meet the potential future demand of eVTOL aircraft by identifying potential locations for a vertiport, positioning the airport to transition to alternative fuels when those aircraft become operational.

To support a more sustainable future of aviation, the alternatives review the potential location for solar systems at the airport. Staff is exploring the possibility of a microgrid at the airport with a backup power system to keep essential services available during power outages. The alternatives also explore the potential location of vertiports to support the transition to eVTOL aircraft when available. Staff has met with several companies interested in partnering with the City to introduce eVTOL aircraft at the airport. Other companies have approached the airport in support of eVTOL operations by providing sustainable alternative fuels like charging stations and possibly hydrogen. These companies have identified the Bay Area, and specifically the airport as an ideal location for eVTOL operations in the future.

The alternatives were developed to meet the needs of the airport today and over the next 20 years. The range of alternatives shows various levels of balancing FAA criteria with airport and

⁴ CoPA Bicycle + Pedestrian Transportation Plan, https://www.cityofpaloalto.org/files/assets/public/v/1/transportation/projects/bicycle-pedestrian-transportation-plan_adopted-july-2012.pdf

City goals, environmental constraints, and implementation feasibility. Not every alternative will address all FAA criteria, but some show the 3,500 foot runway length resulting from the criteria. The alternatives also look to plan for increased operations, whether they be eVTOL or at the runway, a dual taxiway system to increase efficiency at the runway, and to locate a new terminal near the Air Traffic Control Tower to handle transient aircraft in a more efficient manner. The alternatives were developed with FAA criteria in mind. However, those criteria are not requirements. The alternatives are intended to assist with Council decision-making, promote community engagement, and gather input from users and the public, as well as to illustrate various impacts. The airport does not have a preferred alternative at this time.

Alternative 1 (Exhibit A) is also known as the no-action or no-build alternative, which is required for evaluation purposes. This alternative assumes no improvements are made to the airport other than what is required for maintenance and ongoing operations. This alternative would not address any standard or safety issues on the airfield, does not address sea level rise or support sustainable operations, does not provide additional aircraft storage facilities, or provide dedicated facilities for eVTOL activity. There would also be no increase in construction or operational impacts to environmental assets and costs would be limited to maintaining existing facilities.

Alternative 2 (Exhibit B) shifts the runway northeast to allow for the FAA-recommended separation between the runway and parallel taxiway and allows for a second parallel taxiway to decrease congestion. It also increases the runway length from the current 2,443 feet to 2,600 feet by displacing thresholds and uses the follow-on taxiway as additional runway pavement, requiring approximately 3.5 acres of fill (excluding proposed levee alignment from the Army Corps 2021 study) within the lagoon area adjacent to the duck pond to meet FAA grading standards. The runway would be raised to integrate into a new levee system as previously proposed by the Army Corps of Engineers in 2021 (shown in green on the drawing). This alternative does not provide the full runway length resulting from the FAA criteria, but does help to address sea level rise, shifts the runway farther from surrounding neighborhoods, provides an area designated for eVTOL activity, and increases aircraft storage capacity.

Alternative 3 (Exhibit C) includes a 3,500 foot runway with a parallel taxiway on each side that has been shifted southwest to avoid impacts to the lagoon area off the RW 31 end, adjacent to the Duck Pond. However, this alternative requires acquisition of land from the off-airport golf course. While this alternative provides the runway length resulting from the FAA criteria, it would not integrate with the proposed levee system, shifts the runway approaches more over surrounding neighborhoods, divides the tie-down apron increasing taxi times and airfield inefficiencies, and would most likely require additional obstruction mitigation. The alternative does include a proposed area for eVTOL activity, an increase in aircraft storage capacity, and maintaining an adequate number of tie-downs.

Alternative 4 (Exhibit D) includes a 3,500 foot runway with a parallel taxiway on each side, shifted northeast of the existing runway. It would impact the lagoon area adjacent to the Duck Pond and other facilities in that portion of the Baylands. This alternative would require

approximately 10.5 acres of fill (excluding proposed levee alignment from the Army Corps 2021 study) in the lagoon area. The runway would be elevated to integrate into the levee system and the shift would provide the recommended separation between the runway and existing parallel taxiway. This alternative has the greatest impact on the lagoon area near the Duck Pond, but shifts the runway farther from surrounding neighborhoods, provides an area designated for eVTOL activity, and increases aircraft storage capacity.

Similar to Alternative 2, Alternative 5 (Exhibit E) shifts the runway northeast to allow for the recommended separation between the runway and parallel taxiway and allows for a second parallel taxilane to decrease congestion. It increases the runway length from 2,443 feet to 3,000 feet. This alternative would require approximately 6.5 acres of fill (excluding proposed levee alignment from the Army Corps 2021 study) in the lagoon area adjacent to the Duck Pond. The runway would be raised to integrate into a new levee system. This alternative helps to address sea level rise, shifts the runway farther from surrounding neighborhoods, provides an area designated for eVTOL activity, and increases aircraft storage capacity.

The airport has received numerous comments expressing concern that FAA criteria used in the development of planning alternatives may require the City to make changes like lengthening the existing runway, and that the runway alternatives include filling in the Duck Pond.

The alternatives were developed with FAA criteria in mind. However, those criteria are not requirements. The alternatives are intended to assist with Council decision-making and community engagement/input and to illustrate various impacts. The airport does not have a preferred alternative. Each alternative has differing conditions to consider.

None of the runway alternatives being evaluated include filling in the Duck Pond. Alternatives 2 – 5 included the levee location considered by Valley Water and the USACE as part of the South San Francisco Bay Shoreline Phase II Investigations. However, in April 2024, the USACE concluded that there was no [federal interest⁵ in the project](#). No levee alignment option has been advanced by the Council to date. This was included on the airport alternatives exhibits to demonstrate potential impacts considering the various adjacent projects in the vicinity. Some alternatives do include possible impacts to the area adjacent to the duck pond.

During the study session on March 6, 2023, there was a question regarding land identified in the 2006 Santa Clara County PAO Master Plan as being designated for a second runway. There was a question about whether that land could be relinquished because a second runway is no longer being considered. Since 2006, FAA standards have changed and the runway to taxiway separation is currently deficient by 100 feet. The alternatives identify a shift of the runway to the east to meet the current FAA standards. The land east of the runway would most likely be

⁵ USACE South San Francisco Bay Shoreline Phase II Investigations, <https://www.spn.usace.army.mil/Missions/Projects-and-Programs/Current-Projects/SOUTH-SAN-FRANCISCO-BAY-SHORELINE-PHASE-II/>

needed for the runway safety areas. This will be evaluated further as a preferred alternative is developed.

Online Survey Results & Other Community Input

Staff conducted a survey⁶ to gather public input on various alternatives for the airport. The survey was open from June 10, 2024 through August 10, 2024, and received 1,523 responses. It asked respondents to rank five alternatives, select a preferred runway configuration, and choose a preferred vertiport location. Additionally, participants were invited to comment on their rankings and selections and rank five focus areas for the Long-Range Plan.

The alternatives listed in priority order:

1. Alternative 1 – No Action
2. Alternative 2 – 2600 foot Runway with displaced thresholds and Northeastern shift
3. Alternative 4 – 3500 foot Runway with Northeastern shift
4. Alternative 5 – 3000 foot Runway with Northeastern shift
5. Alternative 3 – 3500 foot Runway with Southwestern shift

However, when looking at respondents first choice of alternatives the alternatives are ranked according to the table below. Of the 1,523 respondents, 1,328 provided answers, while 195 abstained from this question. Among those who ranked the alternatives, 43.3% chose Alternative 1 – No Action as their preferred option, while Alternative 4 – 3,500 FT Runway with Northeastern Shift was the second most preferred with 22.1%.

Table 1. Survey Responses to Answer 1			
Title	Rank 1	%	Key Findings and Comments
Alternative 1: No Action	660 (1 st)	43.3%	<ul style="list-style-type: none"> • Strong preference for preserving the Baylands and Duck Pond. • Significant opposition to airport expansion due to environmental and community concerns. • Calls for minimal changes or alternative community uses for the airport land. • Concerns about increased noise from more operations were prevalent.
Alternative 2: 2600 foot Runway	174 (2 nd)	11.4%	<ul style="list-style-type: none"> • Concerns about the environmental impact of shifting the runway.

⁶ 2024 Long Range Planning Survey Results, https://www.cityofpaloalto.org/files/assets/public/v/1/public-works/palo-alto-airport/lrfsp/palo-alto-airport-survey-results_1.pdf

			<ul style="list-style-type: none"> • Seen as a compromise that improves safety while keeping the airport small. • Worries that a longer runway could attract larger or corporate aircraft. • Increased noise pollution from larger aircraft was a concern.
Alternative 3: 3500 foot Runway SW shift	62 (5 th)	4.1%	<ul style="list-style-type: none"> • Emphasis on protecting the Baylands and Duck Pond. • Provides a balance between meeting FAA safety recommendations and minimizing environmental impact. • Criticized for complexity and potential disruption to the apron.
Alternative 4: 3500 foot Runway NE shift	337 (3 rd)	22.1%	<ul style="list-style-type: none"> • Preference for meeting FAA recommendations and modernizing the airport. • Support for readiness for future electric vertical takeoff and landing (eVTOL) operations.
Alternative 5: 3000 foot Runway NE shift	95 (4 th)	6.2%	<ul style="list-style-type: none"> • Seen as a balance between FAA recommendations and maintaining the current aircraft fleet. • Concerns that a 3,500 foot runway might attract larger jets. • Emphasis on balancing airport needs with environmental and community concerns.
No Answer	195	12.8%	<ul style="list-style-type: none"> • Strong preference for preserving the Baylands and Duck Pond. • Strong preference for closing the airport.
Total	1,523		

When asked which alternative contained their preferred runway length and location without consideration for the rest of the elements, 51.2% of the responders chose Alternative 1 – No Action as their preferred alternative, and Alternative 4 – 3500 foot runway with northeastern shift was the second preferred alternative with 23.8%.

When asked what other improvements should be considered or shown in the alternatives, the following is a partial list of comments received:

- Eliminate lead fuel
- Consider large solar panel installation over apron
- Additional noise abatement measures
- More room for the vertiport area
- Additional aircraft hangars
- Aircraft maintenance facilities
- Charging infrastructure for vehicles and aircraft
- Consider space for hydrogen refueling facility
- Identify power requirements for electric vehicles and aircraft
- Improve security and fencing
- Seaplane dock or ferry dock in the Baylands
- Additional community/viewing areas associated with the airport
- Incorporate a fire station
- Install an LPV (localizer performance with vertical guidance) approach
- Better transit connections to the airport
- Increase vehicle parking

Of the five sustainability and resilience focus areas presented for consideration, Maintaining Harmony with the Baylands received the most number 1 (or most important) votes at 51.4% with Operational Excellence (31.2%) and Our Communities and Our People (24.9%) getting the second and third most first-place votes, respectively.

Note: Values do not add to 100% due to some respondents providing the same ranking to more than one focus area.

Petition

On July 23, 2024, a petition was started on Change.org to save the Palo Alto Baylands from Airport Expansion. The petition calls for the protection of the Palo Alto Baylands and duck ponds and strongly opposes any runway extension.

Unleaded Fuel

The airport is committed to reducing the use of leaded aviation fuel (avgas) in a safe and efficient manner, while adhering to federal regulations that prohibit restrictions on the sale of leaded fuel. This is governed by both FAA Grant Assurances and the FAA Reauthorization Act of 2024. Despite these constraints, PAO continues to explore alternative strategies to minimize the reliance on leaded fuels.

On May 16, 2024, the FAA Reauthorization Act⁷ was signed into law which required the sale of 100LL until December 31, 2030 or until a replacement is widely available. The FAA Reauthorization Act places a \$5,000 fine per day on airports that restrict the sale of 100LL.

As part of the EAGLE program, the FAA has outlined a safe transition to unleaded avgas, with a key component ensuring that 100LL is available for aircraft throughout the transition. The FAA has outlined 2 [pathways](#)⁸ for fuels to receive FAA authorization. The first path is through the Supplemental Type Certificate (STC) process. The STC process does not necessarily need industry standards through the American Society for Testing and Materials (ASTM). There can be a significant cost when pilots apply for the STC through the FAA that includes the application cost from the fuel manufacturer which can range from \$100 to \$600.

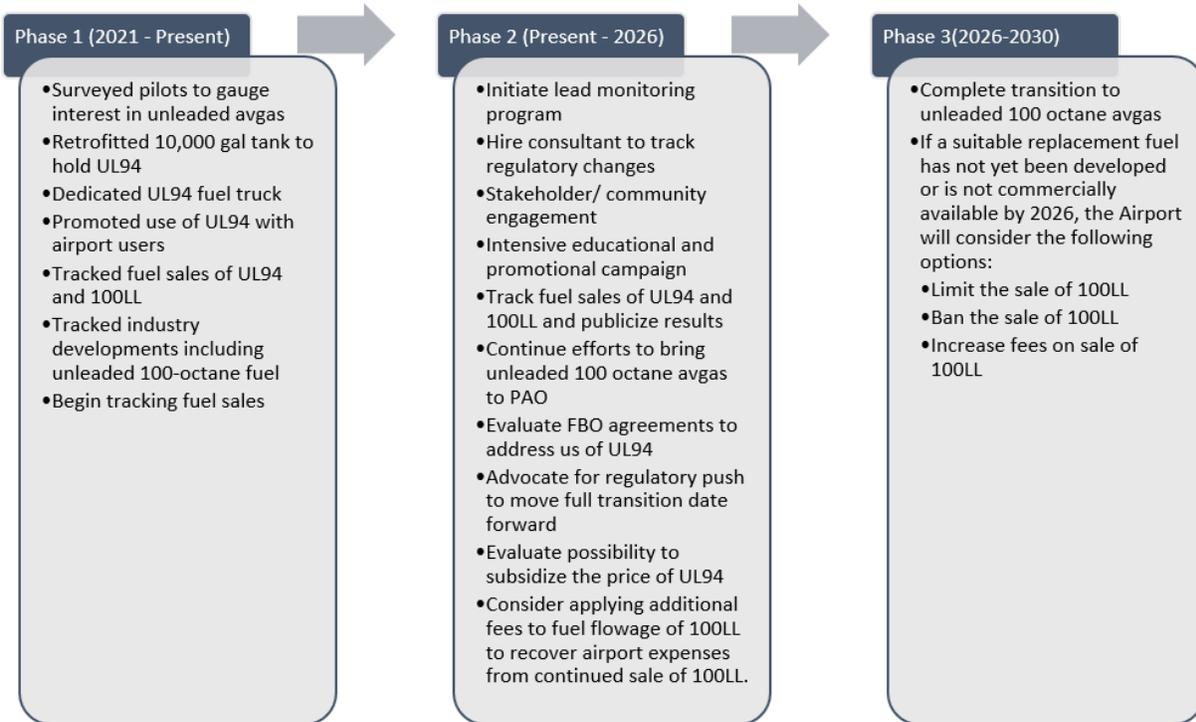
The second process is the through FAA Fleet Authorization, established by Congress. This process, initiated through the FAA and participating OEMs, is designed to meet the PAFI requirements for fuel. Any fuel that receives fleet authorization must also have the ASTM standards. Additionally, there would be no application cost as there is with the STC process.

Currently there are two approved unleaded avgas products approved: 94UL and G100UL. Both have received approval through the STC process. Airport staff regularly communicates with the two FBOs on the field, and requests that they bring a 100-octane unleaded fuel when they are able to purchase it.

The airport has been developing a plan to transition away from unleaded fuel. Below is a draft graphic that depicts the airport's current path to phasing out leaded fuel. An important next step is to evaluate the ability to initiate a Request for Proposals for an FBO that would be required to sell an unleaded fuel option. The current FBO leases expire on June 30, 2024, and a new contract could be entered into with a company to provide an unleaded fuel option as well as the necessary infrastructure for eVTOL aircraft.

⁷ S. 1939 – FAA Reauthorization Act of 2024, <https://www.congress.gov/bill/118th-congress/senate-bill/1939/text/is>

⁸ FAA Authorization for New Fuel Pathways, <https://flyeagle.org/fuel-developers/>



Next Steps

Following the study session, the project team will develop a preferred alternative based on the collected feedback and information received to date. A subsequent public meeting will be scheduled to present this draft preferred alternative and gain community input. An additional survey may be conducted to gather further input on the preferred alternative.

The project team will also prepare informational reports for neighboring City Councils to solicit their review and feedback. Revisions to the preferred alternative will be made in response to community and City Council input before the final proposal is presented to the Palo Alto City Council for acceptance. After the acceptance of the preferred plan, the CEQA and NEPA review will be conducted for the preferred alternative. Once the environmental review has been completed the final plan will be brought to Council for their approval.

In parallel, airport staff have submitted a grant application for the environmental review and design process for a new terminal building, in alignment with the City Comprehensive Plan 2030. This new terminal would be relocated to the east side of the airport to reduce taxiing distance for transient pilots, thereby saving fuel. An FAA grant application has been submitted under the Bipartisan Infrastructure Law to support this project, which is not typically funded by the FAA.

Additionally, airport and Utilities Department are assessing the feasibility, size, and potential funding sources for a solar installation with battery backup and microgrid capabilities. This

initiative aims to power the airport, support the Regional Water Quality Control Plant, and provide electric vehicle charging stations.

FISCAL/RESOURCE IMPACT

This is an informational report, and there is no fiscal impact at this time. Investment in the airport will require additional funding though the amount and source are to be determined based on the direction and design.

STAKEHOLDER ENGAGEMENT

Community and stakeholder input has been vital throughout the project. Airport staff have hosted 5 public meetings to gather input from the community. A survey of the alternatives was advertised and open from June 10, 2024, to August 10, 2024 to gather community interest in 5 alternatives for the airport. After this study session, it is anticipated that the project team will host another public meeting to gather input on a preferred alternative. Also, informational reports will be provided to neighboring City Councils for their input and feedback.

ENVIRONMENTAL REVIEW

Environmental review will begin after the City Council has accepted the draft plan and preferred alternative. Acceptance of the draft plan does not represent final approval of the document, and staff will bring the final plan to City Council for their approval after CEQA and NEPA review is completed.

ATTACHMENTS

- Exhibit A: Alternative 1
- Exhibit B: Alternative 2
- Exhibit C: Alternative 3
- Exhibit D: Alternative 4
- Exhibit E: Alternative 5

APPROVED BY:

Brad Eggleston, Director Public Works/City Engineer