



www.FortWayneEngineersClub.org

Engineers News

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September Tour

Allen County-Fort Wayne 911 Call Center

Thursday September 25th at 7:00 PM

Edwin J. Rousseau Centre, 1 East Main Street, Fort Wayne, IN 46802
A tour of the 911 facilities for Fort Wayne and Allen County is scheduled for September 25 from 7:00 to 8:00 PM. RSVP to info@fortwayneengineersclub.org with name and birth date by noon of September 19 to allow for background checks. Children accompanied by an adult are welcome.

The FWEC will tour the recently renovated handicap accessible government facilities (<http://www.cityoffortwayne.org/description-a-history.html>). The Consolidated Communication Partnership is located in the City-County building. The Center operates with 19 active work stations upgraded with advanced technology and equipment. The center is a 24 hour, 365 day operation center. It's staffing includes a minimum of 13 employed at any one time. All emergency and non-emergency calls come through this center. The dispatch center is an E911 center, short for Enhanced 911.

Meet on the covered "bridge" between the Rousseau Center (formerly called City-County Building) and its parking structure to the north. Parking should be plentiful. Parking is available in the structure, with short and easy handicap access to the "bridge", and may be free after 5:00 PM (public events and other factors cannot be predicted). Street meters on the west side (Calhoun St.) are usually free after 5:00 PM. Some citizens prefer using the parking lot (to the east) directly across Clinton Street from the parking garage, between the railroad overpass and Freimann Square, again typically free after 5:00 PM.

TekVenture's Fort Wayne Regional Maker Faire

[Fort Wayne Regional Maker Faire](#)

Saturday September 13th and Sunday September 14th from 10:00 AM to 6:00 PM
Lincoln Pavilion, Headwaters Park East, Fort Wayne, IN 46802

The FWEC will have a membership booth at the Fort Wayne Regional Maker Faire (<http://makerfairefortwayne.com/>). In addition to a membership booth the FWEC will be hosting two Maker Mini-Challenges; at 1:00 PM and 4:00 PM each day. These challenges are family friendly events that do not require advance registration and are open to any attendee in the right place at the right time.

October Tour

Fleetwood RV

Thursday, October 23rd at 2:00 PM

Note the afternoon tour start

1031 US 224 East, Decatur, IN 46733

Fleetwood RV, owned by Allied Recreation Group, (<http://www.fleetwoodrv.com>) is a leading manufacturer of Class A and Class C recreational vehicles. They build some of the industry's most recognized and iconic brand names. The company is a leader in the development of unique, functional floor plans that meet the needs and desires of its customers. Fleetwood's history begins more than 60 years ago, in 1950 when John C. Crean formed Coach Specialties Company where he made window blinds for travel trailers. A turning point came in the company's history when a dealer saw a custom-built travel trailer that Crean was making on the side and liked it so much, he contracted Crean to build trailers for his dealership. The company was later reincorporated in 1957 as Fleetwood Enterprises, Inc. Over the years, Fleetwood has earned an enviable reputation as a leading innovator. In fact, Crean designed the first motorhome with basement storage, which is now an industry standard. The company currently employs 1,100 at several locations around the country.

2014-2015 FWEC Board Candidates and Open Position

Below are the 2014-2015 FWEC board candidates. The FWEC needs board members to keep the tours coming! Board positions are crucial to the planning of tours and events for the FWEC. Please consult the FWEC constitution (<http://fortwayneengineersclub.org/constitution.pdf>) or contact us at info@fortwayneengineersclub.org for information on specific duties on board positions.

The FWEC is still in need of a member to fill the Vice President position. Vice President becomes the President the following membership year.

Board meetings generally last around an hour and are generally held on the first Tuesday of the month during the membership year (September to August).

Current 2014-2015 Membership Year Board Candidates:

President: Marna Renteria Vice President: Open
Treasurer: Ryan Stark Secretary: Elizabeth Garr
1st Year Board Member: Mike Magsam & Jack Phlipot
2nd Year Board Member: John Magsam & Rod Vargo
3rd Year Board Members: Dan Delaney & David Momoh

2014-2015 Membership Dues

The 2014-2015 membership year is upon us. All FWEC members should review their mailed newsletters to determine if their membership is current. Review the address label, FWEC Treasurer Ryan Stark has indicated the year of membership above each member's name. A "14" would mean that a member needs to pay their dues for the 2014-2015 membership year. A "15" would mean that the member is current for the 2014-2015 membership year. Other designations are "CO" for complementary memberships (the Allen County Public Library, previous tour hosts, etc.) and "HO" as an honorary membership designation. Further information regarding the honorary membership can be found in the FWEC constitution bylaws (<http://fortwayneengineersclub.org/constitution.pdf>).

Northeast Indiana Discover-E Committee

Northeast Indiana Discover-E Committee (formerly Northeast Indiana Engineers' Week) is now a standing committee within the FWEC. The committee's mission is to sustain and grow a dynamic engineering profession through outreach, education,

celebration, and volunteerism. The Discover-E Committee shall support the Northeast Indiana region by connecting area engineering companies with engineers and students to encourage retention of local talent within the profession.

The incorporation of the Northeast Indiana Discover-E Committee as a standing committee within the FWEC was a result of a 2013-2014 board member vote and corresponding update to the FWEC bylaws (<http://fortwayneengineersclub.org/constitution.pdf>).

The Northeast Indiana Discover Committee will be working to upgrade their website with more information to follow.

May Tour History

Eighteen people attended the May 29th tour of Fort Wayne's wastewater treatment plant on Dwenger Avenue. This plant has been steadily expanded over the last ten years to accommodate combined sewage and regional economic development. The combined sewage is increasingly being diverted to the treatment plant instead of flowing into rivers. Current overall capacity is 72 million gallons/day, soon to be 85 million. Extra digesters were built, equivalent to 120 million gallons/day, to allow long-term maintenance of digesters and clearing of sediments throughout City Utilities' sewer system. Two ponds across the river can provide hundreds of millions of gallons of wastewater storage during major storm events.

Solids larger than a quarter inch are removed from wastewater entering the plant by passing through screens resembling a bank of massively robust bicycle chains. These cycle upwards to carry away and dump large solids including animal fats (which tend to solidify) via conveyor into a dumpster. Pumps then lift the wastewater four stories to provide gravity flow through much of the remainder of the facility. Water falls from the pumps in a centrifugal motion to expel grit (sand, glass, small stones, egg shells, etc.) and then injected with ferric chloride to begin precipitating out phosphates.

Huge volumes of water collect in wide outdoor primary sedimentation tanks, circa 12 feet deep. Many oils, particularly vegetable oils, rise and are skimmed off the top, eventually deposited into oversize fabric sleeves and then a dumpster. Many suspended solids settle into sludge which is then mechanically scraped to wells from which it can be drawn away horizontally underground. The tanks periodically require draining and massive manual cleaning, plus maintenance.

The sludge is moved to similar looking but smaller tanks with lids called anaerobic digesters. These are heated by an adjacent boiler house. Methane was flared off until recently, but a cleaning and processing facility now allows adding the methane to the natural gas fueling the boilers. R.O.I. for the methane project will be about 10 years.

Digested sludge is moved under the river to 55 acre basins where it composts and dries for 3 years. The dried compost is evaluated and blended, then mixed with plant compost, to form biosolids for home, garden, and farm uses.

The water from the primary sedimentation tanks flows to elongated secondary treatment ponds while being mixed with regulated amounts of flows from other secondary ponds in various stages of microbiological decay. Those microorganisms then consume organic materials in the wastewater as it flows slowly down the length of the secondary ponds, which are agitated. The water then moves through elongated and aerated secondary clarification ponds. A substantial laboratory monitors the type and relative numbers of microorganisms in order to regulate the systems of ponds. While complicated and sensitive (to factors as simple as too

much vegetable oil in the waste stream), this relatively new biological system is key to meeting EPA treatment standards.

Water allowed to flow from the secondary clarification ponds is passed through elongated horizontal centrifuges on its way to disinfection using sodium hypochlorite (whose facility and tanks were of great interest for some of us). The solids from the centrifuges are sent to digesters.

The disinfected water is transferred under the river to tertiary treatment where all of it is highly aerated and then snaked through a winding channel totaling 40 acres of surface area. The water dechlorinates and some solids settle out for nearly a day while moving through the system. After assuring at least 7 ppm dissolved oxygen, the water is discharged into the Maumee River. Fear of political backlash prevents it from being recycled into drinking water.

The FWEC also toured the computerized central control room for the entire facility including ponds across the river. Operators monitor sensors and cameras.

The facility had newly designed tool boards to minimize time lost retrieving tools from elsewhere in the sprawling plant. These were of great interest because some members were designing boards for their facility.

The FWEC sends a sincere thanks to City Utilities and especially our very dedicated tour guide, Tom Mann.

FWEC Board Meetings

Fort Wayne Engineers' Club board meetings are open to all FWEC members. The next FWEC board meeting will be Tuesday October 7th at 7:00 PM. Board meetings are held on the Indiana Tech campus in the Zollner Engineering Center in room Z-203

(www.indianatech.edu/SiteCollectionDocuments/Campus_Life/Campus_Map.pdf).

Engineers' News Past

The FWEC has a significant history; Treasurer Ryan Stark and his wife were able to find past Engineers News documents dating back to 1938! Here is an excerpt of the past newsletter (a scanned copy of the entire newsletter is available through the FWEC website - [Click Here](#) -

<http://www.fortwayneengineersclub.org/newsletter/194309FWECnewsletter.pdf>):

Engineers' News from September 16th, 1943:

Present day applications of engineering to our everyday lives, the wonderfully complicated machines of war which leave our factories every day and developments already under way in research laboratories, point to the dawn of a new and brighter day when the debris of war is swept away and the world again is at peace. These things point to a world in which the engineer must take the lead – the lead which he has so long left to others less qualified to take it. The engineer must forget his traditional aloofness and attack the new frontiers which beckon from outside the narrow confines of his profession.

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