ITEM # 32
DATE: 06-9-15

COUNCIL ACTION FORM

SUBJECT: **AUTHORIZATION FOR HUNZIKER DEVELOPMENT TO OPERATE UNMANNED AIRCRAFT SYSTEMS (UAS) WITHIN AMES AIRSPACE**

BACKGROUND:

On May 19, 2015, the City Council referred a letter from Justin Dodge with Hunziker & Associates requesting an agreement with the City of Ames to allow commercial use ("Civil Operations", Non-Governmental) of an Unmanned Aircraft Systems (UAS) within a five nautical mile radius of the Ames Municipal Airport. UAS is the general classification for a wide range of light remote controlled aircraft. In the case of Hunziker, it is seeking to use a small commercial drone.

At this time, commercial drone usage is entirely regulated by the Federal Aviation Administration (FAA). The size of the drone owned by Hunziker is defined by the FAA as a "Small UAS", which is an unmanned aircraft less than 55 pounds. The FAA requires the operator of a small UAS to be certified and responsible for the following:

- Pass an initial aeronautical knowledge test at an FAA-approved knowledge testing center.
- Be vetted by the Transportation Security Administration.
- Obtain an unmanned aircraft operator certificate with a small UAS rating (like existing pilot airman certificates, never expires).
- Pass a recurrent aeronautical knowledge test every 24 months.
- Be at least 17 years old.
- Make available to the FAA, upon request, the small UAS for inspection or testing, and any associated documents/records required to be kept under the proposed rule.
- Report an accident to the FAA within 10 days of any operation that results in injury or property damage.
- Conduct a pre-flight inspection, to include specific aircraft and control station systems checks, to ensure the small UAS is safe for operation.

The FAA also has established a comprehensive list of operational limitations placed on those operators of small UAS once they have obtained their certification. The following list is a summary of the major provisions under the proposed rule-making (FAA Part 107):

- Unmanned aircraft must weigh less than 55 lbs. (25 kg).
- Visual line-of-sight (VLOS) only; the unmanned aircraft must remain within VLOS of the operator or visual observer.

- At all times the small unmanned aircraft must remain close enough to the operator for the operator to be capable of seeing the aircraft with vision unaided by any device other than corrective lenses.
- Small unmanned aircraft may not operate over any persons not directly involved in the operation.
- Daylight-only operations (official sunrise to official sunset, local time).
- Must yield right-of-way to other aircraft, manned or unmanned.
- May use visual observer (VO) but not required.
- First-person view camera cannot satisfy “see-and-avoid” requirement but can be used as long as requirement is satisfied in other ways.
- Maximum airspeed of 100 mph (87 knots).
- Maximum altitude of 500 feet above ground level.
- Minimum weather visibility of 3 miles from control station.
- No operations are allowed in Class A (18,000 feet & above) airspace.
- Operations in Class B, C, D and E airspace are allowed with the required Air Traffic Control (ATC) permission.
- Operations in Class G airspace are allowed without ATC permission
- No person may act as an operator or VO for more than one unmanned aircraft operation at one time.
- No careless or reckless operations.
- Requires pre-flight inspection by the operator.
- A person may not operate a small unmanned aircraft if he or she knows or has reason to know of any physical or mental condition that would interfere with the safe operation of a small UAS.
- Proposes a microUAS option that would allow operations in Class G airspace, over people not involved in the operation, provided the operator certifies he or she has the requisite aeronautical knowledge to perform the operation.

FAA rule-making for UAS is still in the very initial stages and, from a national perspective, the usage of drones has increased significantly as the technology become more and more affordable. In the case with Hunziker, the local FAA staff is looking to use this request as an opportunity to apply the rules in a real-world situation. City staff has also discussed this issue with Hunziker, and has worked together to place some additional notification requirements that are specific to the Ames area:

- Operator must carry handheld radio tuned into the Ames Common Traffic Advisory Frequency (CTAF) of 122.70 when operating within the five nautical mile ring.
- Any operations between 50 feet AGL and 200 feet AGL within the one to five nautical mile ring require contacting the FBO at least one hour prior to operations.
- Any operations within the one nautical mile ring of the airport would require FBO notification, City of Ames notification, at least one hour prior to operations, regardless of the altitude.

- Ability to conduct operations between surface and 50 feet Above Ground Level (AGL) without FBO or City notification within the one to five nautical mile ring from the airport.

It should be noted that under the FAA rules, an operator of any UAS (drone, etc.) cannot fly their aircraft over any property that they do not own (public or private), or until they have permission in writing from each property owner involved during a particular flight. Mr. Dodge also told staff that, as part of the certification process, Hunziker will have to keep a detailed flight log, including all flights or any "zero-entry" flights, and any damage that may have occurred while operating its drone. This log must be submitted to the FAA (Des Moines Office) every month.

This would be the first commercial drone usage in the Ames community, and like most communities nationally, Ames does not currently have an official policy related to the private use of small aircraft. However, as shown above, the FAA has established a strict set of regulations governing their use in order to protect the safety of the public and the efficient use of the nation's airspace.

The City of Ames could provide temporary approval to Hunziker to operate its drone under the existing FAA rules for a specified time period. This would provide City staff time to gather more information from national and local sources that would be used to establish a City policy governing UAS usage. However, if there is significant concern related to safety or privacy issues that are not adequately addressed, City Council could restrict all commercial UAS usage within the five nautical mile area of the airport. This would still allow, under FAA rules, a commercial operator to fly his/her UAS outside the five nautical mile area as long as the operator has authorization from any affected property owner.

ALTERNATIVES:

1. Direct the City Attorney to draft an agreement with Hunziker authorizing it to operate a small UAS for commercial use within the five nautical mile ring of the Ames Municipal Airport until December 31, 2015.

   This alternative will result in an agreement that will incorporate all FAA requirements mentioned above. As well as the additional notification requirements suggested by City staff. In addition, the agreement should stipulate that the City has the right to cancel the authorization at any time for any reason.

2. Direct the City Attorney to draft an agreement with Hunziker authorizing it to operate a small UAS for commercial use within the five nautical mile ring of the Ames Municipal Airport with no specific expiration date.

3. Delay approval of this request until staff has sufficient time to gather more information from national and local sources that could be used to establish a City policy governing UAS usage.

4. Deny Hunziker's request to operate a small UAS within the five nautical mile area around the Ames Municipal Airport.

MANAGER'S RECOMMENDED ACTION:

Hunziker has already purchased its drone and has been given authorization from the FAA. It has expressed to the City that it would like to begin operation of the drone as soon as possible. By providing temporary approval to Hunziker, it will be able to begin operating its drone and the City of Ames will have the opportunity to gain working knowledge of commercial drone usage within the community. Alternative #1 will also provide adequate time for staff to speak with other communities and aviation experts to draft a more specific policy for the City of Ames that will address the concerns related to this fast growing industry.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 as described above.