

FROM THE DIRECTOR — DAN CLEM



It's a time for good news and bad news. But it's the Spring-season and there's blue-over-brown on several fronts:

- General aviation aircraft are flying again!
- FAA has a budget, with increases to the Airport Improvement Program.
- Fuel prices are almost affordable again.
- The Oregon legislature is considering allowing premium gasoline to be sold with ethanol-blend, and continuation of the Connect Oregon program for airports next year.

- Four Oregon airports received a total of \$9.2M in the American Reinvestment and Recovery Act (federal economic stimulus).
- Millions of dollars in airport construction projects are still moving ahead, which helps keep jobs in our communities and improves aviation safety.
- Commercial and scheduled air service to PDX continues to grow for Klamath Falls, North Bend/Coos Bay, Astoria, and Newport.
- Formation of an aviation-financing unit within an Oregon-based bank.

There are plenty of negative things affecting all areas of the economy, but we believe that aviation is weathering the current downturn as well or better than several industries and sectors. While the current adjustments in markets and sales of passenger seats, flight instruction, aircraft, avionics, and fuel are down overall, they are not in the 30% - 50% range of decrease in other major market sectors.

In this edition, you'll find information regarding Oregon's Pavement Maintenance Program, airport construction improvements planned for 2009, and other useful information. For the most current listing of airport/fly-in events this year, please refer to the Oregon Pilot's Association website:

<http://www.oregonpilot.org/calendar.html>.

The Oregon Aviation Board's next scheduled meeting is at the Baker Municipal Airport during June 17-18, 2009. All are invited to attend and discuss issues with board members.

Fly Safe and Neighborly -

Dan Clem

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The Oregon Aviation Board consists of seven members appointed by the Governor and confirmed by the Oregon Senate. The Board provides policy direction to the Director and the Department.

Members of the Oregon Aviation Board:

Chair, Mark Gardiner

Vice Chair, Chris Corich,

Board Members: Steve Beckham, Larry Dalrymple, Nan Garnick,

Jack Loacker, & Joe Smith.

**THE NEXT
OREGON
AVIATION BOARD
MEETING
June 18, 2009
8 a.m. to 2 p.m.
Baker City, Oregon**

15th Annual Oregon Pilot Memorial Tribute at Independence State Airport

The 2009 Pilot Memorial Day Event, sponsored by the Independence State Airport Support Group, kicks off at 10:30 a.m. on Monday, May 25, with an Oregon Air National Guard F-15 fly-over followed by the arrival of the USCG rescue helicopters. At 3:00 p.m. there will be a welcome from the Oregon Department of Aviation, followed by a flag lowering ceremony led by the AMVETS and the Fleet Reserve Association, with Suzanne Bladow singing the National Anthem. A Pilot Memorial Wreath, provided by the Pines Chapter of 99s, will be placed by the BSA Troup 38. A tribute to pilots will be given by WW-II B-17 pilot, Stanton Rickey, Retired U.S. Air Force Colonel, who survived after he was shot down over Germany and became a POW. U.S. Representative Kurt Schrader will present U.S. flags to local families of nine deceased aviators and comment on their military and community service. During the presentations, a Missing Man Formation flight is planned by four local RV pilots lead by Denny Jackson.

At the conclusion of the program there will be a Fly-By of aircraft, including warbirds, helicopters, power gliders, home built, light sport, ultralight, classic and antique aircraft. Rescue demonstrations by the U.S. Coast Guard, static display of aircraft and helicopters along with open hangar displays will continue until 3:00 p.m. The Polk County Chapter of the Oregon Pilots Association is providing a community picnic for \$5 in the Nutsch Aviation Hangar starting at 11:30 a.m. Parking is limited, with shuttle service available from the Marquis Spa parking lot at the corner of Hoffman & Stryker Roads starting at 10 a.m. until 3:00 p.m. More information is available from Andy Andersen, 503.838.4231 or andy-connie1@minetfiber.com.



Aurora State Airport Property

Oregon Department of Aviation is looking for an AVIATION RELATED BUSINESS interested in leasing and developing approximately four acres of land at Aurora State Airport. Please email John.P.Wilson@state.or.us Include your name, address and phone number with a short summary of your interest. We will contact you with details.

What's New at the State of Oregon State Airports?

- **Alkali Lake:** Recent maintenance to smooth and level out the surface. No facilities.
- **Aurora:** Plans in the works for summer obstruction removal on airport property.
- **Crescent Lake:** Snow has melted. Open for aviation as of May 1.
- **Joseph:** New delivery of Avgas, (April 27) priced at 3.85/gal. (down from \$4.40).
- **Lebanon:** Scheduled for summer (dry season) runway and partial taxiway overlay with new pilot-controlled MIRL and lighted wind cone.
- **McKenzie Bridge:** Still closed for spring snow.
- **Mulino:** Still have new hangars available and ready for lease. Contact Rita at ODA for information and leasing. Quad hangar and two older hangars adjacent to and perpendicular to runway have had roofs repaired and new gutters installed. Old shed in object free area has been torn down.
- **Pinehurst:** New access road has been completed. Open for business.
- **Prospect:** Still temporarily closed and will reopen when snow melts.
- **Santiam Junction:** Still residual snow and wet conditions. Remains closed until further notice.
- **Toketee:** Still closed for spring snow.
- **Wasco:** Be extra careful around the airport. Wind generator towers over 400 feet tall have been built close to southeast end of the traffic pattern.
- Runway 25 Pattern has been changed to nonstandard right traffic. No segmented circle at airport due to insufficient land on airport property for safe placement.

GPS with Vertical Guidance, The Lowdown on Going Low

Reprinted with permission March/April 2009 FAA Aviation News

When I first started flying, there were two types of instrument approaches. The first kind was the precision approach, so named because it incorporates vertical guidance. The second was the non-precision approach, which offers only lateral guidance. Pilots flying a non-precision approach learn the “dive-and-drive” drill, which calls for a quick descent from final approach fix (FAF) to minimum descent altitude (MDA). The MDA must be strictly maintained unless and until the runway is in sight and the aircraft is in position for a normal descent and landing. It sounds straightforward and, during training flights, it usually is. The challenge comes with the demands of the non-precision approach in actual instrument conditions. Even for experienced pilots, the combination of low altitude, low airspeed, and looking outside for the runway during a non-precision approach can be challenging. Controlled Flight into Terrain (CFIT) accidents have resulted when pilots were not up to those challenges.

What’s in a Name?

The good news is there is now a third type of instrument approach: “approach with vertical guidance” (APV). The traditional precision and non-precision approaches rely on ground-based navigation aids, such as the localizer and glide-slope antennas, which are expensive to install and maintain. However, the APV is based on signals from the global positioning satellite (GPS) constellation and the Wide Area Augmentation System (WAAS) that FAA certified in 2003. WAAS has improved on GPS to the point where WAAS approaches can provide minimums equivalent to Category I instrument landing system (ILS) minimums, i.e., as low as 200 feet above ground level (AGL). Together, GPS and WAAS eliminate the need for airport-specific navigation aids, which means that more airports in more places can benefit from having one or more APV approaches. Since APV approaches include vertical guidance and can, in some cases, provide approach minimums equivalent to Category I ILS, you may wonder why FAA doesn’t simply classify them as precision approaches. Here’s the answer. Officially, the APV is different because it does not meet the International Civil Aviation Organization (ICAO) and FAA precision approach definition. That definition applies mostly to localizer and glide-slope transmitters. In addition, FAA and ICAO definitions for a “precision approach” carry a great deal of documentation, definition, and associated costs. Rather than try to change these standards and the associated international agreements, both ICAO and FAA adopted the term APV.

Why Not Call It WAAS?

The development of WAAS-enabled GPS approaches led to the creation of new terms on certain instrument approach charts. One of these is “RNAV (GPS).” You may ask why you see this term rather than “WAAS” in the upper right-hand corner of an instrument approach chart. Since WAAS is the source of the approach guidance, why aren’t they called “WAAS” approaches? Here’s the story. FAA broke with 40 years of tradition to improve the approach chart format. In the past, FAA named approaches for the primary sensor and listed that term in the upper right corner, e.g., VOR RWY 24 or ILS RWY 6. With the advent of WAAS, it quickly became clear that continuing this format would double the size and number of approach chart booklets. The solution was to use the term “RNAV (GPS)” with the runway number, e.g., RNAV (GPS) RWY 24. This format allows chart makers to publish GPS and WAAS approaches on the same page, with the minimums associated with GPS only or WAAS on the same chart. An approach chart with the RNAV (GPS) notation means that you must have certified and approved area navigation (RNAV) equipment in order to use that procedure. You must then look at the minimums section to determine whether it is a GPS or WAAS approach.

Learning the “L-phabet

So, how do you know whether it is GPS or WAAS? To answer that question, look at the terms in the minimums section of RNAV (GPS) charts. Since The “RNAV (GPS)” format allows chart makers to publish GPS and WAAS approaches on the same page. To use an approach with the RNAV (GPS) notation, you must have certified and approved area navigation (RNAV) equipment. They all begin with the letter “L,” you can think about it as learning the “L-phabet” needed to spell safety and success in flying these approaches. GPS Approaches LNAV. This is the abbreviation for “lateral navigation.” LNAV is the basic GPS approach. Like the traditional non-precision approach, an approach with LNAV minimums provides only lateral guidance. LNAV approaches lack vertical guidance and can be flown via “dive and drive” down to an MDA. The main difference between an LNAV approach and a traditional VOR or NDB is the source of the navigational guidance. In VOR and NDB, it comes from a ground-based navigation aid. With LNAV, the navigational guidance comes from GPS.

LNAV+VNAV. There is no “LNAV+V” approach, so you will not see this particular notation on a published approach chart. However, because you may see it on your moving map navigator or electronic horizontal situation indicator (HSI), you need to understand clearly what it does, and does not, mean. Some WAAS-enabled GPS units provide advisory vertical guidance in association with GPS approaches. The LNAV+V notation is simply the equipment manufacturer’s term for a GPS approach that includes an artificially created advisory glide path from the final approach fix to the touchdown point on the runway. The advisory glide path can provide a stabilized approach and eliminate the need for “dive and drive” descent to the MDA, but you need to understand clearly that an approach with the LNAV+V notation is not the same as LNAV/VNAV or LPV.

Like any non-precision approach, a GPS approach with the LNAV+V notation on your moving map navigator is flown to the published MDA, which in this case is the MDA associated with LNAV minimums. It is still GPS, flown to LNAV minimums, and the advisory “+V” is simply a means for the pilot to achieve a predictable rate of descent.

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RV-12 Highly Anticipated LSA Light Sport Aircraft



Van's RV-12 Prototype

Photo by Bonnie Kratz courtesy of Ken Scott

For many years the average age of pilots in the United States has been increasing. Domestic production of entry-level airplanes virtually ceased decades ago. The combination produced a downward spiral in the population of pilots, as the expense of earning a pilot's license increased and training aircraft got older and more worn. It's been difficult to attract young people, used to computer technology and modern automobiles, into a 35 year old airplane with the sophistication of a '29 Studebaker.

In an effort to reverse the trend, the Federal Aviation Administration approved a new category of

aircraft and a new level of pilot's license. The Light Sport Aircraft category allows simpler certification procedures for a class of light, simple and relatively low-performance airplanes well suited to the training role. Concurrently, a new Light Sport Pilots License was instituted. Easier to earn than the standard Private Pilot's license, the LSPL does not require a medical exam. The caveat was that Light Sport pilots are restricted to flying Light Sport Aircraft.

The new rules had the desired effect, although maybe not to the degree their promoters had hoped. In 2007 a new breed of small airplane began to appear on American airports. Quite small and very quiet, Light Sport aircraft were equipped with modern avionics and amenities and actually looked like something designed in the Twenty-first century. Unfortunately, the simpler certification procedures that were supposed to keep the price down had only limited effect, and many of the new designs sported price tags well north of \$100,000.00. Into this market stepped Van's Aircraft, Inc. with a new airplane they called the RV-12.

Van's is a real Oregon success story. Founded by Cornelius resident Richard VanGrunsven in the early 70s, the company has become the largest seller of kit aircraft in the world. Several designs, all called "RVs," have been developed, manufactured and sold. In 2001 Van's built a new facility at the Aurora State airport and has since expanded several times. As of May 2009 over twenty-thousand RV kits had been sold and over 6,100 airplanes completed and flown in thirty countries – an average of one new airplane in the air every second day since the company began – so the RV-12 had the advantage of good "genes".

The new RV-12 meets all the criteria for a Light Sport Aircraft:

- Maximum gross takeoff weight: 1,320 lbs

- Maximum stall speed: 51 mph (45 knots) CAS

- Maximum speed in level flight with maximum continuous power: 138 mph (120 knots)

- CAS Single or two-seat aircraft only

- Single, reciprocating engine (if powered), including rotary or diesel engines

- Fixed or ground-adjustable propeller

- Unpressurized cabin

- Fixed landing gear (except for water aircraft or gliders)

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WAAS and Other Approaches with Vertical Guidance LPV

The improved accuracy of WAAS enabled FAA to develop the LPV approach, which is the term for “localizer performance with vertical guidance.” The LPV is a WAAS approach that provides vertical guidance to as low as 200 feet AGL. It is flown to a decision altitude (DA) and uses the same criteria as an ILS. The difference is that LPV is based upon the WAAS system positioning signal instead of a ground-based localizer and glide-slope transmitter. This development means that the guidance source is available to every airport in the continental United States with no requirement for additional navigation equipment. In other words, every runway end is a potential candidate for a vertically guided approach. The only limiting factor is airport infrastructure: To be eligible for an LPV approach an airport must still meet the standards for runway length, width, obstacle-free zones, and no glide slope intrusions. FAA plans call for an additional 500 GPS-based approaches to be added in 2009 and most will be LPV approaches.

LNAV/VNAV. You may see this notation on the published approach chart. The term stands for “lateral navigation/vertical navigation.” LNAV/VNAV is an approach with vertical guidance (APV) in the ICAO sense of the term, and it is flown to a DA rather than an MDA. It is not a WAAS approach; in fact, LNAV/VNAV existed before the WAAS system was certified. In the past, only aircraft equipped with flight management systems (FMS) and certified baro-VNAV systems could use the minimums associated with LNAV/VNAV. Now, however, LNAV/VNAV approaches may also be flown using WAAS equipment.

Future WAAS Approaches

LP. The term “localizer performance” is one you will see on future approach charts. As with ILS approaches, there may be places where an obstruction would require a high DA. Just as there are localizer-only approaches, in the future there will be equivalent WAAS procedures with “LP” minimums. A WAAS LP approach will provide accurate lateral guidance, but no vertical guidance. The improved lateral accuracy of the LP approach will allow minimums as low as 300 feet AGL without any vertical guidance. The first LP approaches are scheduled for publication in summer 2009.

Now You Know

Satellite navigation, which has improved the efficiency of the National Airspace System, has been a remarkable success story. For one, FAA can build area navigation (RNAV) routes, such as the new “Q” routes and “T” routes, without concern about installing a VOR in a particular location. Instead, the decision is based on optimum routing. With WAAS, there is now ILS-like accuracy available throughout North America without relying upon ground-based navaids. FAA also has the ability to add hundreds of new instrument approaches each year instead of dozens. It’s a great time to be an instrument pilot!

For more information, visit the FAA GPS website at <http://gps.faa.gov>

By **Larry O. Oliver, FAA**, Flight Standards Service’s Flight Technology Requirements Branch

*The Department of Aviation is always moving forward in our efforts to provide the very best service and to continue to meet the needs of our customers. The department would appreciate your taking a few minutes to fill out a customer survey at the ODA website (under ODA Budget Information and Feedback). **Thank you!!!***

www.aviation@state.or.us

It’s The Law: All Oregon Pilots & Aircraft Must Be Registered With The Department Of Aviation

The Oregon Department of Aviation is not supported by your tax dollars. We use fees, grants, and leases to maintain a safe and efficient system of airports in the state. For more information go to our website. www.aviation@state.or.us

Pay Your Fees or Pay a Fine

837.010 Federal pilot certificate required. No person shall fly aircraft in this state unless holding a pilot certificate of competency issued by the appropriate federal agency. [formerly 493.020]

837.015 Registration of aircraft. Unless exempted by ORS 837.005, no person shall fail to register any aircraft when required by ORS 837.040 to 837.070. [formerly 493.030]

Oregon Aircraft Dealer License are due

If you have not yet paid for 2009 and need an application you may go to our website to download the form.

If you have any questions please contact:

Turise Henthorn 503-378-4880 or 800-874-0102 Therisa.l.henthorn@state.or.us

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The big difference is that the RV-12 is supplied as a kit, not a completed aircraft. Van's estimates that it will take the average customer between 700-900 hours to assemble. The reward for the labor will be a brand-new airplane -- with modern avionics, a new Rotax 912S engine, a large, comfortable cabin and an excellent useful load -- that cost about \$60,000. Better yet, it's designed for easy disassembly. Two people can remove the wings in about five minutes, so the airplane may be stored in the corner of an occupied hangar, or kept at home on a trailer.

The RV-12 was developed over almost three years of intense engineering and extensive testing. As part of the program, Van's two prototype aircraft -- an early "proof-of-concept" airplane and a second "conforming" version -- appeared at airshows across the country, racking up many flight hours and stimulating plenty of interest. In the shop, thousands of man-hours were spent on structural testing, prototyping and developing an accurate and easy-to-follow set of construction instructions.

The RV-12 went on sale in April 2008. All the development effort seems to be paying off, as customers report the airplane is extremely easy to build and goes together very quickly. The first customer-built examples should fly before the end of the 2009 -- in the world of home-built airplanes, that's fast!

In the spirit of the Light Sport Category -- attracting new blood to aviation -- Van's and the Portland-based educational foundation Airways Science for Kids (ASK) have combined on a new project. Using donations from sponsors and a kit donated by Van's, young people ages 12-17 will actually build an RV-12. Working in a shop set up in Van's factory and supervised by experienced volunteers, they will do everything from opening the boxes to rolling the finished airplane out the hangar door. Along the way, the sponsors hope they find what Charles Lindbergh described so well, over eighty years ago:

"Science, freedom, beauty, adventure...what more could you ask of life? Aviation offers it all"

Written by: Ken Scott

NEW T-HANGARS!

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New T-Hangars are available for lease! Contact Rita Rogerson (503-378-5480) at the Oregon Department of Aviation for further details and information.
(rita.f.rogerson@state.or.us)

Larry Reinhardt is owner/technician of Full Throttle Aircraft Services and is an A&P/IA. He works out of hangar 20. Full Throttle offers a full line of maintenance and repair, annual/progressive inspections, paint touch up and repair, aluminum polishing, oxygen service (up to 2,000 psi) and aircraft detailing. Larry is the Northwest rep for Wing Waxers Detailing, a nationally known and respected company.

You can reach Larry at (503) 759-3827 or (503) 698-2109, or by email at: service@fullthrottles.com. Or check his website at www.fullthrottles.com for specials and discounts on services.

AIRSHOWS & EVENTS 2009

Independence Pilot Memorial Event	May 25	Independence, OR (7S5)	
Lebanon OPA Fly-In & Antique Car Show	June 5-6	Lebanon, OR	
Winnemucca Fly-In	June 13	Winnemucca Airport, Nevada	
NW RV Fly-In	June 13	Scappoose, OR (SPB)	www.eaa105.org
All State Festival of Balloons	June 19-21	Cook Park Tigard, OR	
AirVenture Fly-In & 50th Anniv.	June 27	Grants Pass, OR (3S8)	
NW EAA Fly-In & Sport Aviation Conv.	July 8-12	Arlington Muni., WA (AWO)	
Independence Bi-Plane Fly-In	July 18	Independence, OR	
OPA Pancake Breakfast	July 18-19	Mulino State Airport (4S9)	
20th Annual Fly-In Prospect Unit	July 19-20	Prospect State Airport (7S5)	flyguy6956@earthlink.net
26th Annual Mosquito Festival	July 25-27	Paisley Airport (22S)	
EAA AirVenture- Oshkosh	July 27-Aug. 2	Wittman Reg. Airport WI (OSH)	
Annual NWAAC Fly-In	August 14-16	Vancouver Wa. Pearson Airpark	www.nwaac.com
Planes, Trains & Automobiles	August 22	Tillamook Airport (KTMK)	
Central Oregon Air Show	August 21-22	Madras Airport (S33)	donmobleym@madras.net
Oregon International Airshow	August 28-30	Hillsboro Airport (HIO)	www.oregonairshow.com
NW Art & Air Festival & OPA Convention	August 28-30	Albany Municipal Airport (S12)	www.oregonpilot.org
WAAAM Hood River Fly-In	Sept. 11-13	Ken Jernstedt Airfield (4S2)	
Grant County Air/Search Fly-In Breakfast	Sept. 12	Grant County Regional (GCD)	tcberry@ortelco.net
NASAO Annual Meeting & Tradeshow	Sept. 12-15	Tucson, AZ	
National Championship Air Races	Sept. 16-20	Reno-Stead Airport (4SD)	www.airace.org

For Sale: Hangar #2, Siletz Bay State Airport-S45

Sale price: \$27,500

Location: 5 miles south of Lincoln City @ Gleneden Beach, OR 97388

Hangar size: 2484 sq. ft. (44' X 36')

Ground rent: \$322.92 per year (\$.13 per sq. ft.)

Annual real estate tax: \$153.10 per year

Runway: 3300' X 60' asphalt

Attractions: within walking distance of Salishan Resort and the beach

Contact owner: Jim @ (509) 230-8010



Oregon Department of Aviation
3040 25th Street SE
Salem, OR 97302-1125
web: www.aviation.state.or.us

Where to find non-blended fuel: Go to the ODA website at www.oregon.gov/Aviation/index.shtml. Under “Other Aviation Issues” click on E-10 Ethanol In Gas, and scroll down until you come to the chart of suppliers.

Volunteers Needed

Have you ever wanted to help out your local airport or perhaps an airport you are very fond of? ODA , in partnership with the Oregon Pilots Association (OPA), has a volunteer program called Airport Information Reporting for Oregon. (AIRO). This program is designed to have aviation enthusiasts volunteer to help ODA identify items related to safety, maintenance and security.

This program promotes operational excellence through active participation in public/private partnerships. You must be at least 21 years or older and have a willingness to travel around Oregon for training and/or inspections at assigned airports. If this sounds like something you might be interested in, please contact:

Tralee Knapp, State Airport Operations Specialist
E-mail: Tralee.M.Knapp@state.or.us (503) 378-627

You can also visit our website at:

<http://www.oregon.gov/Aviation/index.shtml>

O R E G O N D E P A R T M E N T O F A V I A T I O N