Waterloo Technical Society

July 14, 2021 Meeting

The July, 2021 Waterloo Technical Society (WTS) meeting was called to order by President Stephen Crouse at 7:15 pm. This was the fourth meeting of the 107th year of the Waterloo Technical Society. President Crouse welcomed attendees and introduced the WTS Officers for 2021

A total of 23 members and guests attended.

Treasurer's Report. Ken Friend presented the Treasurer's report. A beginning balance of $1,061.43 with $120.00 income from paid membership and expenses of $40 for the June 2020 speaker s' meals and $18.55 for two receipt books leaves a new balance of $1,122.88. Treasurer Friend's report stated a total of 5 honorary and 25 paid members yielding a membership roster of 30 members.

Introduction of Officers. Officers for the 2021 year (year 107) were noted:

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| President: | Stephen Crouse |
| Co-Vice Presidents: | Jerry Mohling and Dan Johnson |
| Treasurer: | Kenneth Friend and Paul Anderson |
| Dinner Reservations: | Derek Eagles and Steve Lang |
| Secretary: | James Stevenson |
| Publicity/Recognition: | Vacant |
| Auditing: | Bill Mitchell and Jim Garrett |
| Nominating Committee: | Ralph Marrero |
| Web Site: | Tim Schoenfelder |

Old Business. President Crouse reported that 27 WTS and CV Woodworkers toured the Kendrick Forrest Products tour in Edgewood, IA, on June 15. The tour started with the delivery of tree trunks (approximately 16 semi loads a day) through computer controlled sawing, kiln drying (using sawdust from the saw), grading, mulch preparation (natural, red, and black), and shipping. Cabinet and sign preparation were viewed behind the retail store where furniture was displayed for sale. All agreed this was a very worthwhile tour and one that could be enjoyed by the whole family.







New Business. No new business was discussed.

Guest Speaker. **Nathan Eick** is a Geospatial Products Manager and former Manned and Unmanned Aircraft Pilot for Aerial Services Inc. He has flown aircraft throughout the nation for LiDAR and photogrammetric surveys, and today he focuses on analyzing LiDAR data and making maps from photos and lasers

Aerial Services provides remote sensing with a focus on aviation, unmanned aircraft, surveying, GNSS/inertial positioning, photogrammetry, LiDAR (Light Detection and Ranging), and 3D modeling. GNSS (Global Navigation Satellite System) were developed in the 20th century, mainly to help military personnel find their way, but location awareness soon found many civilian applications such as our Global Positioning System, GPS, we use instead of maps to navigate to unfamiliar destinations. LiDAR  is a method for determining ranges (variable distance) by targeting an object with a laser and measuring the time for the reflected light to return to the receiver. LiDAR can also be used to make digital 3-D representations of areas on the earth's surface and ocean bottom, due to differences in laser return times, and by varying laser wavelengths. It has terrestrial, airborne, and mobile applications






Nathan shared his presentation at https://prezi.com/view/fQE8q5qK5BKU3WFqrWCB/ for these minutes. He covered the topics of:

- Satellite Systems for Space Exploration and Global Mapping,
- Surveying, traditional and modern methods
- Aerial Surveying
- Imagery, specifications, sensor configurations, optics and resolution, dynamic range and workflow.
- LiDAR, Light Detection And Ranging
- UAS, Unmanned Aerial Surveying
- Security and Privacy




Meeting adjourned at 8:45 pm.

Next Meeting. The next meeting will be August 11, 2021. Craig Clark will address the topic of Sustainable Construction and Design.

Respectfully submitted,

James R. Stevenson, Secretary