



Oregon Aviation Industries



January 30, 2019

Oregon Department of Aviation
3040 25th Street SE
Salem, OR 97302-1125

Attn: Heather Peck, ODA Planning and Projects Manager
Heather.Peck@aviation.state.or.us
ASAP@aviation.state.or.us

ROAR – Response to Request for Application (RFA)

Oregon Aviation Industries (ORAVI) is pleased to respond to the Oregon Department of Aviation's Rural Oregon Aviation Relief Program (ROAR) Request For Application (RFA).

ORAVI is requesting a ROAR grant of \$500,000 to design and implement a statewide rural air service system. Our grant proposal documents are attached for your review, approval and acceptance. They are also online for your convenience at www.oravi.org/ROAR

ROAR documents

Request for Application (RFA) Response - Grant Proposal
Business Plan
Safety Plan
Operations Plan
Marketing Plan
Air Service Details

Participating Airport Partnership Consent Letters

Astoria Regional Airport **KAST**
Burns Municipal Airport **KBNO**
Hood River Jernstedt Airfield **4S2**
The Dalles Columbia Gorge Regional **KDLS**
John Day Grant County Regional Airport **KGCD**
Prineville Airport **S39**

Supporting documents

ORAVI Rural Air Committee Whitepaper

Rural Air Strawman

Rural Air sample website straw model

We look forward to discussing our proposal with the Department of Aviation and we are excited about stepping up to develop a rural air plan that will serve our entire state.

Please contact us to discuss the next steps. We look forward to working with you.

Sincerely,



Gale 'Jake' Jacobs

Executive Director

Oregon Aviation Industries

ROAR RFA Committee members:

Mark Gardiner, ORAVI Board of Directors Chairman

gardiner@avrotec.com 503-781-1299 M

Aron Faegre, ORAVI Founding Chair and Treasurer

faegre@earthlink.net 503-880-1469 M

Jake Jacobs, ORAVI Executive Director

jake@oravi.org 541-406-0711 M



Oregon Aviation Industries



ROAR grant request for \$500,000 to implement rural air on-demand service in Oregon

I. Proposal Summary

Oregon Aviation Industries requests \$500,000 ROAR funding to organize the capability to provide on-demand and scheduled air service to rural airports across Oregon. This would be an FAA Part 135 commercial air service utilizing existing commercial operators. An online scheduling system would be developed. Travel Bank subsidies funded by ROAR per seat flown would enable affordable pricing.

II. Organization Description and History

Oregon Aviation Industries (ORAVI) is a non-profit aviation association that has been actively focused on general commercial aviation economic development in Oregon for the last five years. We have one hundred members and are managed by a board of directors composed of aviation professionals.

Oregon Aviation Industries is well known throughout the aviation industry in Oregon. Since 2013 we have been conducting annual aviation summits, holding networking meetings at airport facilities across the State and supporting positive aviation legislation. ORAVI is the aviation cluster group of the Oregon Business Council and is the operational arm for aviation economic development. Prior to 2013 the group operated for several years as an unofficial aviation support group that connected via infrequent meetings and email communications. In 2013 a board of directors was created, an executive director was contracted and ORAVI began operation as a going concern; beneficial to our members, airports, aviation businesses, rural communities and the State of Oregon.

ORAVI annual summits attract legislators, educators, aviation officials, economic development managers, airports and aviation companies. These events have been held at locations across the state and typically draw an attendance of 100+ aviation professionals. The summit agendas include speakers, keynote topics and panels of experts to update the participants on aviation trends, issues and opportunities. On a quarterly basis, ORAVI conducts aviation related meetings at ORAVI member facilities. These events include a speaker or panel on a current topic, a tour of the facility, business networking and synergistic connections.

ORAVI is a member of many economic development organizations and regularly participates in events held by PNDC, OEN, OEDA, GTA, AUVSI, Oregon Business Plan, OAMA and OTF. We are recognized as the aviation economic development voice in the State. We provide monthly reports on the operation of the organization and publish them online at www.oravi.org/MonthlyReports

In 2015 we formed an aviation fuel tax committee, presented testimony to Oregon legislative committees and met with legislators around the state to promote the passage of HB2075 that is bringing in funding to the State Department of Aviation to support airport infrastructure, emergency preparedness and rural air service. By increasing the aviation fuel tax by 2 cents per gallon, the bill is providing \$20 million dollars over 6 years to move aviation forward in Oregon and we expect to see it extended.

ORAVI formed a Rural Air Committee in 2016 and, with a wide range of inputs, developed a rural air whitepaper and strawman which formed the basis of a new and innovative way to address rural air transportation. Our organization has worked closely with the Oregon Department of Aviation for more than 5 years and is well connected with airports, aircraft operators, aviation businesses, local communities and Oregon legislators. We believe that we are in an excellent position to organize resources that exist in the State of Oregon to enable air service to rural communities, using an entirely new and sustainable approach.

ORAVI Organization

ORAVI is registered with the State of Oregon as a non-profit beneficial organization and with the US Internal Revenue System as a non-profit 501(C)(6) organization. We are governed by a board of directors and operate according to our published bylaws.

Oregon Aviation Industry Officers and Board of Director members:

Chairman - Mark Gardiner - Financial consultant, former Oregon Aviation Board Chair

Treasurer & Founding Chairman - Aron Faegre, President, Aron Faegre Architects

Vice President - Bruce Bennett, President & Chief Pilot, Aurora Aviation.

Secretary - Brian Prange - Vice President, TacAero / HoodTech

Karl Baldessari - Aviation Department Chair, Central Oregon Community College

Jerry Dale – FBO and airport owner, Sportsman Airpark

Ted Millar – President, TLM Holdings LLC and Southend Corporate Airpark

Larry Atree - Aviation Science Chair, Portland Community College

Dave Sliwa – Partner, Capital Synergy Partners and former Insitu Executive

Joe Smith – Attorney, Former Oregon Aviation Board member and former OPA president

Doug Naimo – President, Triggerfinger Software

Bios for our board members are at www.oravi.org/Board/BoardBios

Our membership roster is at www.oravi.org/Members

ORAVI Executive Director Gale 'Jake' Jacobs has served in this position for 5 years and previously served on the ORAVI board of directors. He also serves on the boards of Portland Navy League, AUVSI Cascade and Lake Oswego Rotary and formerly served on the board of Columbia Aviation Association. He is a high tech industry veteran, former director of sales and marketing at Flight Dynamics (now Rockwell Collins) and is a 2800 hour instrument rated pilot. In addition to large company experience he also co-founded two high-tech software companies. ORAVI offices are located in West Linn Oregon, mailing address ORAVI, P.O. 313, Marylhurst, OR 97036. 541-406-0711.

III. Background

There are currently 97 public use airports in Oregon, but scheduled air service is available at only 6 of them: PDX, EUG, RDM, MFD, OTH; and a PDT shuttle feeder route to/from PDX. LMT lost scheduled air service and is attempting to restore it. There are more than 4,000 aircraft based in Oregon and many of these are certified for commercial passenger operations.

Oregon's rural communities have been deprived of air service since airline deregulation in 1978 and air travel focus has shifted to hub and spoke systems utilizing large aircraft to a limited number of destinations. We believe that air service to rural Oregon communities is essential for economic development, citizen travel and enhancement of rural airports as local economic engines.

Air travel can play a significant role in helping mitigate the urban | rural divide in Oregon. The internet has improved communications, but in-person meetings are essential to maintain personal, business and government connections and relationships statewide. We are a large state geographically, with very few direct roadway routes due to significant mountainous terrain, rivers and lack of a fast freeway system to outlying rural communities. Road travel requires a full day's travel by road from one side to the other. Air travel can cover the same distances in two hours.

Under a structure that ORAVI will create, a number of commercial general aviation aircraft operating under FAA Part 135 commercial regulations will be deployed to serve some of Oregon's 90 plus public use rural airports. Four elements are required for this to take place. 1. An online system and app for on-demand scheduling. 2. A Provider Pool of qualified aircraft operators. 3. Subsidies per seat flown to keep the price affordable. 4. Cooperating airports and communities.

ORAVI proposes to create a non-profit entity named *Rural Air Oregon*. This entity would organize a number of participating Part 135 operators into a provider pool. An online system would be created to allow a person to request a flight from the pool. This online system would operate in a fashion similar to Uber and Lyft in that available aircraft and destinations would be displayed and booked, and payments would be made online. The program would begin with a

limited number of participating commercial aviation operators and a few rural community airports and expand as the benefits are realized and the demand grows.

The typical Part 135 aircraft would provide room for 3 to 5 passengers and would be capable of flying across the state in less than 2 hours. Flights from the coast or central Oregon to the Valley, would take less than an hour. The subsidized ticket cost per passenger could range in the \$200 to \$500 price range one way.

No TSA is required as the flights will be from non-sterile locations, typically Fixed Base Operators (FBOs) at the airports. FBOs provide lounge facilities, restrooms and waiting areas and are a source of fuel, maintenance and operations for the aircraft. Boarding takes place without delay. In most rural communities, the airport is conveniently located from 2 to 5 miles from the center of town.

There are several on-demand air service operators and associations in the US. www.flyblackbird.com is one example of how this type of system will operate.

Significant new aircraft developments are currently underway worldwide that will include electric aircraft, enhanced avionics, automated controls, improved safety and greatly reduced costs of operation. In 5 to 10 years the deployment of these new aircraft will greatly increase the operational capability and lower the cost of rural air service operations. We need to start now to be ready to take advantage of these new transportation technologies as they become available and rural air service will expand significantly as these advances take place. Early versions of UAS type air vehicles are listed at www.evtol.news/aircraft Technologies that enable these urban-range vehicles will become available in the class of aircraft that is ideally suited for on-demand rural air service. Small, fast, efficient and very low cost of operations. Today's aircraft compared to the next generation aircraft is like comparing a 1970 Buick to a Tesla Model S. And, next generation aircraft are already being announced.

The old fashioned air taxi and commuter models of the past are not feasible. The solution to rural air is NOT the shrinking down of an airline model to a small size. These models have always failed due to very high overhead cost and the use of aircraft that are too large to fit a small community's travel needs. ORAVI believes that a modern on-demand, small aircraft service provided by FAA certified Part 135 pilots and aircraft, with ROAR ticket subsidies would enable ALL rural Oregon communities to take advantage of the speed, safety and efficiency of air travel.

IV. Project Description (Program / Project Narrative)

ORAVI's Rural Air Committee site has initial details which form the background from which to develop the organization and structure to implement rural air service in Oregon. It is attached and also located at www.oravi.org/Rural

The next steps are as follows.

Community Outreach

Led by our executive director and supported by our board and membership, ORAVI will conduct meetings with many rural airports. We have made initial contact with airports at Newport, John Day, Baker City, Burns, Hood River, The Dalles, Prineville, Madras, Bend and Astoria. So far, six airports have provided (attached) written consent to partner with ORAVI:

Astoria Regional Airport KAST
Burns Municipal Airport KBNO,
Hood River Jernstedt Airfield 4S2
John Day Grant County Regional Airport KGCD
Prineville Airport S39
The Dalles Columbia Gorge Regional KDLS

Others are expected to consent to partnering in the immediate future. We will develop a structure that fits their respective communities and each subsequent community that chooses to participate.

We propose that the local communities develop a *Travel Bank* which is seed-funded by ROAR and augmented by local resources. The Travel Bank funding would be used to subsidize the cost per seat flown for air travel. Following communications with the initial set of airport communities we will then connect with a number of additional communities who have airports that meet the criteria of time and distance for air travel vs road travel. These include Roseburg, Brookings, La Grande, Ashland, Lakeview and Joseph. Salem will also be included because government and agency personnel travel to and from the capital on a regular basis.

We will determine which locations would be candidates for scheduled air service and which could support on-demand only. We would partner with 2 to 3 airports initially as we further develop the plan.

This phase is estimated to take 3 months.

FAA Part 135 commercial operator outreach

ORAVI has current connections with FAA Part 135 charter operators at Hillsboro, Baker City, Bend, Aurora and Albany. We will determine their interest in providing on-demand air service with a subsidy per seat flown model that enable profitable operations. We will develop a list of qualified operators who are interested in joining the Provider Pool.

There are more than 15 FAA Part 135 operators in the state, operating more than 25 commercial aircraft that are suitable for rural air service. We will meet with all of them and then make a list of interested participants and available aircraft. These aircraft would be right-sized for rural, with 9 passenger seats or less.

The initial aircraft types would include:

- Twin engine prop: Cheyenne, KingAir, Aero Commander, Baron, Navajo, Cessna 300 and 400.
- Single engine turboprops: Pilatus PC-12, Piper Malibu Meridian, TBM 800, Cessna Caravan 208.
- Single engine 4 and 6 seat piston: Beech A-36, Cherokee 6, Cirrus 22.
- Others that meet FAA Part 135 commercial operational requirements.

Future aircraft would be new generation electric and hybrid/electric. Our plan is to deploy existing aircraft now, build the structure, and focus on new design aircraft long term.

This phase is estimated to take 3 months.

Initial list of Airports and Operators

At the end of 6 months a list of interested airports and interested operators will be established and the resources and capabilities of each will be documented. Criteria will be developed for both airports and operators to qualify for participation in the Rural Air Oregon program.

Identify and document the framework

The framework document will include Initial airports, initial commercial air operators and the required online system and subsidy funding process.

Organizing non-profit corporation *Rural Air Oregon*

Create an organizational document, establish a board of directors and staff. Register the entity with state and federal authorities. Legal assistance will be utilized. This will be a 501(C)(3) organization, capable of receiving donations that will support its operations and provide funding to the master Travel Bank. By establishing the entity as a non-profit, the efforts of the organization can be dedicated to serving the needs of rural air service, versus a profit motivation focus. A manager will be hired to oversee the operation. A technical position to support the online systems will also be staffed.

This phase is estimated to take 3 months

Online scheduling, reservation and payment system

Rural Air Oregon will publish an RFP to select a developer of the online systems. The system specifications will call for the Rural Air Oregon system to be available online via web browser and also as a mobile phone and tablet app. It will operate similar to Uber and Lyft. FAA transparency and disclosure rules will be followed. The system will indicate which aircraft and destinations are available as on-demand or scheduled. The user will check the app to select a date, time and location of departure and destination. The app will indicate time enroute and cost and information about the FBO pickup and delivery location and resources. Once booked, the payment will be processed as soon as the flight is complete. Services such as Flight Aware will be utilized to coordinate departure and arrival times and locations.

A similar online structure is used by an aviation organization named Angel Flight West that utilizes volunteer pilots to transport persons that are in need of non-emergency medical

transportation. Flight requests and mission assignments are handled online. www.AngelFlightWest.org is an organization of volunteer pilots that has flown more than 50,000 missions over the course of 30 years in 13 western states. They typically fly 200 missions in Oregon each year. Most of the aircraft are 4 and 6 place. Angel Flight is supported by pilot volunteer donations, fund raising and industry donations. As a free service for those in need of medical or compassion flights, they are not required to be FAA Part 135 compliant. They operate under FAA Part 91 private pilot rules. This is a model that works, and has been working successfully for three decades. A note of interest, the scheduling software that was developed and used by Angel Flight is public domain and its core system is available if we were to choose it as the software development platform.

Rural Air Oregon would operate at a higher level of capability than Angel Flight, operating under the much more stringent FAA Part 135 commercial operator regulations. California based Blackbird Air www.flyblackbird.com provides a service similar to what we are planning. Blackbird is a for-profit organization. However, it does connect airport destinations with customers and provides a model with features that we can use to help develop our system. And, there is always a chance that we may be able to attract a company like Blackbird to operate in Oregon. In that case, Rural Air Oregon would oversee the success of the operation. *Creating the online system is estimated to take 12 months*

Launch and marketing

Local community involvement is critical to the success of the program. Local leaders, mayor, city council, city manager and legislators must stand up to recognize and promote the benefits of rural air travel. The rural air service will be promoted via newspaper articles, interviews of satisfied passengers, support from local organizations, fund raising efforts, Chamber of Commerce and business support. Prepaid, discounted tickets for business budgets will be promoted. There will be a heavy focus on local TV, radio and news outlets and on social media to keep rural air service in the forefront of choices for those who are planning to travel. Flyers, brochures and the website will be constantly promoting the service.

V. Timeline

Start T+ 0 months

T= 3 months: Community Outreach

Funds required are travel and compensation for contractors and ORAVI staff

T+ 6 months: Commercial air operator FAA Part 135 outreach

Funds required are travel and compensation for contractors and ORAVI staff

T+ 6 months: Initial list of Airports and Operators

Compensation for contractors and ORAVI staff

T+ 7 months: Identify the framework

Compensation for contractors and ORAVI staff

T+ 9 months: Organizing non-profit corporation *Rural Air Oregon*

Legal fees, organizational expenses, facilities, equipment, office setup,

Funds required are travel and compensation for contractors and ORAVI staff

T+ 12 months: Online scheduling, reservation and payment system

Compensation for contractors and ORAVI staff

RFP creation, funding of web and app system development, support funding

T+ 15 months: Launch and marketing

Funds required are travel and compensation for contractors and ORAVI staff

Marketing, PR, advertising, community involvement, promotional travel incentives

VI. Budget

ORAVI estimates that the Rural Air Oregon service can be developed and established within two years and with a budget of \$500,000 as itemized below.

RURAL AIR OREGON Development Budget	
Online System & Apps	\$ 200,000
Staffing	150,000
Marketing	100,000
Operating Expenses	50,000
Total System Development Budget	\$ 500,000

10% Grant matching will come from several sources:

- Existing ORAVI funds
- Sponsorships
- Fundraising projects
- Local communities
- SCASD grants
- Business Oregon

Once the Rural Air Oregon system is up and running, ongoing costs would total \$2,000,000 per year – the vast majority of which would support per-seat costs for rural air travel.

RURAL AIR OREGON Ongoing Service Cost	
ROAR Per-Seat Cost Support	\$ 1,700,000
System Manager	120,000
Operations	100,000
Technical	80,000
Total Ongoing Service Cost	\$ 2,000,000

We anticipate that overall ROAR funding would continue in perpetuity if the HB2075 sunset is removed and a small tax per gallon increase is approved. Along with local matching funds (Travel Bank, etc.) significant resources in addition to the estimated \$2,000,000 per year from ROAR would support a robust Oregon rural air connectivity system.

Rural air is an economic development project that will have tremendous benefit to the entire state, it will allow businesses and citizens to connect, it will enhance development at airports, it will create jobs, it will help government operate more efficiently in statewide operations, it will assist in mitigating the Urban | Rural divide. It will benefit the entire state.

ORAVI rural air business plan and additional documents are submitted as a part of this response.



**Serving hometown
airports across Oregon**

Business Plan

The Organization

Rural Air Oregon will be organized as a 501(C)(3) non-profit organization that coordinates on-demand scheduling of commercial aircraft with passenger travel requests to serve residents of rural communities across Oregon. Rural air ticket prices will be subsidized by aviation fuel tax proceeds that are dedicated to rural air service.

Products and Services

The primary service of Rural Air Oregon is connecting rural community airports with qualified commercial air service operators. Our service will provide a system that enables affordable on-demand air travel statewide.

The organization's product is an online web and mobile app system that provides on-demand flight scheduling. It connects citizens, businesses and agency officials who desire air transportation with commercial aircraft providers, using an on-demand model similar to Uber, Lyft and Fly Blackbird.

The aircraft types will be comprised of 3 and 5 passenger piston aircraft and 5 to 8 passenger turbine aircraft. All aircraft utilized will be flown and operated by certified Federal Aviation Administration (FAA) Part 135 pilots and operators. These operators are currently based at locations around the state. The aircraft are owned by these independent operators and will be part of a "Provider Pool" of available aircraft to be scheduled by the Rural Air Oregon online system. Both single engine and multi-engine aircraft will be available.

Market

The market for rural air service exists in communities located near the 97 public-use airports in Oregon. There are initially six airports that have consented to partner with Rural Air Oregon to create rural air service. These include the communities of Astoria, John Day, Burns, Prineville, The Dalles and Hood River. We expect that many other communities will join in as their citizens see the value of air service for their local communities.

The market has the possibility to expand to Newport, Baker City, LaGrande, Lakeview, Roseburg, Joseph, Brookings and Salem in the next phase. It could further expand to include Condon, Lexington, Ashland, Hermiston, Klamath Falls and multiple communities along the coast and small communities across Oregon. The potential exists for more than 50 airports to participate. It would be possible for anyone from our 97 public use airports to utilize the service. We expect that the initial markets will be the larger rural cities that are not well served by roads and freeways, and those isolated by mountains and difficult roads.

Marketing

Initial general marketing will be focused on public relations. This will include community events, newspaper articles, radio and TV interviews and news releases. In January 2019 *The Daily Astorian* published an article about the future possibility of on-demand air service to/from the Astoria airport. Community newspapers are delighted to provide coverage of services that benefit their towns.

The online website will be widely promoted and examples of efficient flights at reasonable prices will be featured. Collateral material including brochures, flyers and promotional handouts will be utilized. Billboard advertising will be important. Statements supporting the use of rural air service by local community leaders will be very beneficial in gaining citizen acceptance of statewide air travel.

Targeted marketing will be focused on major corporations that have multiple locations around the state and to hospitals, government agencies and service organizations that require statewide travel. Information for each will be prepared to target their specific needs and will focus on the benefits of air travel versus road travel.

Chambers of Commerce, City Councils, community economic development agencies and civic leaders will be initial contacts made to promote the service.

Sales

Sales transactions are all handled online with the mobile app and website. Credit cards and PayPal will be utilized to book the flight and payment takes place online as soon as the flight is completed. There will also be pre-sales in the form of pre-paid tickets, coupons and contracts for a minimum number of flights. Most of the pre-paid sales will be for companies and organizations that have scheduled upcoming travel needs and have a budget that can be utilized to buy pre-paid tickets or coupons. Each pre-paid ticket or coupon will have a discrete number that is scanned or input to be utilized online in lieu of credit card payment. Quantity discounts will be developed and published.

Competition

The main competition is travel by personal automobile. Many rural communities that once had access to air service prior to airline deregulation in 1978 have turned to their cars, trucks, and sometimes bus or rail for statewide transportation. We will be able to show the financial and time advantages of flying versus driving in many rural-to-rural and rural-to-urban airport locations. It will take time to make flying a widely accepted method of statewide travel. Road travel is the primary competition to air travel, possibly the only competition.

Facilities and Equipment

The main capital investment will be an online reservation system that will be developed and hosted at a professional webserver hosting corporation such as Amazon Web Services (AWS). Computers, office equipment, office space, communications devices and supplies will be required for the operations support center. As the coordinator of the air service, the organization will not own or operate aircraft, airports or fixed base operators (FBO). These assets currently exist and Rural Air Oregon's charter is to organize these resources into a transportation system that benefits our entire state.

Risks and Risk Mitigation

The biggest risk is public acceptance. People unfamiliar with flying in small airplanes may not initially choose that mode of transportation over driving. Safety of aviation can be an issue that will be addressed by the safety reports of the Federal Aviation Administration (FAA), National Transportation Safety Board (NTSB), the Nall Report and organizations like the National Business Aircraft Association (NBAA) that are comprised of members who utilize corporate aircraft transportation as part of their normal business routine.

Lack of funds is a huge risk. It will be necessary to remove the current 6 year “sunset” on HB2075 so that rural air funds will continue to be available for many years. Legislation currently underway in the Oregon 2019 Legislative Session will be addressing this issue and we expect a successful outcome.

In order for ticket prices to be affordable, subsidy funding from aviation fuel tax proceeds must be available. Subsidy funding is essential long-term for the system to survive. If aviation fuel tax funding becomes unavailable, Rural Air Oregon would increase efforts for local funding support, sponsorships and would need to increase ticket prices and reduce service. Long-term, with newer, far more efficient aircraft types coming on the market soon, the cost of flight operations will be much less and there is a possibility of operations without subsidy funding as these new technologies are deployed.

Management

Rural Air Oregon will be managed by an experienced aviation leader along with the ORAVI board of directors and supported by its membership. ORAVI will oversee the Rural Air Oregon entity, which will be staffed by a manager, a technical resource and support staff. As a 501(C)(3) non-profit organization, it will report to a board of directors comprised of rural community leaders, aircraft operators, and officials of the Oregon Department of Aviation and Port of Portland.

Advisory Board

We will form an advisory board comprised of aviation and technology leaders from across the state who are willing to provide beneficial information in their field of expertise. We will include individuals with knowledge of travel, economic development, transportation and regulations from both state and national levels.

Service Organizations

Rural Air Oregon will engage as a client with major banking, accounting and legal firms to ensure that the organization operates with full credibility in finance, legal and regulation areas. We consider service organizations to be members of our team and some will be selected as members of our advisory board. We will seek firms that possess aviation knowledge and expertise so that they can provide their essential support services with an aviation perspective.

The Opportunity

With funds from HB2075 and subsequent aviation fuel tax bills, there is a viable opportunity for Oregon residents to finally have air service from their local airport to any of the public use airports in the state via an on-demand service and with limited-scheduled service at selected locations.

Affordable rural air service will advance economic development statewide, enable efficient personal travel, enhance government and agency travel and better utilize rural airports as economic engines. It will also assist in mitigating the rural | urban divide that exists due to our large geographically dispersed state that often isolates rural communities.

The economic engine viability of local rural airports will be enhanced. Business and personal travel will be faster, cheaper and less time consuming.

Rural Air Oregon will operate permanently, serving our state as a Non-Governmental Organization (NGO), working with elected officials, Oregon transportation related departments and citizens across the state.

Financial

It is essential that funds are available over a 2 year period of time in order to develop and launch rural air service. We forecast that \$500,000 will be required for this phase.

These funds will enable the organization to organize a number of aircraft service companies into a "Provider Pool", to bring in rural communities that are interested into the service and to create and host the online scheduling system. Staff, travel, legal and organizational expenses, capital expenditures and promotion will require funding as the program moves to implementation.

After implementation of the Rural Air Oregon system, the majority of the funding available from aviation fuel tax and other sources will go towards subsidizing ticket prices to make them affordable. A small portion of the funding will be utilized for staff, system hosting, support and overhead.

Rural Air Oregon will not generate profits. As a service organization, its role is as a facilitator that enables free enterprise and interested communities to take advantage of the benefits of air service across the state of Oregon.

We forecast that \$2,000,000 per year will be required to ensure that ticket prices are affordable and to keep the support organization fully operational.

Funding Requirements

RURAL AIR OREGON Development Budget	
Online System & Apps	\$ 200,000
Staffing	150,000
Marketing	100,000
Operating Expenses	50,000
Total System Development Budget	\$ 500,000
RURAL AIR OREGON Ongoing Service Cost	
ROAR Per-Seat Cost Support	\$ 1,700,000
System Manager	120,000
Operations	100,000
Technical	80,000
Total Ongoing Service Cost	\$ 2,000,000

Rural Air Oregon

Safety Plan

Rural Air Oregon will not own or fly aircraft. The organization will provide the online flight request services needed to link Federal Aviation Administration (FAA) Part 135 commercial air service providers to rural communities across Oregon that have airports located nearby.

Certified FAA Part 135 commercial operators are required to conform to stringent safety and operational standards that are published by the FAA in their Federal Aviation Regulations (FAR) documents which apply to the aircraft, the pilots and the operations.

Rural Air Oregon will insure that only FAA approved commercial air service providers are allowed to participate in the Provider Pool of aircraft that are utilized to deliver air service within our system. Each operator will be required to submit their safety plan that will be included in our ongoing ROAR grant performance submissions that will be delivered to the Oregon Department of Aviation.

Federal Aviation Administration (FAA) Part 135 Air Carrier and Operator Certification

Title 14 of the Code of Federal Regulations (FAR) for Part 135 certificates defines the requirements for certification and the certification process. The FAA Part 135 requirements are at www.faa.gov/about/initiatives/atos/135_certification and the topics and their respective links are listed below.

1-[General Information](#)

- a. General Information
- b. Types of 14 CFR 135 Operations
- c. Kinds of 14 CFR 135 Certificate Operating Authorities
- d. Scope of Part 135 certificates

2. [General Requirements for Certification](#)

- a. General Requirements for Certification
- b. Company Ownership
- c. Principal Base of Operation
- d. Aircraft
- e. Maintenance Requirements for Part 135 operations
- f. Insurance
- g. Economic Authority

- h. Management Personnel
- i. Manuals
- j. HazMat Manual- Will or Will-Not Carry Program
- k. Training Programs
- l. Drug and Alcohol Program Requirements
- m. Transportation Security Administration (TSA) security program requirements for Part 135 certificate holders
- n. Minimum Equipment List (MEL)
- o. Proving Runs and Validation Testing
- p. Pilots Record Improvement Act (PRIA) of 1996

3. Certification Process

- a. Certification Process General Information
- b. Phase 1 — Pre-application
- c. Phase 2 — Formal Application
- d. Phase 3 — Design Assessment
- e. Phase 4 — Performance Assessment
- f. Phase 5 — Administrative Functions

4. Resources

Rural Air Oregon

Operations Plan

Flight request operations are online. A person interested in a flight will open the mobile app or website and indicate the airport of departure and destination. The system will validate that the airports are within the system. It will also suggest close-by alternates. The number of travelers (usually 1) will be indicated. A list of aircraft with aircraft photos, details and prices will be displayed. The customer will choose the flight and indicate the desired day and time to fly. Once accepted by a member of the Provider Pool and booked, a map will display the route to the airport and information on the Fixed Base Operator's (FBO)s name and location. The passenger will provide credit card or PayPal payment information for subsequent billing upon landing. This system will operate similar to UBER, LYFT and www.FlyBlackbird.com There will be a chat resource and support number for customer assistance.

The passenger arrives at the airport FBO and meets the pilot in the lounge. After a briefing, they board the aircraft and depart for the destination. There may be additional people on the flight, and if so, the ticket price will be reduced. When the aircraft lands, the pilot indicates arrival on the app and the billing takes place automatically. Ground transportation is available per an online list for available transportation at each airport location. There will be no TSA. All operations will begin and terminate in "non-sterile" FBO facilities. Boarding and passenger briefing will be fast and easy. Passengers will see their beautiful state of Oregon from an airborne perspective of wonder aloft with views of automobile grid-locked roads below.

Funding operations

Each community will be asked to create fund-raising vehicles that would fund their local *TravelBank*. Based on their level of participation they would receive a percentage of ROAR subsidy funding contributed to the TravelBank. The majority of funding would come from the ROAR dollars, the match required by the local communities would be 10% of the total.

Based on the dollars available in the TravelBank, and factored for hours flown to or from the airport, a subsidy per seat will be paid to the air operator, less credit card fees.

The target will be a ticket price of \$100 per 30 minutes in the air. Thus, Willamette Valley to the coast would be about \$100, From Portland to Eastern Oregon, about \$400. Average flight ticket cost of \$250. Time will be based on Hobbs meter which tracks time that the aircraft is operating for taxi, takeoff and inflight. If more than one passenger is on a flight, then the ticket cost will be reduced based on the number of passengers.

If any flights are listed as scheduled-flights, there will be an online section that displays these flights, showing type of aircraft, how many seats are open and how many passengers can be accommodated on that flight.

There will be weight and baggage restrictions. A passenger must indicate their weight. The luggage will need to fit a size and weight restriction based on the type of aircraft selected.

A cost per hour will be assigned to each type of aircraft and its respective crew requirements. When choosing a flight, the passenger will have the option to select the size of aircraft, which will be priced accordingly, similar to the various vehicle options on UBER. We expect that there will be 5 categories of aircraft.

- 1- 4 place single engine with one pilot, such as Cessna C-182 and Cirrus
- 2- 4 place single engine high performance, such as Cessna C-210, Beech A-36
- 3- 6 place single engine turboprop, such as TBM 700, Pilatus PC-12, and Piper Meridian
- 4- 6 place small twin with two pilots, such as Beechcraft Baron, Piper Navajo
- 5- 6 place large twin with two pilots, such as King Air, Cessna 421

A maximum total weight will be listed for passenger and luggage for each aircraft type.

The scheduling system will be heuristic in that, over time, optimum routes and passenger trips that become the most popular and cost effective may be able to be flown on a published schedule.

Aircraft that are delivering passengers to a specific location will be displayed online to be immediately available for a subsequent flight shortly after landing. Every effort will be made to board a passenger(s) on all flights to reduce non-revenue return flights.

Initial system planning and implementation

The ROAR policy requires a 10% match on funds received. To obtain the initial funds to start the project ORAVI will provide a 10% match. We require ROAR funding of \$250,000 per year over the period of two years to complete all tasks to the point where air service can begin. ORAVI will provide a match of \$25,000 per year for these 2 years. We will utilize our existing cash reserves, we will solicit sponsorships and we will write grant requests and seek donations. Some community organizations may provide match funding to assist.

Once the system is operational:

Current ROAR funding from the aviation fuel tax receipts is about \$800,000 per year. (About \$2,000,000 is currently in the bank) If the 6 year sunset on HB2075 is removed these funds will continue.

As the rural air system proves itself beneficial to the state, it may be possible to obtain a small increase in the fuel tax percentage. An additional 2 cents per gallon would provide total annual ROAR funding of about \$2,000,000 per year.

Putting ROAR funding to use in providing rural air services

As previously stated in accompanying ORAVI documents, the traditional air taxi models of the past are not viable. They served a limited number of locations, their aircraft were too large and too expensive and the services were not properly promoted. Trying to shrink down air carrier services to fit small rural communities does not work. A totally new approach is needed.

The Rural Air Oregon model will serve all 97 public use airports with an on-demand system. Later, limited scheduled services may be possible at certain locations. The system manages supply and demand. A passenger request is made, a Provider accepts the flight and it is scheduled and ready to go in anywhere from one day away to a date in the future.

TravelBank solution for affordable ticket prices

Once air service is implemented and operational, participating local communities would provide a 10% match of requested ROAR funds. These funds would go into the community's TravelBank to provide subsidies that will make the ticket price affordable.

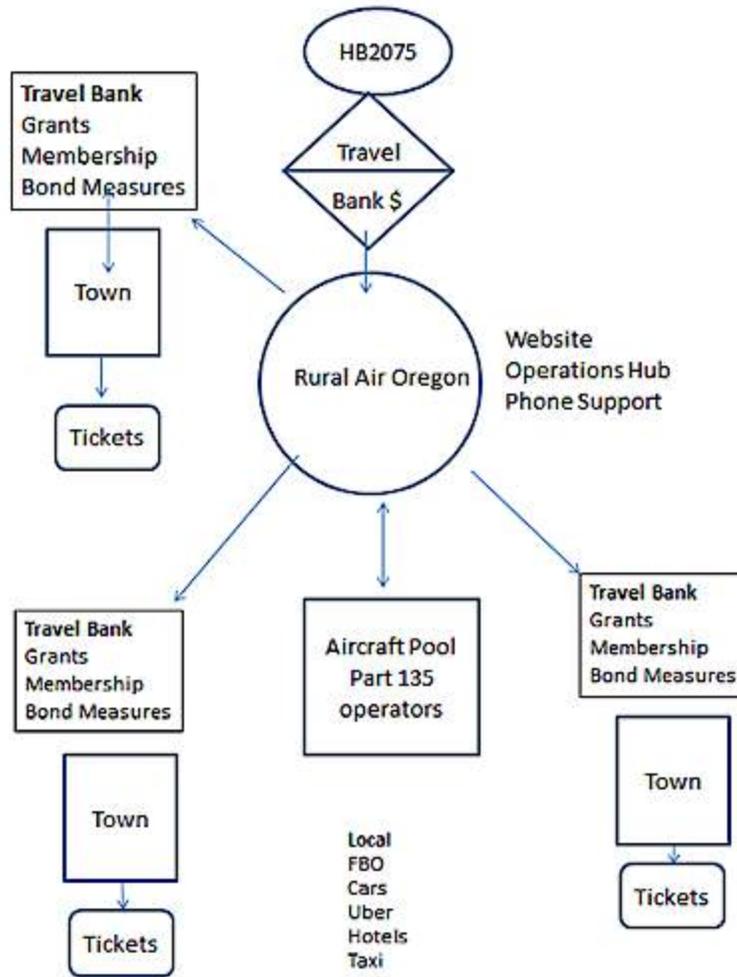
If a passenger flies from Prineville to Baker City the cost of the ticket could be subsidized by the TravelBank on either end, making it affordable, estimated to be in the amount of \$250 one-way or less.

Each participating community could establish a TravelBank. If Baker City has \$20,000 in their TravelBank from local funding sources and other grants they could then use this as a grant match to qualify for \$200,000 from ROAR funds to be added to their TravelBank and used to subsidize the tickets to or from the Baker City airport.

If Prineville had \$10,000 in their TravelBank then they could use it as a match to qualify for \$100,000 of ROAR funding to subsidize ticket costs.

The flight would dip into both Baker City and Prineville TravelBanks on a prorated basis depending on funds allocated for ticket subsidy by each community. With both communities participating it would lower the cost of each flyer's ticket compared to only one community participating in TravelBank subsidies. The one-way ticket cost may be about \$200.

If Prineville had zero funds in their TravelBank, there would be no ROAR funding available from their end and the ticket price to/from Baker City would be higher. Baker City could do their portion of the subsidy, but because Prineville did not contribute, then the ticket would be higher than an Prineville to Baker City seat where TravelBank funds from both points would be utilized. A Prineville to Baker City might be \$300.



There are many details to be worked out on the cash flow to and from the TravelBanks. This is one of the reasons that the rural airport communities and the commercial air operators need to be a major part of the ORAVI planning efforts. It must work to the benefit of all involved.

At this time, ticket prices are initial estimates. The ticket prices and the amount of subsidy per passenger seat flown by specific aircraft is part of the overall project planning. The flow of funds will require considerable study and participation with both the rural communities and the air service providers. The only thing that we can predict is that as new generation electric / hybrid aircraft become available the cost of aircraft operations will be greatly reduced. Thus over time, ticket prices will go down, or require fewer subsidies, and it is eventually possible that no subsidy would be required.

These are concepts and that will be modified or replaced as we move the project forward working with multiple airports, rural communities, multiple P135 operators and analysis of the financial models.

There is no funding commitment required from rural communities or their airports in order to partner with ORAVI in developing the Rural Air Oregon plans. If these communities create a significant TravelBank at system launch, then the price of tickets to/from their location will be affordable. Some city pairs will be less expensive than others based on the TravelBank subsidy funds in their respective locations

Rural Air Oregon is not designed to “sell” services to rural communities. Rather, the organization is non-profit and designed to make available and promote air travel resources that have not previously existed from their towns.

ORAVI wants to see rural air available for all of Oregon's communities. We are here to lead the effort and partner with any rural airport communities who wish to join in the effort. The rural air organization that would be created would be a non-profit, interested only in bringing together the resources. The old models have all failed and we believe that an on-demand, subsidized, Part 135 statewide model will work. It is new and different and “out of the box”. But, it is a coming trend and we are on the leading edge of a new generation of both urban and rural air travel.

Provided that ORAVI receives ROAR funding to implement the planning process with all parties involved, the Operational Plan will then be completed and will be submitted as part of the request for ongoing operational subsidy funding.

Rural Air Oregon

Marketing and Communications Plan

ORAVI will engage an advertising & public relations agency to assist with the marketing and communications plan for Rural Air Oregon

In summary, the initial efforts will be as follows:

Initial general marketing will be focused on public relations. This will include community events, newspaper articles, radio and TV interviews and news releases. Community newspapers are delighted to provide coverage of services that benefit their towns.

The online website will be widely promoted and examples of efficient flights at reasonable prices will be featured. A rough initial sample is at www.oravi.org/RuralAirOregon Full database and transaction processing capabilities will be added and a new look and feel will be designed.

Collateral material including brochures, flyers and promotional handouts will be utilized. Billboard advertising will be important.

Statements supporting the use of rural air service by local community leaders will be very beneficial in gaining citizen acceptance of statewide air travel.

Targeted marketing will be focused on major corporations that have multiple locations around the state and to hospitals, government agencies and service organizations that require statewide travel. Information for each will be prepared to target their specific needs and will focus on the benefits of air travel versus road travel.

Chambers of Commerce, City Councils, community economic development agencies and civic leaders will be initial contacts made to promote the service.

The participating Provider Pool of FAA Part 135 operators will promote their service as part of Rural Air Oregon, developing relationships with communities served and participating in promotions to increase the use of air travel.

The marketing plan will be expanded and completed as part of the rural air planning process.

Rural Air Oregon

Air service details summary

1. Rural airport(s) or routes proposed to be served and how

Rural Air Oregon will be available to serve all public use airports in Oregon. The service will be on-demand, utilizing FAA Part 135 aircraft that are part of the “Provider Pool” and scheduled via online request. The service will initially be focused on the following airports that have consented to partnership with ORAVI in planning for rural air service:

Grant County Regional Airport KGCD

Burns Municipal Airport KNO

Hood River Airport 4S2

The Dalles Municipal Airport KDLS

Port of Astoria Regional Airport KAST

Prineville / Crook County Airport S39

The market has the possibility to expand to airports located in Newport, Baker City, LaGrande, Lakeview, Roseburg, Joseph, Brookings and Salem in the next phase.

It could further expand to include Condon, Lexington, Ashland, Hermiston, Klamath Falls and multiple communities on the coast and small communities across Oregon.

The potential exists for more than 50 airports to participate. It would eventually be possible for anyone from our 97 public use airports to utilize the service. We expect that the initial markets will be the larger rural cities that are not well served by roads and freeways, and those isolated by mountains and difficult roads.

2. The proposed start date for service, project or program.

The project planning, which will include selected rural airports and FAA Part 135 operators will begin with ORAVI upon initial funding received from the grant.

Air service will begin on or before 24 months following the date of grant approval.

3. Total amount of grant request, including proposed month by month drawdown of grant.

The development of the rural air plan will require \$500,000 over 24 months. These funds will be used for salaries, travel, meetings, per diem and related expenses in working with rural communities and commercial air service providers to develop all details of the system. Funding will be required for legal work to set up the organization as a 501C(3) and to establish office facilities. Funding will be required to contract for development of the online software flight request and payment system and ongoing hosting and support fees. Funding will be required for initial marketing and communications

Month	\$	Month	\$	Month	\$	Totals
1	\$10,000	2	\$10,000	3	\$20,000	\$40,000
4	\$20,000	5	\$20,000	6	\$50,000	\$90,000
7	\$10,000	8	\$10,000	9	\$10,000	\$30,000
10	\$10,000	11	\$10,000	12	\$10,000	\$30,000
13	\$100,000	14	\$30,000	15	\$30,000	\$160,000
16	\$10,000	17	\$10,000	18	\$50,000	\$70,000
19	\$10,000	20	\$20,000	21	\$20,000	\$50,000
22	\$10,000	23	\$10,000	24	\$10,000	\$30,000
					Total	\$500,000

Listed by month # beginning with first drawn down

4. Additional funds being provided by community being served, business or other sources

ORAVI will provide 10% of the total grant amounts listed above during the planning phase.

After the system is launched, local communities will have the option placing local grant match funding into a TravelBank which will then qualify them for ROAR funds which require a 10% match. Community auctions and raffles, corporate sponsors, donations and other fund raisers may be used by local communities to build up their TravelBank. The TravelBank funds will be used for subsidizing the rural air tickets and for local advertising and promotion. The TravelBank is optional and the amount of funding is a local decision. However, the passenger ticket prices to and from a particular city will be lower if adequate subsidy funding is available.

ORAVI will apply for federal Small Community Air Service Development Program grants (SCASDP) to assist in all functions related to the planning and operation of the system.

5. Total expected budget (for the proposed program, project or service, showing all expected sources of revenue and expenses).

Revenue will come from ORAVI funds, from ROAR funds and from community TravelBank funds.

RURAL AIR OREGON Development Budget	
Online System & Apps	\$ 200,000
Staffing	150,000
Marketing	100,000
Operating Expenses	50,000
Total System Development Budget	\$ 500,000
RURAL AIR OREGON Ongoing Service Cost	
ROAR Per-Seat Cost Support	\$ 1,700,000
System Manager	120,000
Operations	100,000
Technical	80,000
Total Ongoing Service Cost	\$ 2,000,000

6. For programs that include air service, applicant shall provide:

a. Probable customer air fares for the service and basis for calculating the fares.

The service is projected to calculate flight ticket costs to the passenger at about \$200 per hour of flight time after subsidies are applied on a per seat flown basis. Ticket prices will range from \$100 to \$800 one-way depending on time enroute, type of aircraft and number of passengers. The average ticket price for many trips will be about \$250.

b. Projected aircraft to be used.

The aircraft types will be comprised of 3 and 5 passenger piston aircraft and 5 to 8 passenger turbine aircraft. All aircraft utilized will be flown and operated by certified Federal Aviation Administration (FAA) Part 135 pilots and operators. These operators are currently based at locations around the state. The aircraft are owned by these independent operators and will be part of a "Provider Pool" of available aircraft to be scheduled by the Rural Air Oregon online system. Both single engine and multi-engine aircraft will be available.

4 place single engine with one pilot, such as Cessna C-182 and Cirrus

4 place single engine high performance, such as Cessna C-210

6 place single engine turboprop, such as TBM 700, Pilatus PC-12, and Piper Meridian

6 place small twin with two pilots, such as Beechcraft Baron, Piper Navajo

6 place large twin with two pilots, such as King Air

c. Type of FAA certificate operations will be conducted under.

All aircraft will be flown under Federal Aviation Administration (FAA) Part 135 commercial passenger rules and regulations.

d. Discussion of how applicant will maximize filling of seats.

Multiple people per flight will be promoted when possible. Marketing and promotion will draw people to the air travel mode. Subsidy to operator ONLY for seats flown will incent them to work closely with selected communities that they want to serve, to increase passenger load.

e. Method for scheduling of service.

Scheduling is via online web and mobile app system that provides on-demand flight scheduling. It connects citizens, businesses and agency officials who desire air transportation with commercial aircraft providers, using an on-demand model similar to Uber, Lyft and Fly Blackbird.

f. Projected draw down of grant funds, month by month, for initial 24 month period.

As per section #3, Listed by month # beginning with first drawn down.

Month	\$	Month	\$	Month	\$	Totals
1	\$10,000	2	\$10,000	3	\$20,000	\$40,000
4	\$20,000	5	\$20,000	6	\$50,000	\$90,000
7	\$10,000	8	\$10,000	9	\$10,000	\$30,000
10	\$10,000	11	\$10,000	12	\$10,000	\$30,000
13	\$100,000	14	\$30,000	15	\$30,000	\$160,000
16	\$10,000	17	\$10,000	18	\$50,000	\$70,000
19	\$10,000	20	\$20,000	21	\$20,000	\$50,000
22	\$10,000	23	\$10,000	24	\$10,000	\$30,000
					Total	\$500,000

g. Projection of anticipated passenger loads by month for initial 24 month period.

We project that initial flights will be one passenger per week in the first 2 months of operation. By the end of six months this will grow to 20 passengers per month and by the end of the first year of operation to 50 passengers per month. At the end of 24 months of operation the passengers flow is projected to reach 100 per month. As the financial model is developed during the planning phase these amounts will be adjusted based on demand, rural communities served, flight costs and ticket pricing.

Participating Airport Partnership Consent Letters

Letters from seven airports consenting to partner with ORAVI in developing rural air service include the following: Additional letters are on their way.

Astoria Regional Airport **KAST**

Burns Municipal Airport **KBNO**

KBNO Hood River Jernstedt Airfield **4S2**

The Dalles Columbia Gorge Regional **KDLS**

John Day Grant County Regional Airport **KGCD**

Prineville Airport **S39**

Madras Municipal Airport **S33**

The letters are on the following pages



January 23rd, 2019

TO: Gale Jacobs
Oregon Aviation Industries
Executive Director
PO 313, Marylhurst, OR 97036
Email: Jake@oravi.org
Ph: 541-406-0711

RE: Support of ORAVI's ROAR Initiative

Mr. Gale "Jake" Jacobs,

Hood Tech Corp., Aero Inc. (Also DBA: "TacAero, Hood Tech Aero") is pleased to commit its full support of Oregon Aviation Industries ("ORAVI") efforts to promote Oregon's aviation industry cluster. As a private organization that runs two airport operations (Hood River & The Dalles), we provide premium aviation services through product development, aircraft maintenance, restoration and training. We have found great value in our membership and participation in ORAVI activities.

Hood River Airport (4S2) and The Dalles Municipal Airport (KDLS) consent to partner with Oregon Aviation Industries in applying for a ROAR grant and developing rural air service in Oregon. Hood Tech Aero will continue to support ORAVI's initiative and support of HB 2075. With the addition of our Part 135 Air Carrier Certificate, Aviation Holdings, LLC. #3A7A4550, we believe strongly in developing affordable air carrier service to the entire state of Oregon. It is our belief that support from state funding, industry and organizations like ORAVI we can make Oregon an leader in providing affordable rural air transportation.

Regards,

A handwritten signature in black ink, appearing to read "B. Prange".



Brian Prange
Vice President | CFII
C: 701-610-6581
844-FLY-CUBS ext:702

TO: Jake Jacobs, Executive Director, ORAVI

FROM: Port of Astoria Commission

SUBJECT: Rural Air Service Initiative

DATE: January 10, 2019

The Port of Astoria Regional Airport is interested in participating in the development of a system that would provide air service to our rural community and we are pleased to participate with Oregon Aviation Industries in developing a plan that would include our Port of Astoria Regional Airport. We think this is an excellent opportunity for our airport to add to the value it already provides surrounding communities, businesses, Camp Rilea and the US Coast Guard. By a vote of the Commission we hereby consent to become a partner with Oregon Aviation Industries in developing a rural air service plan.



Frank Spence, President



Jim Knight, Executive Director

Jim Campbell, Treasurer
Bill Hunsinger, Under Secretary
Dirk Rohne, Vice President
Robert Stevens, Secretary



City of Burns

242 S. Broadway

The Heart of the Big Country

BURNS, OREGON 97720

(541) 573-5255 • (541) 573-5622 Fax

January 8, 2019

Oregon Aviation Industries

Burns Municipal Airport is interested in a system that would provide air service to our frontier community and we are pleased to coordinate with Oregon Aviation Industries in developing a plan that would include our Burns airport. We think this is an excellent opportunity for our airport and our community to provide another way for business, medical, family and pleasure transportation and consent to being a partner with ORAVI in developing a rural air service plan.

Sincerely,

Dauna Wensenk
City Manager



Grant County Regional Airport
72000 Airport Rd.
John Day, OR 97845

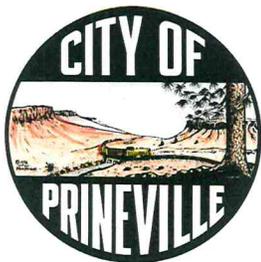
January 9, 2019

ORAVI
PO Box 313
Maylhurst, OR 97036

Grant County Regional Airport is interested in a system that would provide air service to our rural community and we are pleased to coordinate with Oregon Aviation Industries in developing a plan that would include our John Day KGCD airport. We think this is an excellent opportunity for our airport and Grant County as a whole and consent to being a partner with ORAVI in developing a rural air service plan.

Sincerely,

Haley Walker
Airport Manager



CITY OF PRINEVILLE

387 NE Third Street Prineville, Oregon 97754

Phone - (541)447-5627 - Fax - (541) 447-5628 - Website -

<http://www.cityofprineville.com>

January 22, 2019

Jake Jacobs
Executive Director
Oregon Aviation Industries

The City of Prineville and Crook County is pleased to acknowledge support to ORAVI for a rural air ROAR grant.

The Prineville/Crook County airport is willing, and looks forward to partnering with ORAVI to developing a rural air service that would include the Prineville, Crook County area.

Our community appreciates the opportunity to work with ORAVI and the Oregon Department of Aviation's ROAR program. We look forward to finding out more on how we can participate and support the program.

Thank you,

Kelly Coffelt
Prineville/Crook County Airport



THE CITY OF
MADRAS

Date of Notice: Jan, 29th 2019

To: ORAVI
PA Box 313
Maylhurst, Oregon 97036

SUBJECT: Rural Air service

All,

Madras Municipal Airport and The City of Madras Oregon are interested in and supporting a Rural air service system plan that would take in Madras and Central Oregon. Please count on our support of this program in hopefully moving forward within Oregon Airspace system We are always proud to be partners with ORAVI as always. Please contact me if I can be of any assistance.

Robert Berg
Madras Municipal Airport Manager



Oregon Aviation Industries



Whitepaper

7/18/2016 Updated several times with inputs from many sources. Latest update 1/1/2019

ORAVI Rural Air Service - Overview and Options

Since passage of House Bill 2075 in the Oregon 2015 Legislature, Oregon Aviation Industries has been investigating options and possibilities for implementation of rural air service in Oregon. We have received inputs and ideas from our membership, from airports, from our board of directors, from Oregon air service operators, from operators in other sections of the country and from consultants and industry leaders. ORAVI is focused on analyzing models that would meet the intent of HB2075, which is to serve rural Oregon communities that currently do not have passenger air service from their local airports.

Executive Summary

The current model of rural air service is antique. It cannot operate using a scaled down version of major city airliner service. In the age of internet, big data, sophisticated scheduling algorithms and sophisticated smaller aircraft, it is possible for a major disruptive method to be deployed that will serve rural communities with air service.

Our premise is that a sustainable rural air service must be based on the following criteria:

1. Right-sized aircraft that match the air travel demand in small communities.
2. Subsidies per-seat flown to keep the cost of rural air travel affordable.
3. Dynamic online scheduling to increase individual flight loads and reduce costs.
4. Utilize Oregon's existing and new FAA approved Part 135 air operators.
5. Airport to airport, no TSA. Rapid travel with very little overhead time.
6. Flexibility - on-demand and limited schedules
7. Strong promotion, advertising and sponsorship at the served communities
8. Begin with 1 to 3 key communities and expand as the model is perfected

Background

The state of Oregon covers a large geographic area of 98,466 square miles with many mountain ranges and rivers that impede the speed and efficiency of road travel. Due to the terrain and distance, driving across the State can take 6 to 8 hours or more to travel 300 to 400 miles across the state.

Since deregulation of the airlines in 1978 the primary passenger travel mode within Oregon has been by automobile. Two major statewide freeways serve a portion of the state but the majority of towns are served by roads that twist, turn, climb and descend to fit within the irregular terrain of the state.

As an example of road versus air travel, a 160 mile trip from Portland to Sisters Oregon by car takes 3 hours. By small aircraft the time is less than one hour. Driving from Salem to Baker City takes 6 hours versus 2 hours by a small 4 seat aircraft. And, travel through metro areas, even on freeways, is typically impeded by heavy traffic, and often gridlock, adding considerable time to the trip.

Major airlines provide scheduled air service from 4 Oregon hub airports: Portland, Eugene, Redmond and Medford. There is also commuter service between Pendleton and Portland. North Bend and Klamath Falls have had air service in the past and are attempting to get it reinstated.. The rest of Oregon's 90 airports and surrounding communities are unserved by passenger air service.

Rural | Urban Divide

It would be highly beneficial for economic and community development statewide to implement air service that connects rural communities to urban areas. And, it would be equally beneficial to provide intra-state rural to rural community air service. To address this issue, in 2014 ORAVI formed an aviation fuel tax committee and submitted proposed legislation that would assist with aviation funding including rural air service assistance.

Aviation fuel tax bill HB2075 was lobbied by Oregon Aviation Industries and many aviation industry leaders who gave positive testimony at committee hearings. It was passed by the Oregon 2015 legislature with a 100% affirmative vote by Revenue and Ways and Means Committees and by a 90% majority on the floor. 25% of the funds, amounting to \$5 Million over 6 years, are targeted to assist rural air service. Rural air service potential was a significant reason that the bill received tremendous bipartisan support. It can better connect the state and it can provide some relief in reducing road travel.

Existing Models versus radical change

All former models of air service in Oregon that attempted to serve rural communities have failed. We cannot try the same unsuccessful methods again, there needs to be a new and different approach or it will be money wasted down a rat hole. It is beneficial to have aviation fuel tax funding to help make rural air service affordable for passengers, but we cannot try to bring back to life those models that have died in the past. We need radical out-of-the-box thinking and dramatic change. Think of previous legacy models as Univac, IBM, Cray, DEC who were stuck in their traditional models vs: radical game-changers such as Apple, Google, Facebook, Amazon, Uber and Tesla. Their initial ideas were deemed impossible. We need initial ideas that seem impossible, and then, like rough pieces of wood being converted into a fine piece of furniture, sand them, smooth them and varnish them into the possible, probable and successful.

Extensive market studies did not launch game-changer companies. Breakthrough successes are paradigm shifts. Conceive, test, try it, fix it, develop a model that works in a limited scope and then streamline it and deploy to other locations that may find it of value, with localization as needed.

Current types of FAA authorized commercial passenger air service

Part 121- Major airlines for mass travel in our hub and spoke system to major cities. TSA required.

Part 121- Shuttle service from smaller towns to major airports, usually TSA

Part 135- Shuttle service from smaller towns to major airports. Limited schedule, not always TSA.

Part 135- On-Demand charter of corporate sized piston, turbine and jet aircraft. Very expensive

Part 135- Scheduled Rural. Up to 4 times per week by the same operator / same location. No TSA

Part 135- On-demand service to and to from qualified airports. Smaller aircraft, no TSA

Oregon Airports

There are 97 Public use airports in Oregon and most of them are located in rural communities. However, scheduled rural passenger air service is currently available in only one rural community

Pendleton <-> Portland - served by Boutique Air (Previously served by SeaPort Airlines)

Previous air service from North Bend <-> Portland and Klamath Falls<->Portland had been served by PenAir but lack of subsidies and not enough seats filled due to aircraft that may have been too large for the size of demand.

Residents in most rural Oregon towns must drive from 2 to 3 hours to reach a major commercial airport that provides connections to national and international locations. In rural communities, local airports are often within 5 miles of a resident's home.

There is no intra-state rural air service to fly passengers from one rural Oregon location to another rural Oregon location. Road travel via car, truck or bus is the only practical alternative. There are more than 15 air charter facilities in multiple airports across the state with 25 aircraft total, but they do not fly on a scheduled basis and the costs can range from \$2,000 to \$9,000 to fly from one side of the state to the other one-way. Surveys have indicated that the price most residents are willing to pay to fly across the state ranges from \$200 to \$300 - one way.

Since airline deregulation in October 1978, all attempts at rural air service in Oregon have failed. Without subsidies, they have not been economically feasible. The most recent attempt at rural scheduled service was made by SeaPort Airlines who initially operated from the Flightcraft FBO at PDX to Seattle Boeing Field BFI, then to Pendleton and later to Astoria, Newport and North Bend with plans for expansion to Salem and possibly other towns. After five years their only service that remained was the PDX <->Pendleton route which is funded by an Essential Air Service (EAS) federal subsidy. SeaPort went Chapter 7 and ceased operations on September 20, 2016. They were replaced by Boutique Air that is currently flying 9 place PC-12 single engine turboprop aircraft on the Portland<->Pendleton route.

As soon as subsidies went away on the Oregon routes served by SeaPort they pulled out while chasing subsidies in other states. SeaPort originally flew 9 seat Pilatus PC-12 pressurized single engine turbo

prop aircraft that operated at 16,000 feet and flew at 250 knots and offered an airline-type of passenger experience. They later changed to 9 seat non-pressurized Cessna 208 Caravan's with a speed of 200 knots and altitudes of less than 15,000 feet. These cost less and get the job done, but with much less passenger appeal.

The Portland<-> Pendleton route has been in jeopardy several times of continuing their EAS grant which has now reached more than \$2 million annually. They typically fill 4 to 5 seats of the 9 available. And, Pendleton officials had not been pleased with the level of SeaPort customer relations and lack of promotion of the service. Accordingly, on August 17, 2016 Pendleton City Council voted to replace SeaPort with Boutique Air. Boutique flies PC-12s, a return to a more airline-type environment in the cabin, pressurized, higher altitudes and faster speeds. Boutique has received an EAS subsidy of \$2.27M per year to operate this route. Boutique Air began passenger air service on 1/1/2017.

Air service at Oregon's 4 major hub airports and the 1 commuter shuttle airports needs to be continued. There could be some fuel tax money allocated to the smaller existing commuter airports if they reach a point of failure in the future.

However, this whitepaper's attention is on serving a few of the other 241 towns in Oregon. Many of these towns are located close to one of the state's other 90 public use airports, the majority of which are in rural communities and not far from local downtowns.

Assumptions based on road travel time, city size and community demand.

Unserved towns where air service might work include those that fit the following criteria.

- 1- Two or more hours of driving time to a major airport in typical traffic conditions.
- 2- Towns without major freeway access
- 3- A population area of 10,000 to 50,000 people within a 50 mile radius.
- 4- A suitable instrument meteorological conditions capable airport
- 5- Community support where want or need (and therefore demand) for air travel is high
- 6- Communities who are willing to take a leadership position in pursuing rural air service

These criteria support consideration of the following Oregon communities:

- Newport
- John Day
- Burns
- Baker City
- La Grande
- Lakeview
- Roseburg
- Joseph
- Astoria
- Brookings
- Salem

Salem is considered for inclusion in an "intra-state" air service system due to the demand for travel to and from the Capitol (particularly during legislative sessions) and with the high statewide travel by State agencies. Driving two days across state for a one day (or 2 hour meeting) is costly and unproductive. Flying can get the meeting done in a single day, saving per diem costs, overnight and meal expenses, and most importantly, it can save the wasted time accomplishing nothing while driving in traffic.

The initial rural air focus in early 2016 was on John Day, Burns, La Grande and Baker City. More recently, Astoria and Newport have shown interest. Meetings have been held by Oregon Department of Aviation (ODA) and ORAVI with John Day officials who have shown some interest. Burns has expressed some interest and involvement. La Grande has expressed mixed interest. Baker City has not currently expressed much interest, although they did apply for a SCASD federal grant (which was not funded) in 2009 to extend Pendleton's air service to Baker City. The Newport airport manager and the city council have expressed strong interest in air service and they have recently issued an RFP to determine what scheduled services may be available to serve their city. Newport's high levels of tourism, their NOAA facility, ocean research, fishing and academic institutions are likely drivers for air service utilization.

Aircraft types that would fit rural air service in Oregon

9 passenger seats or less

Twin engine prop: Cheyenne, KingAir, Aero Commander, Baron, Navajo, Cessna 300 and 400 series)

Single engine turboprop: Pilatus PC-12, Piper Malibu Meridian, TBM 800, Cessna Caravan 208
Single engine 4 and 6 seat aircraft: Beech A-36, Cherokee 6, Cirrus 22 that meet Part 135 requirements. IFR (certified flight into known icing conditions would be desirable for scheduled services)

Operations

No TSA. Rural cannot afford the cost, overhead and logistics.

FBO to FBO (or to non-sterile designated areas at TSA airports)

Lounge facilities exist at Fixed Base Operators FBOs Part 135 - on demand flight requests

Part 135 - scheduled-can publish a schedule with a maximum of 4 days/week of service per location

Service types

Scheduled - up to 4 flights per city per week are permitted under Part 135 by the FAA.

On-Demand-Part 135. Any location, flexible scheduling options

On Demand - Part 135 operators exist, but are very expensive. These include local FBOs and charter brokers such as www.charterhub.com and www.flyotto.com New types of services are becoming available in other states. In California, BlackBird Air www.flyblackbird.com provides an on-demand service that appears to provide affordable prices.

Published cost

As with Expedia, Travelocity, Uber, Lyft, the cost must be displayed for specific flight times and for on-demand requests, with options for lower costs based on days, times and locations. And, in addition, be subject to change if passenger loads change, ideally lower.

Ground transportation considerations

Dedicated airport cars

Rental car companies

Uber / Lyft type car service

Local bus and taxi services

Travel Bank

One financial solution to lower ticket costs is a Travel Bank which would be funded from various sources to spread the risk/reward. Air service operators that have relied solely on subsidies per-flight such as Essential Air Service (EAS) to operate have failed in the past. SeaPort's chapter 7 is an example. Payment per-flight subsidies or per-year (fee for service) is an inherently bad structure as there is no incentive to increase passenger loads. And if there is no risk/investment "skin in the game" from the operator it becomes corporate welfare and attracts the wrong type of operator.

A Travel Bank could be funded by the following sources:

- HB2075 Oregon Department of Aviation funding from aviation fuel tax
- Local community bond measures
- Local community fund raising, auctions, promotions
- Local community taxes, business contributions
- Discounts for fuel from local FBOs
- Prepaid tickets offered at a discount
- Prepaid coupons
- Air service operator via discounted pricing
- Air service operator offering specials
- Donations, annuities, philanthropy
- Contracts with business, medical and government institutions that guarantee ridership levels

The Travel Bank funds would be used to subsidize the individual ticket cost for a flight. Some funding would be used for promotion. The travel bank subsidy would make the ticket price affordable for the individual passenger and it would access budgeted risk-shared funds to increase passenger utilization and thus move toward a profitable operation, or at least one with less subsidy needed over time.

Alternatives service types to consider

Extend the existing PDX - PDT Service

Extend Boutique Air Pendleton to other rural locations. It might be possible for Boutique to add Newport to the west end of their Pendleton Portland route, and Baker City to the east end of their route. As previously stated, a SCASD grant request (unsuccessful) proposed extension of the Pendleton shuttle to eastern Oregon, and it would be worth a try again if HB2075 funding could assist.

Pros: Leverage off of the existing PDX - PDT EAS grant of \$2+ Million

Cons: Boutique may not be interested, low ridership.

Plane may be too large/expensive for smaller markets.

Funding large airport operations to subsidize flights from outlying towns

Pros: Might bring in more passengers for their flights. Mini hub/spoke system

Cons: Funds might be depleted at the expense of other outlying communities Does not address the rural to rural intra-state need

Part 135 On Demand

Pros: Services are currently available at many airports across the state

Cons: Very high cost, would need major subsidies. Typical charter aircraft are very expensive to operate and may be too large for most rural community ridership. Unrealistic at \$2,000+ per flight.

On demand model with General Aviation private planes under FAA Part 91

Pros: Online scheduling and payment, low cost, many aircraft.

Cons: FAA would not permit revenue flights under Part 91. Would have to be Part 135.

Create existing or new Part 135 air service

Provide support to get an interested Part 135 operator to create a service with multiple aircraft and locations dedicated to providing a rural air network. Mini airline.

Pros: Sounds good on paper. Would be ideal if it worked. Easy to brand.

Cons: These models have typically used expensive aircraft such as Cessna 400 series twins or King Airs. Due to the high overhead costs, these models always failed in the past. Expensive to purchase, expensive to operate, with one company absorbing all overhead. And, difficult to fill the many seats. Aircraft were too large for small rural community passenger demand.

Horizon, PenAir or other commuter airlines

Pros: Currently operational

Cons: Aircraft are too large for rural, cannot fill enough seats in a 30 seat aircraft. No interest by them.

Establish a new State-owned rural commuter air service network

State invests in a fleet, served by one or more Oregon-based Part 135 certificate holders.

Partner with FBOs in served communities for pilots, fuel, passenger service, car rental, etc.

Local non-profits create "membership" programs which provide foundation for service viability for that community Circuit-rider network based on membership and seat-demand in communities, with service on a less- than daily basis (e.g. John Day - PDX on Monday & Thursday, Newport - PDX on Tuesday & Friday). Ongoing State (HB 2075) operating support pro rata with community membership and seat-demand

Pro: State-backed plans and funding could provide sustainability

Con: Very difficult to get political support. Many prefer private businesses for such services.

Contracted air service with major organizations

One marketing effort that could be utilized by a rural air carrier is to contract with large organizations that need to move people around the state on a regular basis. For example, medical centers, universities, law enforcement, state prisons, local, regional and national government agencies, major employers, contractors, service organizations. These would amount to pre-paid tickets or an agreement to pay down payment and a fee overtime to fund the tickets. This would provide a sustainable base from which to add other passengers to locations where they fly.

State contracts with Part 135 operators

An RFP could be issued by the State Department of Aviation to Part 135 operators to be established as a Rural Air Oregon network. A maximum of 3 air service operators would be selected and contracted. Cities would be selected for service based on time/distance, interest, community funding matches and potential for success based on estimated ridership levels. Ticket prices are fixed by the Department of Aviation for each route. Tickets are subsidized based on a travel bank established for each served city. The travel bank would be funded by HB2075 plus community funding. Based on the number of tickets projected for each location served by each of the three operators, a subsidy estimate would be published. The subsidy is estimated to be \$200,000 per year per operator and it would be paid based monthly on the number of seats flown/tickets sold.

Pros: The operators would have projected revenue forecasts and could deploy assets accordingly
With 3 operators, if any one or two failed there would be a backup operator.

State regulated ticket prices would ensure profitable operations, thus provide sustainability.

Cons: Direct state involvement may be discouraged Oregon legislators

Antitrust liability and/or other operators complained about stifling free trade Requires estimated ticket sales/seat numbers to be reached.

Technology - online systems and aircraft

As previously stated, all attempts at implementing Oregon rural air service since airline deregulation have failed. Lessons learned: we can't keep doing the same model over again. There has to be a different model. The one major differential today versus 10, 20 and 30 years ago is technology. By using online technology to provide supply and demand matches, resource sharing, instant information and communications we may be able to construct a new generation model that is completely different from past methods. Past methods such as Part 135 charter are too expensive for wide use by average citizens. Heavily subsidized commuter airline schedules have not been sustainable. SkyTaxi models have not been economically viable.

An online system where available aircraft resources are listed, and the ability to capture a flight and to book it for a given date and pay online could be the first step. Then, an optimization supply/demand model that allows resource sharing ie: a passenger may search for flights to a chosen city and be flexible on the dates. A Doodle-type scheduling capability could show others that are interested in traveling to the same location. Very often, schedules

can be matched to find the day with the maximum seat load that will produce the minimum cost per seat. For example if 4 people wanted to travel from Salem to Pendleton sometime in a given week, they may be able to arrange their schedules so that they could all fly the route on the same day at the same time. Sophisticated software can make it possible to easily match the passengers with an available aircraft and pilot and make the flight at a cost of less than \$200 per seat.

The other side of technology is the aircraft. The FAA permits Part 135 IFR operations in single engine aircraft with dual alternators and vacuum systems and special equipment. A 4 to 6 seat aircraft can be outfitted with the latest avionics gear and safety equipment and upgraded interiors to provide a very comfortable and safe flight. The Cirrus 22 and Beech A-36 are examples. Some 6 place aircraft offer fast, easy entry via clam-shell doors, low acquisition cost, fast, powerful and proven. An A-36 cost of about \$300,000, 285 horsepower, 1,500 pound useful load, climb at 1,000 FPM, 170 knots speed.

9 seat aircraft such as the Cessna Caravan 208, Pilatus PC-12, King Air type aircraft are very expensive to obtain and operate and they typically load less than 50% of the seats on typical flights where used for charter and commuter service. Cirrus 22 type 4 seat aircraft have are in use for some shuttle operations, although fast and efficient, they are very expensive to obtain and do not provide the comfort of a slightly larger aircraft. However, there are Part 135 companies such as www.flyhopscotch.com and www.imagineair.com that are using Cirrus 22 for commercial passenger service on the east coast. www.flyblackbird.com utilized many types of aircraft.

Technology applied to recent model 4 to 6 seat aircraft can offer excellent price / performance that can come close to matching a new or nearly new aircraft. They must, however, comply completely with FAA Part 135 regulations.

Most importantly, an online system that can match supply and demand and optimize for the lowest cost per seat is technically viable today and proven models exist in several online systems used by volunteer medical flying organizations such as www.AngelFlightWest.org For on-demand ground transport, systems such as Uber and Lyft have revolutionized car travel . We need to apply these modern technologies as a resource to take a completely different approach to providing rural air service to Oregon.

Dynamic demand type model with online scheduling and payment

A sophisticated online website and mobile app system could be used to request a flight or book a seat. Modern technology can assist in optimizing the system.

Online flexible scheduling would maximize the number of people and destinations (similar to Doodle for finding preferred meeting times)

Schedule optimization to maximize passenger load and minimize cost per seat Online payment ala modern purchase and payment models.

This online model is further discussed in a Strawman out-of-The-box document that is follow-on to this whitepaper.

ORAVI Rural Air Committee

An ORAVI Rural Air Service Committee has been formed to work with the Oregon Department of Aviation, rural communities, air service operators and other resources to assist in defining what type of rural air programs might be considered or created. Our goal is to define services that would work, at a price travelers are willing to pay. Then, to work with communities who desire that model for their airport and match them together.

The ORAVI Rural Air Committee is available to work with the Oregon State Department of Aviation, aviation resources statewide and ORAVI members to seek solutions. We are looking for resources and ideas, defining needs and models and participating in focus meetings.

Definition of Rural

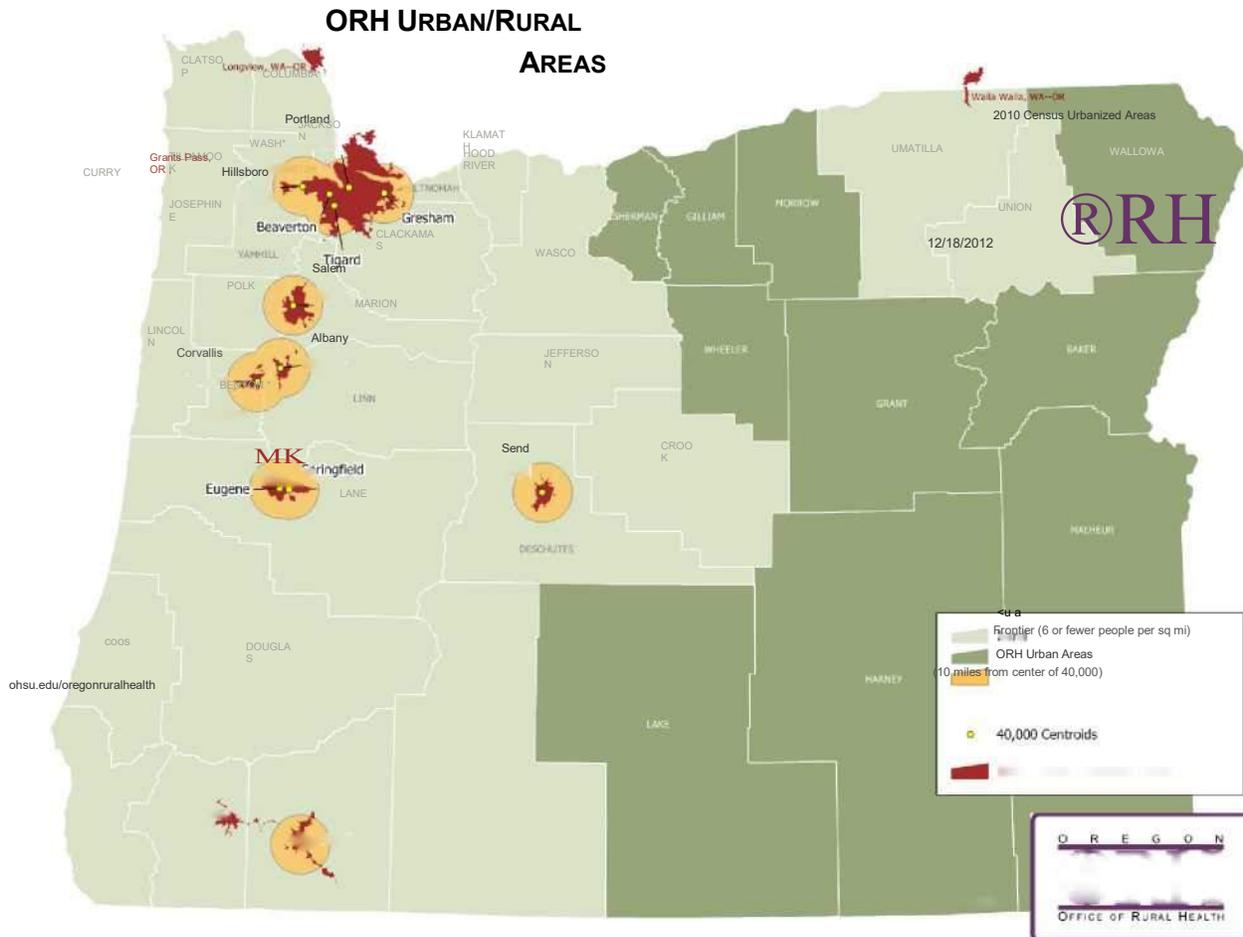
The unserved communities are those shown in the light and dark green areas of the map. (With the exceptions of Pendleton, North Bend and Klamath Falls which have commuter service to Portland)

Oregon Office or Rural Health rural definition

Next page...

Oregon Office of Rural Health rural definition

Rural includes geographic areas in Oregon 10 or more miles from the centroid of a population center of 40,000 people or more.



Our next steps:

- 1- Continue contact with rural communities to determine their interest level and contact additional communities. Distill this list to 10 primary targets to further investigate and survey.
- 2- Contact Oregon FAA Part 135 operators to determine their level of interest. Distill this list to the operators who have an interest in providing rural air. There are 15 operators with 25 aircraft. We are in touch with several of them so far.
- 3- Bring the Part 135 operators together for a meeting to discuss participating in a consortium that would provide scheduling and promotion services.
- 4- Match operators and communities together and assist with resources to explore possibilities of on- demand and limited scheduled air service to / from specific communities.
- 5- Assist with our member's grant requests.
- 6- Establish Rural Air Oregon as an entity that can match riders to operators with an online system similar to Expedia, Travelocity, Kayak, Uber, Fly Blackbird. This system would provide online booking, payment and distribution of subsidies based on the number of seats flown.
- 7- Work with operators and communities to assist with establishing routes and structures that meet both rural communities and air service operator's criteria.
- 8- Obtain a source of funding to enable ORAVI to actively pursue rural air service options and to fund an online system to promote on-demand and limited-schedule rural air operations.



Outside the Box and into the Air

A fragile idea to consider.....

Strawman

10/8/2016 updated 12/10/2016

Rural Air Oregon

Rural Air Oregon brand

A non-profit website and mobile app "Rural Air Oregon" is designed as a dynamic scheduling system to match passengers to flights. Its focus is on serving a small number of the 97 public use airports in Oregon. A Doodle type schedule would be used to match the most desired flight times / dates with the desires of the travelers. The more passengers per flight, the lower the cost. Customers can check the web schedule for the flights that best meet their time frame and cost criteria. Similar to scheduling a meeting for multiple attendees on Doodle, Appointly, and Vite.

Rural Air Oregon conforms to standards including the requirement that FAA Part 135 compliance for aircraft and pilots is met by the operators. Existing Part 135 operators participate and new operators who are interested can sign up as air service provider members. We are a scheduling resource for the existing Part 135 and any new Part 135 operators who choose to participate. We match available aircraft to requested flights. And the operators provide limited schedules to key cities and promote ridership on those flights.

It might be best for the State to limit the number of operators. This could be done with a competitive bid for three of the most qualified Part 135 companies to be selected. It might be beneficial for the Department of Aviation to establish the cost of tickets. Setting the cost of tickets and subsidizing on a per seat/ticket basis for established routes might ensure sustainability for the operators if passenger load projections are met. It is essential for the operators to remain profitable long term. And it would give the customers a known published price. The implementation for scheduled flights would be easier to standardize than for on-demand flights.

The web and app service is free to all operators who are part of the group for the first 3 years as the system matures. Then there will be a small fee per passenger to assist in the operational expenses. The web collects payment for passenger flights online via credit card. Revenue is automatically be distributed to the flight provider upon completion of the flight as is done with Uber / Lyft.

The website uses an on-demand posting and scheduling model similar to www.angelflightwest.org but with the addition of a scheduling feature that permits multiple passengers per flight. Based on this model, two Angel Flight members are planning to launch a Part 135 small aircraft commercial shuttle in Southern California.

Part 135 providers request membership in the pool. Once approved per published standards they are listed as an approved provider and can post available flights on the web. These show cities, time and distance, flying vs driving times, cost, transportation at the destination (airport cars, Uber, etc)

The concept of memberships for travelers can further reduce ticket prices. This provides rebates for those who have paid membership fees.

Communities can buy memberships. Local community auctions, taxes, bonds, and other local funds help reduce the ticket cost for individual locations. These funds go into a travel bank to be used to lower the ticket price for that community based on the amount of contribution to the travel bank.

All subsidies are on a per-seat basis, not on a per-flight basis. This provides an incentive for an operator to maximize ridership on a given flight, thus reducing the per-seat cost for the travelers. It would not operate on the Essential Air Service EAS model of subsidy per year or subsidy per flight.

Scheduled flights:

Locations such as Newport, La Grande, Roseburg and other locations can be selected and any of the approved Part 135 operators who choose could list flights that they desire to schedule to / from that location. HB2075 funds plus local funds would go into a travel bank to reduce the ticket price for the locations served. For example Salem to / from Newport three times per week initially could be a schedule to explore. Or, maybe PDX would be more practical, or both combined.

On demand flights:

A person wanting to fly can go online and request a flight. An email is immediately sent to all approved Part 135 operators. There is competition for pricing. Any subsidy would be evenly applied to the operator based on travel bank credits for locations that have travel banks.

An interested operator can pick up the flight on the website. If accepted, then that flight is booked and displayed online with number of passengers signed up for that date and time options. This is listed for specific day or it can be a range of times and days if the traveler's schedule is open - thus providing the flexibility for others to "vote" on the best day to get the most seats filled.

With the posted schedule (with at least 1 person committed to fly) then others can join that flight (Doodle type listing) If no others, the price remains higher.

For return flights:

The destination is shown as a departure flight available— usually within an hour of the arrival if all the incoming passenger(s) had been one-way for that day. This may assist in reducing empty returning flights. Emails could be sent to people who sign up to see flights that are becoming available to / from their specific towns. Technology gets the word out. Social media is also deployed.

Travel bank

There is an established overhead expense for operating the website organization. As a non-profit, any additional funds beyond operational costs that are received for memberships, auctions, HB2075 etc , are placed in the travel bank for use in reducing individual seats. This would be allocated based on local

investment where communities provide additional funding. For example for a city who has \$20,000 per in their travel bank per year versus another who has \$5,000 per year, it is allocated per seat on a prorata basis. Thus, communities with higher levels of contribution to the travel bank result in lower ticket prices when flying to / from that location.

The system encourages competition among Part 135 operators. They are organized to offer on-demand or limited schedules and they compete online based on available flights on given days to given locations. A single common dynamic website reduces the cost and confusion of multiple operators creating their own sites. This is like the difference of using Expedia or Travelocity to check on flights versus going to each individual airline. One stop shopping.

All payments are handled online ala the Uber model, Amazon and other modern ordering and payment systems. Scheduling flights and payments are done both on computers and all mobile devices with an app, similar to Uber .

The flyer requests the flight and the fee is charged to his card upon completion of the flight.

Ancillary systems including mobile apps such as Flight Aware or Flight Stats track flights (all are squawking discrete codes and using an N Number so it can be followed online) and ADS-B information will be used as it becomes available to display status in the air and arrival as well. Modern technology is put to maximum use.

Work flow

Passenger wants to fly from La Grande OR to Condon, OR.

Goes to web and selects a range of dates, times for a location from and to.

If flights exist within that parameter, they are displayed. A flight may not exist for that location. But if it does, as an inbound or outbound flight, the display would show time and distance and number of passengers and price for each date/time. (Doodle type selection). This flight is chosen, or the passenger could check back periodically to see if there are better rates based on day/time.

Once a passenger selects a flight, the passenger receives a confirmation vis email / text with all the details necessary, including FBO, location on field, plane and pilot, access to FBO, available ground transportation. Advertisements are available to increase cash flow into the travel banks, and these include hotels, restaurants, and local attractions at participating locations.

If flights do not exist –an email is instantly sent to all operator members and they can go online to show availability for that time/location and cost if they desire to pick up the flight request. This stays online whether the person selects the flight or not, because others may be going the same way.

The system can expand from a few locations on a scheduled basis to additional locations as demand grows. (4 flight per week to a specific location by one operator is FAA maximum under Part 135. Learning from the most often chosen routes allows operators to provision for them for better pricing and availability. Demand drives the system and locations like La Grande, John Day, Burns, Baker City and Newport have dynamically changing scheduled based on demand. Heuristically developed

schedule based on-demand year round flight requests are developed. Operators conform to actual historical times/days/locations that are most requested and provided, vs setting up a schedule and forcing the operator and passenger to conform to it. Technology provides the flexibility.

Aircraft type and size

Note: in 1998, the FAA changed the Part 135 requirements to allow specially equipped single engine turbine and piston aircraft to be flown under Instrument Flight Rules (in the clouds) IFR with revenue passengers. This was a reaction to commercial flights experiencing visual into obscured weather (VFR into IMC) flights, especially in Alaska with bad results. The FAA determined it is much safer to fly IFR. (FAA Parts 135.163 and 135.421) The Part 135 operators conform to these regulations using 4 and 6 place single engine aircraft. There are operators on the east coast and in other parts of the country using this size and type of aircraft. Single pilot IFR is FAA authorized if an autopilot is part of the aircraft systems . www.flyhopscotch.com and www.imagineair.com are operators flying small aircraft for passenger service. However, they are individual operators, each with its own online scheduling system not a dynamic pool as used by Rural Air Oregon to aggregate all operators into the most efficient system for both travelers and operators.

Rural Oregon cannot support large aircraft, there is not enough demand –at least initially- for more than 6 seats. Beech A-35, Cherokee 6, Piper Malibu, Cessna P-210, and Cirrus 22 are aircraft that can qualify. Cessna Caravan 208 and Pilatus PC12 are initially too large. Pendleton has been averaging only 4 passengers per flight in the 9 seat aircraft that fly their PDX route. Smaller works better for smaller communities.

We have 97 public use airports and 4,000 aircraft in Oregon. It would be ideal if we could get 4 aircraft flying to 4 locations 4 times per week within 4 years. 4x4x4x4 plan.

Promotion

Establishing rural air in a small community is analogous to opening a sushi bar in Madras. (maybe lots of interest, good surveys, but unknown actual demand and maybe no initial customers until it became the “in-thing” to do). Once a community decides on air service, it has to be heavily promoted, advertised, and also appearing in newspaper front page articles emphasizing the speed, times-saving, realistic cost, efficiency and safety. The mayor and community leaders need to be behind the effort. It will take 2 to 3 years before the flights are accepted by a local community as a reasonable option for travel versus their trucks. Auctions, airport days, demo flights, billboards, promotional items, Chamber of Commerce, city council involvement must be ongoing. A huge amount of the travel bank funds are needed to be spent to get ridership started, increased and sustained.

Website funding

A request will be made for website development and operational funding from ODA per HB2075 to go into a central travel bank. This is a legitimate use of rural air fuel tax funds. But, if that is not possible and is declined, other options would have to be explored.

The central travel bank funds the development and operation of the Rural Air Oregon website and mobile app until it reaches a point of success where a small per seat fee would be deducted from the

operators' fee payment. It will take an estimated 3 years before the web operation will be self-sufficient. However, the web may require ongoing subsidies depending on added features and use. Initial estimate on website costs would be \$100k to develop and \$100k per year to operate the web. Worst case, double that. But still, it would be only a very small percent of the fuel tax funding for a potential big positive result.

Expectations must be properly set

Airline passengers expect a 737 or 747 or Airbus 320 and more. Some are shocked when they have to fly on a tiny Canadair RJ or worse, a Dash 8 with propellers. Whew! Something to write home about. Passengers in more rural settings and especially in tourist locations like the east coast Martha's Vineyard, Nantucket and Cape Cod air shuttles have a different expectation level. A smaller plane is expected. And in Alaska anything with wings is fine with most flyers. So, expectations must be clearly set as to the type of aircraft and the type of flying, ie altitudes, headsets, ingress, egress, baggage and weight limits, etc. And turbulence. Like in boating, sometimes turbulence is to be expected and it is not life-threatening, and must be part of the briefing and the web must have detailed postings to set the expectation level. The same is true with entering the clouds, it can cause discomfort with some people if not briefed and expected, vs an airliner where you can't see much. Most people will love it, some will not. Based on Angel Flight mission experiences, most all the first-time passengers flown in small planes have been delighted. And the repeat flyers are real pros. Flights are at levels low enough to see the beautiful countryside (5,000 to 12,000 above the ground level AGL, and they provide an experience much better than being stuck at 35,000 looking through a tiny window at nothing. Expectations, expectations, expectations- make all the difference.

Ground transportation

At airports where regular travel begins to materialize, rental car agencies provide vehicles. In smaller towns, the communities provide serviceable cars at a small fee. And, some airports provide free airport cars for the day. Each location has its specific resources listed on the web and some ground transportation modes can be added in addition to the ticket cost. And, Uber and Lyft, they are nearly everywhere.

FBO to FBO – No TSA

The rural model will not support the overhead and time delays of TSA. All operations would be Fixed Base Operator FBO to FBO. Most airports have a facility which serves this purpose with and bathrooms, lounges, soda machines, food and friendly people. And, FBOs appreciate the additional fuel sales.

Competition – Expensive Traditional Part 135 charter webs

www.charterhub.com and others do not operate dynamically. When requesting a flight on one, the responses are emails and phone calls from operators asking, "Do you want food service", "How many flight attendants needed?", "do you prefer jet or piston, single or twin, what will you pay?". When the price is eventually quoted it ranges from \$2,000 to \$9,000 to fly one-way across Oregon. We need to have a ticket price that competes with driving (considering the time savings) and that means \$100 to \$500, typically \$200 fly across the state one-way. This becomes possible with 4 and 6 seat single

engine aircraft, properly Part 135 operated, and with fuel tax subsidies and skin in the game from communities and operators to keep the price low.

This system allows Part 135 to compete on day one upon signup. It incents new operators to emerge and structure themselves to meet the developing use of rural air travel. Competition is encouraged in the free market with the non-profit Rural Air Oregon organization not playing any favorites. One shared POOL resource.

We have technical resources to maintain and improve the website. All operators must meet the requirements of FAA aircraft operations per Part 135. We conduct Part 135 operator meetings. We promote the service that attracts operators. As others join, they will pick routes that work best for them, matching plane size and schedules with works best for them at their location. For example it might be that an operator based in Burns wants to fly specific routes in their region that match their capabilities, and avoid others.

Studies and research

Millions could be spent on determining (guessing) at passenger demand. This would be a waste. Like the Madras sushi bar, it would be very difficult to predict the demand until operations begin and succeed for a period of time. Better to pick one or two airports and destinations that make sense based on existing Part 135 and airport and community guesses and try them – using dynamic online technology.

Traditional rural models (often with 30 seat and 9 seat aircraft) have not worked. Something totally different must be developed that has a chance of working. Studying previous rural models would create data based on sand, often quicksand.

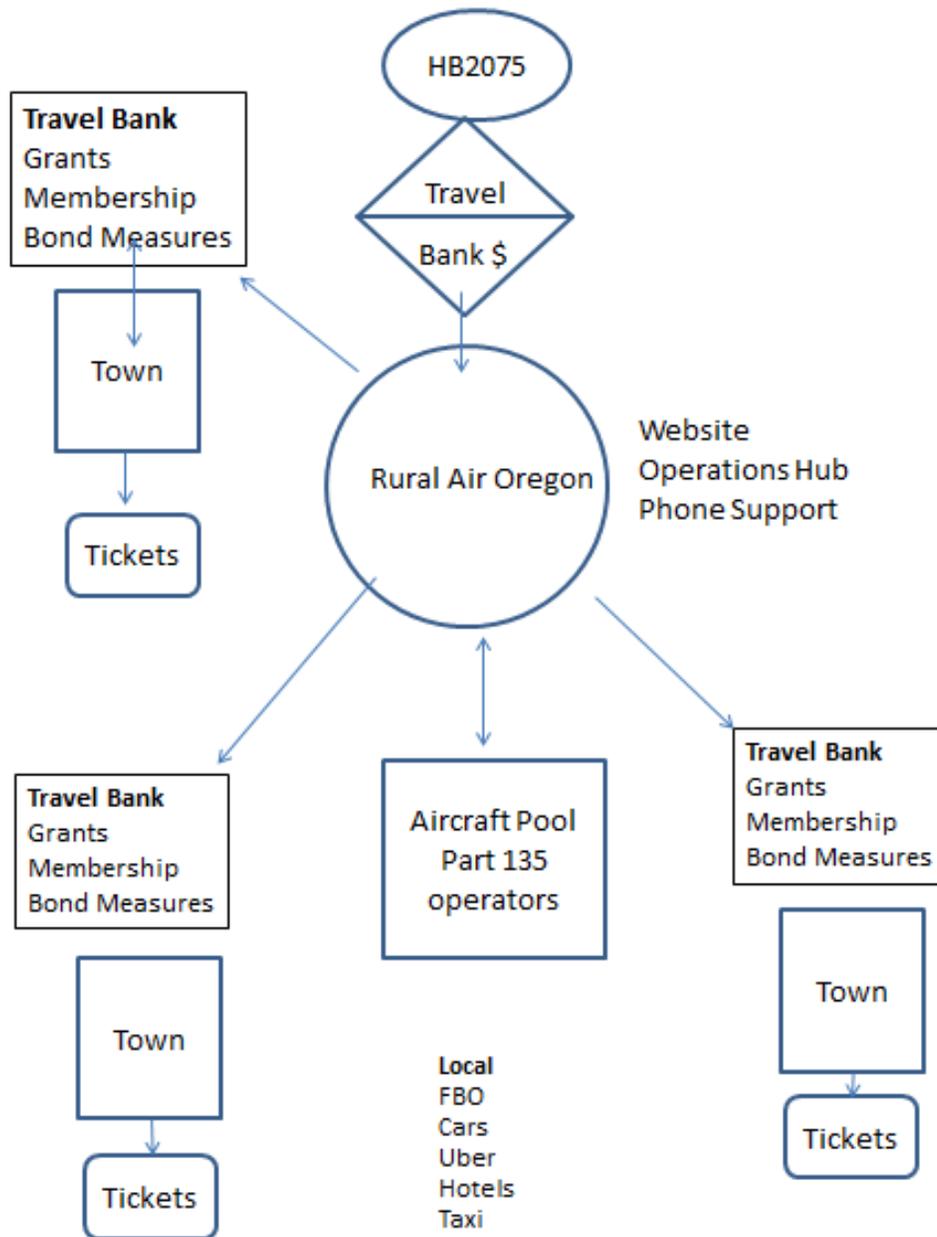
Communities must lead

Rural communities that desire air service will need to come together at their leadership levels to agree on what they initially want and then actively pursue all avenues to make it happen. Rural Air Oregon, ORAVI and ODA can provide the resources, connections and subsidies, but the proposal to move ahead, structure how they want it to work and to commit to local fund matching is essential to be done by the community to be served. They need to stand up to be counted.

Fly vs: drive & utilize our multi-million dollar existing assets

Oregon needs to get a few of our 4,000 aircraft out of their hangars and into the air to utilize our 97 airports across the state. And utilize the existing resources via technology and promotion and HB2075 subsidies per seat. And assist the Oregon Travel Forum OTF goals by getting more people off the road and into the air. As the time-worn saying goes: One mile of highway takes you one mile, one mile of runway can take you anywhere!

Diagram on next page.....



Strawman operations and flow.

www.oravi.org/RuralAirOregon How it might look.



**Serving hometown
airports across Oregon**

Draft - for discussion only

[Home](#)

[Towns](#)

[Flights](#)

[Aircraft](#)

[Oregon Airports](#)

Rural Air Oregon can fly you there in less than 2 hours.

Any many locations that require a 2 hour drive take only 30 minutes by air!

We provide passenger air travel from a town near you. Our pilots fly 4 to 6 seat aircraft that can pick you up near your home and take you anywhere in the state two to four times faster than by car. For example, Salem to Bend 45 minutes. Baker City to Aurora 2 hours. Hillsboro to Newport 1 hour. As a comparison, Aurora Oregon to Sisters Oregon is a 2 and 1/2 hour drive. by air with us, it is only 40 minutes.

There are no waiting lines, no TSA. Comfortable waiting rooms and facilities exist at most airports we serve, some with restaurants. We meet you in the waiting room, load your bags, you board the aircraft and we're off in the sky speeding across the state direct to your destination. Free parking is offered at most airports and inexpensive rental cars are available at many locations.

The cost ranges typically between \$300 and \$500 one way depending on location and number of passengers. Our flights are on-demand to meet your schedule.

When additional seats are filled on the same flight the cost drops dramatically. For scheduled flights, for example 3 flights per week from Newport Oregon to Portland Oregon, it is our goal to have a full plane on every flight and keep the price per seat down to \$300 each way. And, we fly at altitudes where you can see the beautiful Oregon landscape from your window seat. Our wireless Bluetooth headphones let you listen to our selection of music, the radio or your audio player.

The schedule shows both flights that are planned on-demand by other fliers, and flights that are on our regular planned routes. If you would like to request a different date and location, submit a request form and we will respond within 24 hours with price and availability. Our sophisticated web system works with a concept somewhat similar to Uber and Lyft transportation systems, except you are scheduling transportation by aircraft versus automobile. Your pilot will be a certified FAA Part 135 commercial pilot with thousands of hours of experience, flying aircraft designed for the mission.

In large cities aircraft with hundreds of seats fit the need. In smaller cities, aircraft with 10 to 30 seats fit the need. In small towns, aircraft with 4 to 6 seats are the perfect size to match the population size and its travel needs.

Welcome aboard! Take a seat, kick back and enjoy the flight and the beautiful view!



[Home](#)

[Towns](#)

[Flights](#)

[Aircraft](#)

[Oregon
Airports](#)

Rural Air Oregon can fly you there in less than 2 hours.



Step in
and
take a
seat



Sit back and enjoy the view.

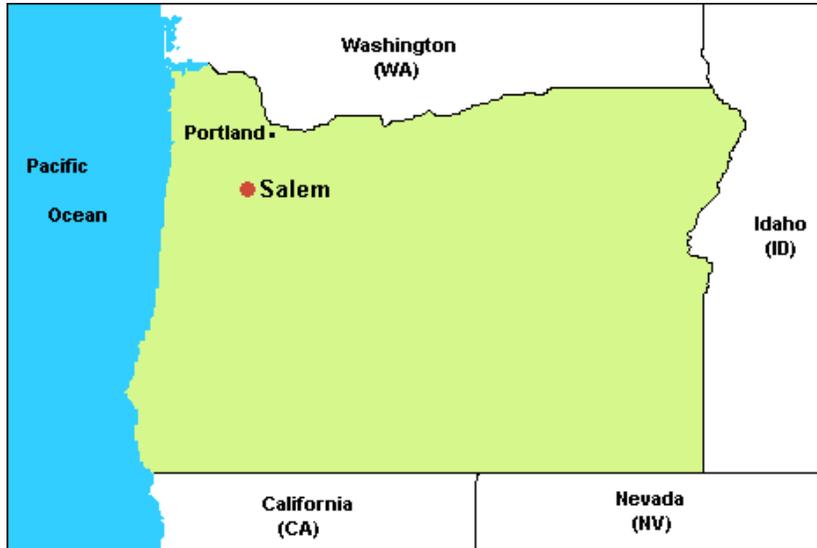
The Beechcraft A-36 is one of the aircraft in the fleet.

This aircraft typically holds 5 people. Four in the cabin and one in the cockpit. The A-36 cruises at nearly 200 miles per hour and typically flies at 5,000 to 12,000 feet above sea level depending on the route chosen. We fly in the same system as the larger aircraft and jets, talking to the same air traffic controller and under positive control from their radar systems. The aircraft and pilots are certified for instrument Flight Rules IFR with the required navigation equipment to enable flight in overcast skies which are so typical in the Northwest.

Welcome aboard! Take a seat, kick back and enjoy the flight and the beautiful view.



Airports in Oregon



Town	Airport name	ICAO	IATA	Usage	Customs	Runway	IFR	Rwy length
Albany	Albany Mun	S12		Civ.		Paved	Yes	3000 ft
Alkali Lake	Alkali Lake State	R03		Civ.		Paved	No	6100 ft
Arlington	Arlington Mun			Civ.		Unpaved	No	3000 ft
Ashland	Ashland Mun-Parker	S03		Civ.		Paved	No	3600 ft
Astoria	Astoria Regl	KAST	AST	Civ.	No	Paved	Yes	5700 ft
Aurora	Aurora State	KUAO		Civ.		Paved	Yes	5000 ft
Baker City	Baker City Mun	KBKE	BKE	Civ.		Paved	Yes	5000 ft
Bandon	Bandon State	S05	BDY	Civ.		Paved	No	3600 ft
Beaver Marsh	Beaver Marsh State			Civ.		Unpaved	No	4500 ft
Bend	Bend Mun	S07		Civ.	No	Paved	Yes	5000 ft
Boardman	Boardman	M50		Civ.		Paved	No	4200 ft
Brookings	Brookings State	KBOK	BOK	Civ.		Paved	No	2900 ft
Burns	Burns Mun	KBNO	BNO	Civ.		Paved	Yes	5100 ft
Cascade Locks	Cascade Locks State	KCZK	CZK	Civ.		Paved	No	1800 ft
Cave Junction	Illinois Valley			Civ.		Paved	No	5200 ft
Chiloquin	Chiloquin State		CHZ	Civ.		Paved	No	3700 ft
Christmas Valley	Christmas Valley			Civ.		Paved	No	5200 ft
Clearwater	Toketee State			Civ.		Unpaved	No	5300 ft
Condon	Condon State Pauling			Civ.		Paved	No	3500 ft
Cornelius	Skyport			Civ.		Unpaved	No	2000 ft
Corvallis	Corvallis Mun	KCVO	CVO	Civ.	No	Paved	Yes	5900 ft
Cottage Grove	Cottage Grove State			Civ.		Paved	No	3200 ft
Crescent Lake	Crescent Lake State			Civ.		Unpaved	No	3700 ft
Creswell	Hobby			Civ.		Paved	No	3100 ft
Culver	Lake Billy Chinook State			Civ.		Unpaved	No	5000 ft
Denmark	Cape Blanco State			Civ.		Paved	No	5100 ft
Enterprise	Enterprise Mun			Civ.		Paved	No	2800 ft
Estacada	Valley View			Civ.		Paved	No	3700 ft
<u>Eugene</u>	Mahlon Sweet	KEUG	EUG	Civ.		Paved	Yes	8000 ft
Florence	Florence Mun			Civ.		Paved	No	3000 ft

Town	Airport name	ICAO	IATAUsage	Customs	Runway	IFR	Rwy length
Gates	Davis				Civ.	Unpaved	No 1900 ft
Gleneden Beach	Siletz Bay State		S45		Civ.	Paved	No 3000 ft
Gold Beach	Gold Beach Mun			GOL	Civ.	Paved	No 3200 ft
Grants Pass	Grants Pass				Civ.	Paved	Yes3900 ft
Hermiston	Hermiston Mun		KHRI	HES	Civ.	Paved	Yes4500 ft
Hillsboro	Stark's Twin Oaks				Civ.	Paved	No 2400 ft
Hood River	Hood River				Civ.	Paved	No 3000 ft
Hubbard	Lenhardt				Civ.	Paved	No 3200 ft
Imnaha	Memaloose				Civ.	Unpaved	No 3300 ft
Independence	Independence State				Civ.	Paved	No 3000 ft
John Day	Grant Co Regl/Ogilvie			JDA	Civ.	Paved	Yes4500 ft
Joseph	Joseph State				Civ.	Paved	No 5200 ft
<u>Klamath Falls</u>	Klamath Falls Intl		KLMT	LMT	Civ.	Paved	Yes10300 ft
La Grande	La Grande/Union Co		KLGD	LGD	Civ.	Paved	Yes5600 ft
Lakeside	Lakeside State				Civ.	Unpaved	No 2100 ft
Lakeview	Lake Co		KLKV	LKV	Civ.	Paved	Yes5300 ft
Lebanon	Lebanon State		S30		Civ.	Paved	No 2800 ft
Lexington	Lexington				Civ.	Paved	No 4100 ft
Madras	City-Co		S33	MDJ	Civ.	Paved	No 5100 ft
Malin	Malin				Civ.	Unpaved	No 2800 ft
Manzanita	Nehalem Bay State				Civ.	Paved	No 2300 ft
Mc Dermitt	Mc Dermitt State				Civ.	Paved	No 5900 ft
Mc Kenzie Bridge	Mc Kenzie Bridge State				Civ.	Unpaved	No 2600 ft
Mc Minnville	Mc Minnville Mun		KMMV		Civ.	No Paved	Yes5400 ft
Medford	Rogue Valley Intl-Medford		KMFR	MFR	Civ.	No Paved	Yes6600 ft
Monument	Monument Mun				Civ.	Unpaved	No 2100 ft
Myrtle Creek	Myrtle Creek Mun				Civ.	Paved	No 2600 ft
Newberg	Chehalem				Civ.	No Paved	No 2200 ft
Newberg	Sportsman				Civ.	Paved	No 2700 ft
Newport	Newport Mun		KONP	ONP	Civ.	No Paved	Yes5300 ft
North Bend	North Bend Mun		KOTH	OTH	Civ.	No Paved	Yes5300 ft
Oakridge	Oakridge State				Civ.	Paved	No 3600 ft
Ontario	Ontario Mun		KONO	ONO	Civ.	Paved	Yes4500 ft
Owyhee	Owyhee Reservoir State				Civ.	Unpaved	No 1800 ft
Pacific City	Pacific City State		KPFC	PFC	Civ.	Paved	No 1800 ft
Paisley	Paisley State				Civ.	Unpaved	No 4300 ft
Pendleton	Eastern Ore Regl At Pendleton		KPDT	PDT	Civ.	Paved	Yes6300 ft
Pinehurst	Pinehurst State				Civ.	Paved	No 2800 ft
<u>Portland</u>	Portland Intl		KPDX	PDX	Civ.	Paved	Yes11000 ft
Portland	Portland-Hillsboro		KHIO	HIO	Civ.	Paved	Yes6600 ft
Portland	Portland-Mulino				Civ.	Paved	No 3600 ft
Portland	Portland-Troutdale		KTTD	TTD	Civ.	Paved	Yes5300 ft
Powers	Powers State				Civ.	Unpaved	No 2500 ft
Prineville	Prineville		S39	PRZ	Civ.	Paved	No 5000 ft
Prospect	Prospect State				Civ.	Paved	No 4000 ft
<u>Redmond</u>	Roberts		KRDM	RDM	Civ.	No Paved	Yes7000 ft
Rome	Rome State		KREO	REO	Civ.	Paved	No 6000 ft
Roseburg	Felt				Civ.	Unpaved	No 2300 ft
Roseburg	Roseburg Regl		KRBG	RBG	Civ.	Paved	Yes4600 ft
Salem	Mc Nary		KSLE	SLE	Civ.	No Paved	Yes5800 ft
Sandy	Country Squire		S48		Civ.	Paved	No 3000 ft
Sandy	Sandy River				Civ.	Unpaved	No 2100 ft
Santiam Junction	Santiam Junction State				Civ.	Unpaved	No 2800 ft
Scappoose	Scappoose Industrial		KSPB		Civ.	Paved	Yes3900 ft
Seaside	Seaside Mun				Civ.	Paved	No 2300 ft
Sheridan	Sheridan				Civ.	Unpaved	No 1900 ft
Silver Lake	Silver Lake F S Strip				Civ.	Unpaved	No 3000 ft
Sisters	Sisters Eagle Air				Civ.	Paved	No 3500 ft
Sunriver	Sunriver		S21	SUO	Civ.	Paved	Yes5400 ft
The Dalles	Columbia Gorge Regl/The Dalles		KDLS	DLS	Civ.	Paved	Yes5000 ft
Tillamook	Tillamook		S47		Civ.	Paved	No 4900 ft
Toledo	Toledo State				Civ.	Paved	No 1700 ft
Vale	Miller Meml		S49		Civ.	Unpaved	No 3800 ft
Vernonia	Vernonia				Civ.	Unpaved	No 2900 ft
Waldport	Wakonda Beach State		R33		Civ.	Unpaved	No 2000 ft
Wasco	Wasco State				Civ.	Paved	No 3400 ft

For additional information

Contact the ORAVI ROAR RFA Committee Members

ROAR RFA Committee members:

Mark Gardiner, ORAVI Board of Directors Chairman gardiner@avrotec.com 503-781-1299 M

Aron Faegre, ORAVI Founding Chair and Treasurer faegre@earthlink.net 503-880-1469 M

Jake Jacobs, ORAVI Executive Director jake@oravi.org 541-406-0711 M

Submitted by Oregon Aviation Industries www.oravi.org

January 30, 2019