

MINUTES
Nebraska Aeronautics Commission
August 14, 2015

The Nebraska Aeronautics Commission held their regular meeting at the department's offices, Lincoln, Nebraska. Commissioner Diana Smith called the meeting to order at 1:00 p.m. CDT. Commissioners Michael Cook, Terri Wachter, Doug Vap and Dorothy Anderson were in attendance. Also present were Planning/Programming Division Manager Anna Lannin, Director Ronnie Mitchell, and Project Management Division Manager Russ Gasper. Deputy Director Andre Aman was absent.

Public Comment

NONE

Approval of Minutes

Motion by Commissioner Anderson to approve the minutes of the May 8, 2015 meeting as published. Second by Commissioner Cook. Roll call vote. All voted aye. Motion carried.

State Funds Available

A written report of state funds available was presented by Anna Lannin.

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PROJECT GRANT FUND

Funds available April 30, 2015		\$114,760.17
<u>Commission Actions (05/08/15 meeting)</u>		
Sargent Airport - Obstruction Removal	-\$3,240.00	
Wayne Airport - Replace Regulator	-\$5,130.00	
Subtotal		-\$8,370.00
<u>Other Actions</u>		
None		
Subtotal		\$0.00
Funds available July 31, 2015		\$106,390.17

Funds available at meeting in August 2014: \$89,563.62

STATE OWNED AIRFIELDS (SOA) DIVERSION GRANT FUND

Funds available April 30, 2015 \$0.00

Commission Actions (05/08/15 meeting)

None

Funds available July 31, 2015 \$0.00

Funds available at meeting in August 2014: \$0

SEAL COAT GRANT FUND (Pavement Preservation Program)

Funds available April 30, 2015 \$130,792.18

Commission Actions (05/08/15 meeting)

None

Subtotal \$0.00

Other Actions

None

Subtotal \$0.00

Funds available July 31, 2015 \$130,792.18

Funds available at meeting in August 2014: \$179,843.18

HANGAR REVOLVING LOAN FUND

Funds available April 30, 2015 \$510,872.91

Commission Actions (05/08/15 meeting)

None

Subtotal \$0.00

Other Actions

Expired allocation - Auburn H01	\$332,500.00	
Expired allocation - Burwell H02	\$135,333.00	
Subtotal		\$467,833.00

Receipts

May 2015	\$26,641.95	
June 2015	\$24,926.00	
July 2015	\$28,425.99	
Subtotal		\$79,993.94

Funds available July 31, 2015		\$1,058,699.85
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Funds available at meeting in August 2014: \$1,598,155.86

Total amount in Hangar Loan fund: \$3,768,360

FUEL STORAGE LOAN FUND

Funds available April 30, 2015		\$176,628.47
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Commission Actions (05/08/15 meeting)

None		
Subtotal		\$0.00

Other Actions

Reduce allocation to Valley Co. loan #7035	\$6,214.89	
Subtotal		\$6,214.89

Receipts

May 2015	\$2,593.33	
June 2015	\$2,593.33	
July 2015	\$2,593.33	
Subtotal		\$7,779.99

Funds available July 31, 2015		\$190,623.35
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Funds available at meeting in August 2014: \$153,288.50

Total amount in Fuel Storage fund: \$336,500

NON-PRIMARY ENTITLEMENT TRANSFER PROGRAM

Funds available April 30, 2015		\$1,823.75
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Funds Disbursed

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City of Grant	-100	
Subtotal		-\$100.00
Funds available July 31, 2015		<hr/> \$1,723.75

Motion by Commissioner Cook to accept the report of State Funds as published. Second by Commissioner Anderson. Roll call vote. All voted aye. Motion carried.

Approval of State Pilot

Motion by Commissioner Vap for Charles R. de Zafra to be approved as a State Pilot.

Second by Commissioner Wachter. Roll call vote. All voted aye. Motion carried.

Federal Projects

Anna Lannin presented the following projects. The airport sponsors are requesting Commission approval for the CIP data sheets to be forwarded to the FAA, as required by state statutes. The FAA considers the requests for future federal funding as funds become available. No state funds are requested at this time.

Atkinson B-03

Scope: Build Storage Hangar
Total Estimated Cost: \$460,000

A storage hangar will provide a facility to store itinerate and based aircraft. The existing building is approximately 50 years old and will be removed because it is in poor condition. The existing pavement drive to be reconstructed is 50-year old asphalt, also in very poor condition.

Hastings R-02

Scope: Joint Sealing & Pavement Markings for Runway 4/22
Total Estimated Cost: \$287,000

The project will consist of sealing of existing joints, and pavement markings for runway 4/22. The current pavement markings do not meet the requirements of AC 150/5340-1L Standards for Airport Markings.

North Platte M-04

Scope: Construct Wildlife Fence
Total Estimated Cost: \$1,900,000

The existing wildlife fence is old and in need of replacement. The new 10' chain link fence with

3 strand barbed wire and wildlife deterrent fence skirt will keep wildlife out and improve safety at the airport.

Omaha A-02

Scope: Reconstruct Terminal Ramp – Phase 3

Total Estimated Cost: \$17,748,357

Reconstruct Terminal Ramp to improve safety, upgrade the drainage to current standards and improve the ramp surface. The existing ramp was constructed without frost protection, underdrains, and was built in several phases. Over the years asphalt and concrete overlays have been provided to increase strength. The surface has deteriorated due to age and traffic and needs to be reconstructed to eliminate the potential for FOD. The condition of the existing drainage structures under and adjacent to the ramp have been deteriorating and several pipes and inlets have failed and been repaired over the past few years. This work is to bring the terminal ramp to current standards and upgrade the surface.

NDA

Scope: Airport Economic Impact Study

Total Estimated Cost: \$350,000

An Economic Impact Study was commissioned by the Nebraska Department of Aeronautics in 2003. Since then, many of the economic conditions at the Nebraska airports have changed and the study should be updated. For additional justification, refer to the attachment.

Motion by Commissioner Cook to approve the CIP data sheets and forward them to the FAA. Second by Commissioner Vap. Roll call vote. All voted aye. Motion carried.

Hangar Loan Requests

Anna Lannin presented the following projects.

Hartington

Representatives: V. E. Rossiter, Jr., Gayle Hochstein, Roger Filips and Tom Trumble

Scope: 6-place T-Hangar

Total Estimated Cost (over AIP grant): \$500,000

The hangars at the airport have been full for several years. A 6-place t-hangar with 45' bi-fold doors is proposed to meet current and future demand for aircraft storage. Taxilane construction is included to provide paved access to all doors. Eighteen aircraft are on the airport with 4 waiting.

With the present facilities, credit card av gas, a full line maintenance facility, and other amenities, we expect the airport to continue to grow, thus requiring additional hangar space.

The project will be funded with a combination of AIP grant funds, NDA hangar loan funds, and local funds. The AIP grant is anticipated to be \$300,000 with a total project cost of \$800,000.

Hastings

Representatives: David Wacker, Jack Newlun and Eric Johnson
 Scope: 6-Place T-Hangar
 Total Estimated Cost: \$350,000

This project will replace an older t-hangar that was severally damaged in a wind storm. The hangar was determined to be structurally unsound and removed by the City. It is critical to the airport to provide a new hangar to maintain the current based aircraft and to attract future airport tenants. The existing hangars are full and corporate planes need space.

The proposed hangar will be constructed in the same location as the hangar that was removed so the existing taxilanes and other infrastructure can be used.

Motion by Commissioner Wachter to approve the hangar loan requests. Second by Commissioner Vap. Roll call vote. All voted aye. Motion carried.

AUGUST 2015 HANGAR LOAN ALLOCATIONS

Outstanding Loan	AIRPORT	SCOPE	STATE	SPONSOR	TOTAL
\$12,204.00	Hartington	6 Place T-Hangar with 45' Doors	\$350,000	\$150,000	\$500,000
\$0	Hastings	6 Place T-hangar with 45' Doors	\$245,000	\$105,000	\$350,000
MAXIMUM TOTAL REQUESTS			\$882,700	\$378,300	\$1,261,000

Closed Projects

**Closed Projects
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<u>Airport</u>	<u>Original State Allocation</u>	<u>Increase in State Funds Required</u>	<u>Decrease in State Funds Required</u>
Holdrege 11 (Replace runway lights)	\$ 0.00	\$ 0.00	\$ 0.00
Lexington 13 (SRE Building)	\$ 0.00	\$ 0.00	\$ 0.00

Loup City 05 (Extend runway; turnarounds)	\$ 16,380.00	\$ 0.00	\$ 0.00
Millard 08 (Rehab RW 12/30 – Engineering)	\$ 0.00	\$ 0.00	\$ 0.00
Millard 09 (Rehab RW 12/30 – Construction)	\$ 0.00	\$ 0.00	\$ 0.00
Sargent SA-7 (Obstruction removal)	\$ 3,240.00	\$ 0.00	\$ 4.25
Seward 11 (Hangar addition)	\$ 0.00	\$ 0.00	\$ 0.00
Wayne 13 (Hangar)	\$ 0.00	\$ 0.00	\$ 0.00
Wayne SA-9 (Replace regulator)	\$ 5,130.00	\$ 0.00	\$ 7.35
York 12 (2-Place hangar & apron)	\$ 0.00	\$ 0.00	\$ 0.00
Totals	\$ 24,750.00	\$ 0.00	\$ 11.60

Net Decrease - \$11.60

Motion by Commissioner Anderson to approve the closed projects. Second by Commissioner Cook. Roll call vote. All voted aye. Motion carried.

Department Report

On August 12th, Senator Deb Fischer hosted a Transportation Round Table with DOT Secretary Anthony Foxx in attendance. It was held at the UNL Whittier Research Center with approximately 70 people attending. There were participants from Dept. of Roads, trucking, UP railroad CEO, Duncan Aviation, Eppley Airfield, Lincoln Airport, Grand Island airport and many others including myself. I asked Senator Fischer about multiyear funding for the FAA as the

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present budget authorization expires the end of September. They (the Senate) are intent on a multiyear budget but Roads is on a CR until the end of October. I suspect FAA will get a CR until the roads issue is settled. Drones or UAS were also discussed and I asked about restricting airspace over and around our prison systems since a drone dropped drugs into an Ohio prison a few weeks ago. Secretary Foxx said that was more of a Homeland Security issue rather than the FAA. It was a very congenial meeting and overall the emphasis was on roads even though I would have liked the next day newspapers to have mentioned airports and the role they play in transportation.

Our department has entered electronic social media with a Facebook page. Just type in Nebraska Department of Aeronautics and do a Facebook page search. Deb Hernandez has taken this project on as an additional duty and is doing a fine job with it.

In addition to a monthly dashboard, Directors have now been told they will be evaluated by the Governor every six months with the first one being July 1 to December 31. Four areas will be evaluated with subareas in each of those.

Russ Gasper, Project Manager for Engineering services, recently researched and compiled a four page report on the advantage of using aerial application in agriculture. That report is attached.

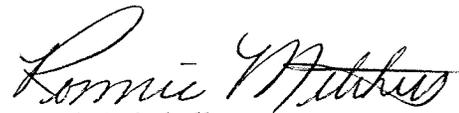
We have recently hired two individuals for our department, Tim Kral for the Pavement Preservation Team and Rod de Zafra, a retired 20 year Marine aviator for our flight department. We will also be losing Soni Stone to retirement after working in the department for 29.6 years.

The next meeting is tentatively set for Friday, October 9, 2015 at 1:00 pm CDT in the Lincoln office.

Motion by Commissioner Cook to adjourn the meeting. Second by Commissioner Anderson. Roll call vote. All voted aye. Motion carried.

The meeting was adjourned at 2:08 p.m.

Submitted by,



Ronnie Mitchell
Director

AGRICULTURE, AERIAL APPLICATORS and AIRPORTS

Is Bigger Better/Does Size Matter

By: Russ Gasper
Nebraska Dept. of Aeronautics

When it comes to agricultural receipts, bigger is not better and size does not matter: Nebraska and Iowa rank in the top four in the U.S. in agricultural receipts for all commodities along with California and Texas, but Nebraska and Iowa are not in the top ten when it comes to total area. The following table (Table 1) shows that Nebraska and Iowa are much smaller in size; however, Nebraska and Iowa are able to compete with the big guys (i.e., Texas and California) for the top producers in U.S. agricultural receipts for all commodities.

TABLE 1

State	NE	IA	TX	CA
U.S. Rank by Ag Cash Receipts	3	2	4	1
All Agriculture Cash Receipts, \$Billion	23	31	22	46
U.S. Rank by Size	16	26	2	3
Size, Square Miles	77,421	56,272	268,272	163,696

A major commodity for agricultural receipts is crop production. In Nebraska, three of the top five agricultural commodities are crops: corn, soybeans and wheat. These are also Nebraska's main exported crops. It is estimated that in Nebraska every dollar in agricultural exports generates \$1.34 in economic activity. Nebraska's \$5-6 billion in agricultural crop exports translates into approximately \$7-\$8 billion in additional economic activity, which is approximately 35% of all agricultural cash receipts. These facts and figures may not be surprising to most Nebraskans; however, many Nebraskans overlook the contributions of aerial applicators and the 80 public-use airports that support applicator activity to make Nebraska a leader in agriculture on a national level.

The Nebraska Department of Agriculture has 436 applicators registered to do business in Nebraska. The other leaders in agriculture have comparable numbers of applicators registered in their states; however, it should be noted that Nebraska has the fewest number of public-use airports (See Table 2).

TABLE 2

State	NE	IA	TX	CA
Public-Use Airports	80	116	297	243
Aerial Applicators Registered with State's Ag Dept.	436	333	443	458

Nebraska aerial applicators represent a small portion (436) of Nebraska's population working in agriculture. It is estimated that 1 in 4 jobs in Nebraska are related to agriculture, which would be 250,000 jobs, as Nebraska has approximately 1,000,000 people employed in the state. In recent years, more and more farmers are using aerial applicators to control diseases and pests. The reason for the increasing use of aerial applicators is threefold: 1) maximized crop yields, 2) improved flight technology, and 3) development of fungicides.

ATTACHMENT
Article by: Russ Gasper
Advantages of Aerial Application in Agricultural

Aerial applicators have the ability to apply products at the right time, at the right place and in the right amount, to maximize crop yields. In addition, aerial applicators have several advantages that include the ability to treat more acres per day than ground rigs; the ability to make extensive applications in narrow, busy treatment windows, especially if weather/soil conditions are unfavorable; they cause less crop damage, which is estimated to be 1.5-5% of crop yields; and they cause no soil compaction, hence preventing soil runoff. The National Agricultural Aviation Association (NAAA) has indicated:

- the average aerial applicator has 21.3 years of experience
- aerial applicators have a commercial pilot's certificate, and must meet requirements of FAA regulations Part 137, which allows low-level aviation operations
- 87% of the aircraft used are fixed-wing; the remaining 13% are rotorcraft/helicopters
- of the combined fleet 67% are turbine powered and 33% have piston engines. (At the 2015 NATA Nebraska conference it was reported that 94% of ag operations are done with fixed wing aircraft while 3% is done by helicopters and 3% by other means.)
- aerial applicators account for just under 20% of all applied crop protection products on commercial farms and 100% of forest protection applications
- applicator's most commonly treated crops are corn, wheat/barley, soybeans, and alfalfa

Advances in aircraft have also ignited aerial applicator popularity. Aircraft are twice as big as they were several years ago. The most popular aircraft today are powered by a turbine engine and carry 400 to 500 gallons of product, which together allow applicators efficient applications by dispensing huge swaths of product across a field during flight. The move to larger turbine engine aircraft has not only added aircraft power for quicker application of larger areas, but has proven to be more mechanically reliable, resulting in less maintenance. For aerial applicator aircraft, bigger is better and size does matter.

In recent years, there has been an explosion in the growth of aerial applicators due to the development of fungicides that are designed to be applied to the corn tassel. In addition, advances in flight technology allow for more timely, efficient, and effective application of protection products. The University of Illinois conducted a study that recorded a yield increase of 18.6 bushels per acre with aurally applied fungicides. However, on average retailers report that their customers are indicating increases of 7-10 bushels per acre.

During the spring and summer of 2015, all 80 Nebraska public-use airports replied to questions regarding 2015 aerial applicator activities at their airport. Based on the responses, 66 of the public-use airports (82.5%) indicated that they anticipate applicator aircraft using their facility for base operations, fuel, and/or maintenance. The combined total of aircraft using the 66 airports is anticipated to be 321. The use of public-use airports in Nebraska by aerial applicators is very significant and somewhat surprising, because the general industry thinking is that aerial applicators operate off privately owned airfields.

Based on NAAA data, Nebraska appears to be within the national trends/norms for aerial applicators. Therefore, using the national trends with information collected within Nebraska

and applying similar lines of thinking to other states, Nebraska is a leader in resourceful use of limited valuable assets (i.e., public-use airports and aerial applicators). For example, 321 aircraft use 66 public-use airports (i.e., 82.5% of the public-use airports are used) with 436 registered applicators in Nebraska. One could only assume that this equates to approximately 4.9 aerial applicator aircraft per public-use airport in Nebraska. In actuality, the responses indicated that the number of aircraft using an airport ranges from one (1) to as many as sixteen (16). Table 3 illustrates a similar line of thinking applied to the other top agriculture states.

TABLE 3

State	NE	IA	TX	CA
Aircraft Using Public-Use Airport	321	245*	326*	337*
82.5% Public-Use Airports	66	96*	245*	200*
Aerial Applicator Aircraft Per Airport	4.9	2.6*	1.3*	1.7*

*Indicates correlated value based on Nebraska data

Based on USDA data, approximately 8,800,000 acres of corn are planted annually in Nebraska. If an acre produces 160 bushels of corn, approximately 1,408,000,000 bushels of corn are produced annually in Nebraska (See Table 4). Assuming aerial applicators treat 15% of the corn crop, we can estimate that 211,200,000 bushels of corn receive an aerial treatment. Based on a study by Purdue University, crop loss due to ground trample from ground applicator rigs could range from approximately 1.5% to 5.0%. Therefore, if the same 211,200,000 bushels were not treated by aerial applicators but treated with ground rigs, and it is assumed that 3% crop loss occurs (6,366,000 bushels), it is estimated that \$25,464,000 is lost in crop yields. If the \$25,464,000 lost in crop yields were exported corn, approximately \$34,000,000 would be lost in additional Nebraska economic activity. Based on crop production, aerial applicators provide significant financial advantages from an economic/business stand point.

TABLE 4

	Aerial Applicator	Ground Rig
Totalled Area Planted	8,800,000 acres	8,800,000 acres
Average Yield	160 bushels/acre	160 bushels/acre
Average Total Yields	1,408,000,000 bushels	1,408,000,000 bushels
15% Treated	211,200,000 bushels	211,200,000 bushels
Loss Due to Crop Trample (3%)	0 bushels	6,366,000 bushels
Total Yields	211,200,000 bushels	204,834,000 bushels
Total Cash Receipts (\$4.00/bushel)	\$844,800,000	\$819,336,000

From a farmer's stand point, applying treatments (fungicides, pesticides, etc.) with aerial applicators also indicates substantial financial advantages (See Table 5) if crop loss is part of a farmer's cost equation.

TABLE 5

Aerial Applicator	Ground Rig
160 bushels/acre	160 bushels/acre
\$4.00/bushel	\$4.00/bushel
Crop \$640/acre	Crop \$640/acre
Treatment \$9.00/acre	Treatment \$7.00/acre
Trampling 0%	Trampling 3%, \$19.20/acre
Total \$9.00/acre	Total \$26.20/acre

The next time you are asked "Why does our community support this small general aviation airport?" you can reply with "This small airport is a valuable asset for the community in the role it plays in the agricultural economy of the State." Aerial applicators with the general aviation airport access may be viewed as a small part of the agricultural economy in Nebraska; however, together the applicators and airports have a vital role in sustaining Nebraska as an agricultural leader on the national level. As the old saying goes, it is not the size of the tool that matters; it is how you use it. Nebraska airports and aerial applicators are prime examples of an efficient system that work in harmony with one another to maximize lesser resources while maintaining national leadership in crop output, which concludes that bigger is not always better and size may not matter.

PILOT QUALIFICATION SHEET

In accordance with Paragraph 3-104 of Nebraska Statutes, the below listed individual seeks approval from the Nebraska Aeronautics Commission to be employed as a pilot by the State of Nebraska.

Name Charles R. de Zafra Date 31 July, 2015

Address 11814 S. 53rd Ave, Papillion NE 68133

Agency Nebraska Department of Aeronautics

Requests approval as a Class III Pilot. List FAA Airmen certificates and ratings currently held:

Airman Certificate 3472582. ATP MEL, CSEL, CFII

Airman medical certificate Date 7/21/15 Class 1st

Flight Experience	NDA Recommended Flight Time	Applicant's Flight Time
Total flight hours	<u>1500</u>	<u>2620</u>
Pilot in command	<u></u>	<u>1982</u>
Cross country	<u>500</u>	<u>1500+</u>
Inst. time (hood, act. & sim)	<u>75</u>	<u>383</u>
Multi-engine PIC	<u>300, no PIC specified</u>	<u>252 TT</u>
Night time	<u>50</u>	<u>350</u>

I certify the above information is true and correct to the best of my knowledge.

Charles R. de Zafra
Signature of applicant

Recommendation of Director

I have reviewed the qualifications and find the above applicant (meets) (does not meet) the qualifications established by the Nebraska Aeronautics Commission to act as pilot of State owned aircraft. Further I (do) (do not) recommend Commission approval of the applicant as a Class III Pilot.

Lorrie Mathews
Director, Nebraska Department of Aeronautics

If the applicant is not recommended it is due to the following:

The applicant is (approved) (disapproved) by the Nebraska Aeronautics Commission as a Class _____ Pilot.

Diana Smith
Rev. Aug. 99 Chairman, Nebraska Aeronautics Commission