

Mountain Wave



FALL 2004

Quarterly publication of the Colorado Department of Transportation - Aeronautics Division

SPECTACULAR AIRSHOW HIGHLIGHTS ANNUAL APPRECIATION BARBECUE



Program partners of CDOT-Aeronautics Division were awed by the sight of precision aerial maneuvers, flawlessly executed by the THUNDERBIRDS, resident pilots of the Division's air arm at the recent Annual Aeronautics Appreciation Barbecue held in early October.



John Sweeney, T.K. Gwin and Shahn Sederberg man the grills in their spare time.

In addition to the breathtaking aerial performance, guests were treated to genuine Ponderosa hospitality and a delicious barbecue. Undaunted by the early October weather, the hearty will not soon forget this memorable day!

Each year, the Division hosts CDOT colleagues - such as Accounting, Procurement, Budget, the FAA-Airports District Office and Flight Service and program partners such as the DIA- ARFF training personnel in order to say thank you for the support each has given Aeronautics in making their programs successful during the previous year.



IF I CAN DREAM... I CAN FLY!

"Wow! What a great workshop! Not only did I learn so much interesting information about the science of flight, but I also overcame a fear of flying. Can it get any better than that?" Teresa Osborn - Collbran Elem. School

Teachers from Western Colorado gathered mid-summer at **Walker Field Airport in Grand Junction** to learn how to use aviation to help learning take flight with their students. Thirty teachers, from grades K-12, participated in the **Science of Flight Teacher Workshop**. The Division partnered with the **Thunder Mountain Civil Air Patrol Squadron** and **EAA Chapter 800** to provide two days of hands-on learning for educators.

The first day of the workshop consisted of three sessions: **Integrating Aviation Into Science**, **The Physics of Flight**, and **Physiology of Space Flight**. The focus was on hands-on activities and other fun and easy ways to make math and science come alive for students. Day two was an aviation fair including several different airport tours, dozens of hands-on and make-and-take activities, and even the opportunity to take a flight! Each teacher left with a classroom set of supplies to do the activities with their students. Those who chose to do so, were able to earn a science credit through Adams State College.

The next **Science of Flight Teacher Workshop** will be offered **October 30 and 31** at the **Weisbrod Museum at Pueblo Memorial Airport**.

For more information or to register, contact Darci Wert, 303-261-4418 or darci.wert@dot.state.co.us. Registration form and workshop brochure are also available at our website: www.colorado-aeronautics.org ... look for the Teacher Workshop icon at the bottom of the main page.



Cathy Latham, pre-school teacher from DeBeque, grins after her first flight in a small aircraft.

For this first-time flyer, it felt like "learning to ride a bicycle without training wheels".

KidSpace – Hands-on Aviation Activities for Kids of All Ages

The goal of the **KidSpace** program is to give local groups ideas and support to offer **KidSpace** activities independently at their airport events. **KidSpace** appeared at the **Rocky Mountain Regional Fly-In** at Front Range, the **Planes to Plains Fly-In** at Lamar, the **National Radial Engine Exhibition** at Akron and **Airport Appreciation Day** in Montrose. All in all, nearly 1000 kids participated in **KidSpace** over the course of the summer.



Hands-on activities - like making your own airplane - are always popular at **KidSpace**



Colorado Division of Aeronautics
5126 Front Range Parkway
Watkins, CO 80137

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**ON LINE WITH
SPORT PILOT/
LIGHT SPORT AIRCRAFT
RULE**

**GRANTS BENEFIT
AIRPORTS**

**GA ENTITLEMENT
TRANSFER PROGRAM
A SUCCESS**

**MOUNTAIN RADAR
STUDY BEGINS**

WORLDWIDE GPS SYSTEM EXPANDS

Following an agreement in June between European Union technocrats and the US, a meshing of GPS satellite systems is in the offing. The EU agreed to make its new *Galileo* system compatible with the US system, eliminating the concern that proposed different frequency bands might pose jamming problems in war zones.

The expanded *Galileo* system, putting 30 rather than the present 15 satellites into use above the earth, will result in greater reliability and better accuracy. But it also has far-reaching capacity for train and automobile navigation – and the hint of nearly 400 millions satellite cellphones in use by 2015.

And as technology advances, so do the prospects for cell phone service aboard your favorite airliner. By creating a cell site on board each aircraft, the problem of overwhelming land-based towers and interference with airline navigation and communication has all but been eliminated. Use of satellites as a collection and distribution site is being researched, as well as “down-loading” to ground based distribution centers.

The US DOT Small Community Air Service grant program has announced a \$500,000 one-time award to promote year-round service to the **Yampa Valley Regional Airport** and underwrite scheduled service during the summer tourist season.

Having always relied on the ski industry to provide winter bookings, the Airport hopes now to use the grant to attract more year-round visitors, as well as provide a enplanement guarantee to a carrier who initiates the service.

Yampa Valley Regional Airport is located in Hayden, CO, and serves the Steamboat Springs Resort area.

STATEWIDE TAX REFUNDS to Colorado airports reached nearly \$8M in fiscal year 2004, which ended on June 30th. This represents \$.04 excise tax on every gallon of Avgas and non-commercial jet fuel sold-and 65% of jet fuel sales taxes collected each year.

Funds remaining after refunds go to airports who are recipients from the **Colorado Discretionary Aviation Grant** program, which awarded nearly \$4M in individual and statewide grants last year.

During fiscal 2004, **fifty-seven Colorado airports received a combined total of more than \$52M in federal funds**, aimed at airport improvements, maintenance and planning.

STATE COMMUNICATIONS SERVICES SUPPORT CDOT PROGRAM

By T.K. Gwin, AWOS Program manager

Most pilots who regularly fly the Colorado mountains are familiar with CDOT's Mountain AWOS Program. Placing weather information systems in mountain passes was an idea that had been around for a few years, but had no funding until House Bill 1069 was passed by the Legislature in 2000.

Now we are in our final stages of installing the last four sites and moving the AWOS from Niwott Ridge, north of Corona Pass to Mines Peak, north of Berthoud Pass. When all of these sites are commissioned, we will have a total of twelve weather information systems operating in critical terrain statewide.

The twelve sites were determined on the basis of where weather information would be most useful, and did not take into account installation expediency. But each site had to have electricity, telephone access, and enough altitude to capture usable weather data. The most productive search would have to center around developed sites.

The FAA has a remote communication outlet (RCO) on the north side of La Veta Pass. A potentially good site, the location has no telephone lines installed and FAA regulations prohibit the use of its microwave system for non-federal needs. After some research, I contacted State Communications Services and asked if they could help. Communications Services offered that we move the AWOS to their site four miles south of Hwy 160. This turned out to be such a good idea that the concept was expanded to total six sites – by the end of the year, there will be AWOS units installed at La Veta and Monarch Passes, Sunlight Mountain, Bald Mountain, Badger Mountain and Mines Peak using micro-wave services from Communications Systems to deliver the data.

I would like to recognize the contribution that State Communications Services continues to provide to CDOT's Mountain Automated Weather Observing System (AWOS) program. Communications Services is the backbone of the statewide communication network, including voice, video and data service to the Colorado State Patrol and the Departments of Corrections, Transportation, Natural Resources, as well as other local public safety agencies. It is this service which operates the state's digital microwave system with personnel monitoring network load usage, operations functions and performing communications capacity planning.

From the beginning, the entire staff at Communications Services has gone above and beyond to help us. They have allowed us to co-locate our equipment with theirs and have provided electricity and a microwave link to our phone system. In the winter, they provide access to the sites via snow-cat and keep an eye on our equipment. They have taken the opportunity to help – even before we have asked.

AIRPORTS BENEFIT FROM ANNUAL GRANT AWARDS

37 Colorado airports were recipients of nearly \$3M in **Colorado Discretionary Aviation Grant** program awards at a recent meeting of the **Colorado Aeronautical Board** in Denver. Approximately two-thirds of the annual funding requests supported local match for FAA Airport Improvement Program (AIP) projects.

The **Colorado Aeronautical Board** was in session in conjunction with the **Colorado Aviation Conference and Grant Review** on Friday, October 22nd. However, the traditional grant hearing process was streamlined to award funding to many projects without the necessity of an individual interview with the sponsor. Instead, much of the Board's session allowed for an open discussion with sponsors and members of the aviation community...a sort of “how goes it” to exchange goals and ideas with the Board.

Much credit for the streamlining of the grant award process can go to the Division's efficient use of the Capital Improvement Program (CIP) planning process which annually defines airport needs and possible sources of funding. Working in conjunction with the FAA Denver Airports District Office, airports and Division planners fine tune needs to maintain and improve the airport system statewide - then identify timing and likely funding sources.

To view a complete list of 2005 discretionary aviation grant funding, visit our website at www.colorado-aeronautics.org - click on the **Discretionary Grant** link.



Governor Bill Owens participates with AOPA president Phil Boyer (r), in honoring Sen. Lewis Entz (l) for his support of the CAB's installation of mountain AWOS.

Without the support of Communications Services, we would not be able to provide weather information from the remote locations where it is so critical to pilots. In an era of lack luster work within so many government entities, Communications Services sets the example of *how it should be done*. They have always found a way to accomplish the job – and with a very professional attitude. They are not only good stewards of the taxpayer's dollar, but are contributing to flying safety in Colorado.

As pilots and aviation managers, we owe them a huge measure of thanks.

FREQUENCIES AND TELEPHONE NUMBERS TO ACCESS THE FINAL FOUR AWOS INSTALLATIONS WILL BE AVAILABLE SHORTLY

SPORT PILOT/ LIGHT SPORT AIRCRAFT FINALLY A REALITY

After almost ten years in the planning, FAA has finally announced September 1st as the activation date for the new **Sport Pilot** and **Light Sport Aircraft** Rule, defining a whole new category of flying for pleasure.

The **Sport Pilot** may operate an aircraft using a valid driver's license as evidence of medical eligibility, thus eliminating the expensive and sometimes complicated FAA medical process. However, knowledge of a condition that you believe might preclude your safe operation of an aircraft should be reason enough for "self-grounding".... the honor system among pilots.

Sport pilots are limited to day-VFR flight staying outside controlled airspace unless prior training has been accomplished. Flying for compensation is prohibited, as is use of the certificate for charitable flights. Training as a **Sport Pilot** is based on a minimum of 20 hours of instruction.

The FAA worked with the general aviation community to create the final rule that sets safety standards for the 15,000 people who will now earn FAA certificates to operate more than 15,000 existing uncertificated ultralight-like aircraft.

Another 12,000 pilots and new aircraft are expected to be certificated over the next ten years.

FAA UPDATES SPORT PILOT TIMELINE

Over the course of the next several months, the FAA's newly-formed Sport Pilot/ Light Sport Aircraft office will be issuing guidance toward implementing the new Rule. Keep up with the changes at www.faa.gov.

Aircraft registration - begins Oct 15/04
Airman Certification - begins Jan 15/05
Proficiency guidelines - available Jan/05
S/PEXaminer Handbook-avaialbe late Oct /04
Pilot Examiner Applications - Nov /04



Light Sport Aircraft must weigh no more than 1320 lbs., with a single engine and conventional landing gear. They might be referred to as ultra-light, micro-light, glider, lighter-than-air, rotorcraft, powered parachutes or weight-shift controlled aircraft...small production aircraft, experimental aircraft and aircraft built from a kit or as a homebuilt.

The **Sport Pilot/ Light Sport Aircraft Rule** makes becoming a pilot and owning an aircraft more affordable and less time consuming. Yet, there are enough restrictions imposed by the Rule to retain a level of safety for aviators and the public. It will reduce the hassles that have hindered so many people from realizing their dream to fly.



The Rule is long and (it's a government regulation - what did you expect) complicated on initial reading. But the effort to take a lot of the prohibitions (both in training and in cost) away from recreational flying, makes this the most highly anticipated actions by the FAA in a long time.

Manufacturers of factory-built and home built aircraft have a bevy of new aircraft waiting for the public to admire. Some are available in the neighborhood of \$25,000 or less. Many require only partial individual construction, meeting the 51% owner-built limitation, yet providing an aircraft that will be easy to fly and cheap to operate.

Let's hope that the **Sport Pilot/ Light Sport Aircraft Rule** is the kick in the pants that the general aviation industry has been hoping for to open a new arena of pleasure flying.

At left, FAA Administrator, Marian Blakey, takes an ultralight ride with veteran instructor, Kenley Snyder, at the recent AirVenture in Oshkosh in late July. She commented, "It was the neatest experience I've ever had, just fantastic! It's the first time I've been up in a plane and been able to look through my legs and see the ground."

CLASH OF THE TITANS

Dynamics in the airplane business are not for the Faint of Heart. Billions of dollars are riding on one call.

In the world of international jet production, two clear paths appear to be diverging - and the rise - and possibly ultimate fall - of one of the world's premier manufacturers could be in the balance.

Long the leader in commercial jet production, U.S. Boeing is now seeing a real "run for their money" from European Airbus. Supported by the multiple nations of a centralized European economy, Airbus has taken ground away from the venerable old Seattle giant. Operating in a world economy, Airbus has offered an array of small, medium and now jumbo aircraft, while Boeing continues to push the size and endurance of its 737/ 747/ 777 fleets.

Over the past couple of years, there has been a lot of hype about Airbus' pre-production sales of the Airbus 380 - that giant double-decker, four-aisle, 550-seat behemoth primed to serve major international destinations. (Denver International Airport is one of the few worldwide airports that can currently handle the A-380.)

The A-380 is expected in service by 2006. To date, a number of airlines (many from emerging middle-eastern airline industries) have put their name in the order book.

But with the introduction of the 7E7 midsize long-range 250-seat "Dreamliner" in 2008, Boeing has set itself squarely to reap the secondary market with point-to-point service between regional airports, as well as international destinations. With longer endurance, better fuel efficiency and 9,000 mile range (say, like from Denver to Singapore), the 7E7 offers to replace the 757 on domestic and 767 on international routes.

Boeing is contemplating a stretch version of the 747 in competition with the Airbus 380; in turn, Airbus is back at the drawing boards to find a competitor for the 7E7 in a revitalized A330-200.



The growing demand for air travel has prompted this push from the two international rivals. The pot of gold at the end of this rainbow may well be over \$2 trillion during the course of the next twenty years. For sure, the air traveler is the ultimate winner!

NON-PRIMARY (GENERAL AVIATION) ENTITLEMENT TRANSFER PROGRAM

Chris Pomeroy, CDOT-Senior Planner

With the reauthorization of the Federal Aviation Administration (FAA) Airport Improvement Program (AIP) in 2001, many of Colorado's general aviation airports became first time recipients of annual \$150,000 entitlement grants. Over the course of a three year period (2001-2003), this entitlement program proved to be very beneficial to many of these airports. As a result of its initial success, the program has been continued in the new AIP program for 2004 through 2007.

While a majority of the specifics of the entitlement program have remained unchanged, Congress authorized the flexibility for airport sponsors receiving the entitlement funds to "transfer" their entitlement funds to other airport sponsors if they are not using the money in a certain year.

Anticipating such a change, in 2004 the Aeronautics Division worked with the FAA and various airport sponsors to develop a four year GA Entitlement Program that takes advantage of the "transfer" aspect of the new AIP program. By utilizing these transfers, the Division, the airports and the FAA have realized more, "economies of scale" where we can now plan for a \$300,000 to \$600,000 project as opposed to just an annual \$150,000 project. Thus far the program has proven to be very successful with excellent participation from the airports involved. We are hopeful this success will continue through the end of the current AIP program in 2007.

Here's what we have been able to accomplish as a result of the "transfer" aspect in 2004:

- For Fiscal Year 2004, **nine (9) airports** have successfully participated in the Non-Primary Entitlement Transfer Program.
- Participation from just these nine (9) airports has resulted in **\$1.35 Million** of Non-Primary Entitlement Funds being successfully transferred to other Colorado Airports for larger scale projects.
- For Fiscal Years 2005-2007 **19 airports** have committed to participate in the transfer program.
- Over the course of the next three fiscal years, participation by these 19 airports will result in **\$2.85 Million** of Non-Primary Entitlement Funds being transferred to various Colorado airports.

A very sincere thank you goes out to all of the participating airports. It is your willingness to participate in this program that will continue to make it a success. All of your efforts and cooperation are greatly appreciated!

GUNNISON/CRESTED BUTTE REGIONAL AIRPORT



NEW RUNWAY AND BETTER-THAN-EVER SERVICE

The multi-year project to relocate and expand the safety areas and extend the runway at **Gunnison/ Crested Butte Regional Airport** reached its final stages when the airport was re-opened in late summer.

Nearly \$18M was spent on the project which was begun in 1998. Taxiway work and construction of an aircraft rescue and fire-fighting/ snow removal equipment storage building are planned for completion over the next several years.

Gunnison/ Crested Butte Regional Airport, on the Western slope of Colorado is the only airport in the U.S. above 7,500 feet with the facilities and runway length to accommodate 757 aircraft from major American cities during the ski season, and year-round service from Denver. Over the past years, passenger traffic has increased to nearly 40,000 annually in 2003.

Becoming a year-round destination, the Gunnison Valley and surrounding mountains offer world-class fishing, hiking, boating and rafting during the summer months, as well as skiing and winter sports in spectacular mountain surroundings.

The **Gunnison-Crested Butte Regional Airport** was a last-year recipient of a U.S. DOT Small Community Air Service grant to help market its service. This year, Steamboat Springs' **Yampa Valley Regional Airport** was the sole grantee in Colorado.

SPCC Update

Airports struggling with the EPA mandate for **Spill Prevention, Control and Counter-measures** regulations have been given another compliance extension.

Deadline for the completion of a **Plan** is now Feb. 2006, allowing Aug. 2006 for the **Implementation** on-site...an update of the information we left with you in our last edition.

SkyWest BASE TO COLORADO SPRINGS

SkyWest, the nation's largest regional airline, opened a maintenance and crew base at the **Colorado Springs Airport** in August. The move initially brings 50 maintenance employees and 130 flight crew members to the area. But with the continued eastward expansion of the airlines operations, employees on the field could rise to 135 maintenance personnel and up to 150 flight crew members.

SkyWest operates a fleet of 50- and 70-seat *Canadair Regional Jets* under the flags of **Delta Connection**, **United Express** and **Continental Express**. It employs more the 6700 people nationally to operate over 1300 daily flights to 111 cities in 29 states and three Canadian provinces. Last year, **SkyWest** was the nation's top-ranked carrier for on-time arrivals.

AIR SERVICE BEGINS FROM LAMAR

With grant funding provided by the **U.S. DOT Small Community Air Service grant program**, the City of Lamar has been successful in acquiring four-times weekly air service between the southeastern Colorado community and the Denver metro area.

Round trip service, which began Monday, September 20th, operates between **Lamar Municipal Airport** and **Front Range Airport**, with continuing ground transportation provided to Denver International Airport (DIA). Front Range Airport lies approximately 5 miles southeast of DIA.

Service is provided in a **PIPER Seneca 2** by Lamar Flying Service.

2004 ANNUAL REPORT

The **2004 CDOT-Aeronautics Division ANNUAL REPORT** which covers the period from July 1, 2003 through June 30, 2004, is now available in hard copy or on the Division website.

To review another successful year, go to our website or request a free copy be sent to you from the web address, mailing address or phone number below.

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5126 Front Range Parkway
Watkins, CO 80137



Contact us at: 303-261-4418 or at www.colorado-aeronautics.org

ALL IN A DAY'S WORK

Travis Vallin, Director
Colorado Division of Aeronautics

As I walked into the office the other day, I couldn't help but notice a lot of electronic equipment sitting in what used to be our main lobby. Being someone who is naturally curious and one who likes to stay informed, it was not a surprise when I inquired as to the nature of our converted lobby/electronic storage closet. Come to find out, the dismantled pieces and parts actually turned out to be one of our remote mountain Automated Weather Observation System's (AWOS) being relocated from Niwot Ridge to Mines Peak to enhance mountain coverage. Before we could finish our staff meeting a delivery driver arrived at the office to drop off 2,000 pounds of steel decking which will be used to build a platform to keep the Mines Peak AWOS unit above the anticipated snow level.

Once the driver confirmed that he was at the correct location, he asked us if we had a forklift to unload the steel decking? Since we didn't have a spare forklift sitting around, we asked if we could unload the steel decking by hand? He looked at us kind of funny and said, "well, I guess so". So after rounding up a few pair of gloves and 20 minutes of a little early morning weight lifting exercise, the truck was unloaded and the decking neatly stacked in our office. The delivery driver was obviously surprised at our direct approach of solving a problem and could only grin and shake his head as he drove off. That reaction started me thinking of all the things that the people within the Aeronautics Division office do - not just because it is a part of their job responsibilities - but rather because of how they view their job as a part of who they are.

How often it would be easy to say "no" when it comes to solving problems like the delivery of the steel decking. One could say that finding a way to unload the truck was not our problem or responsibility - but that is not how we viewed it. That makes me realize how often, as an office, we work to find a way to say "yes". A good example would be how we approach meetings with elected officials or airport managers. We have a simple approach to this, just tell us when and where - and we'll be there, unless of course we already have a scheduled conflict. We prefer to attend meetings in the community where the aviation issue or airport is located. We have learned that the answers are not found by sitting in an office in Denver - but rather the best solutions are found when we get out of the office and communicate with those closest to the issues.

Our approach as an office is not fancy or sophisticated but rather a "roll up your sleeves, hands-on approach" to solving problems within the Colorado Aviation System. This is why you will find members of the Division doing Pavement Condition surveys on the weekends, delivering surplus equipment to airports, attending City Council and County Commissioner meetings throughout the state, conducting aviation education outreach activities at weekend fly-ins, hand walking grants through the contracting process to expedite a payment or doing whatever needs to be done to make sure that aviation is as successful as possible in Colorado.

I truly believe that we have taken this approach because we are a direct reflection of whom we work for and whom we are working with. Pilots, airport managers, transportation officials, aviation consultants are by nature a group of "can do" individuals. Whether it is an airport manager plowing snow on a Sunday afternoon or a group of pilots volunteering their time to give introductory flights to children, those involved in aviation are dedicated - and I am proud to say that the eight individuals within the Aeronautics Division are just a small part of that unique group of people.

AIRLINE TRAFFIC CONTINUES TO GROW

Predictions of a busy flying summer appear to have been realized. If you tried to book a flight, get through security or spread out to an extra seat next to you on an airliner, you can agree first-hand.

Denver International's traffic exceeded 4.2M passengers in July - a very healthy 16% above last year's totals. And Denver now ranks fourth in activity at the nation's airports.

According to co-manager, Turner West, "This double-digit increase continues to reflect the strength of the Denver market, and it underlines the important role that aviation plays in the local and regional economy."

"We continue to be amazed at the rate of passenger traffic growth," said Vicki Braunagel, co-manager of aviation at DEN. "The airlines are reporting very high load factors."

CAB FUNDS RADAR SERVICE STUDY

The Colorado Aeronautical Board recently funded a study to determine the need for improved radar coverage at mountain airports.

In large areas of our mountains, Denver Center cannot "see" aircraft below 10,000 feet, so are limited in their ability to land significant numbers at mountain airports. Back-ups in arrivals at these airports, in turn, negatively impacts Center's ability to process aircraft into Denver International Airport.

The Study will determine each airport's role in the state system, make recommendations for the best and highest use of resources and prioritize available funding to meet most urgent needs.

The study is the first step in enhancing safety, vastly improving air traffic efficiency, providing a greater economic base and eliminating much of the road traffic demanded when re-routed passengers must drive to their holiday destinations.

In a related action, Eagle County struck out on its own recently in securing funding for the new "beacon interrogator" - BI-6, offering \$1.5M in local funds to help install the new radar system at the Eagle County Regional Airport.

STRICTLY BUSINESS FOR AERO BOARD AND ITS CONSTITUENTS



CAB members at a recent meeting at Ft. Collins-Loveland Municipal Airport include (l to r) Leo Large, Corinne Nystrom, Harold Patton, Pat Wiesner and Harry Felderman. CDOT staffers, Caroline Scott and Travis Vallin are to the right in the photo. CAB members Larry Romrell and Bob Anderson were not present.

Colorado Aeronautical Board members unanimously retained the sitting officers for the next twelve months: Harold Patton as Chairman; Corinne Nystrom as Vice-Chairman and Pat Wiesner as Secretary.