Utility Engineering & Surveying Institute (UESI) Ontario GTA Chapter Initial Meeting

Please Join us on December 7th 10:00-12:00 at 330 Taunton Rd East Whitby Ontario at the T2 Utility Engineers office for the initial kick off meeting
Motivations

- Utilities, existing and planned, present risks to the public health and welfare.
- Contracts, case law, statutes, and the standard of care are leading civil engineers and owners to recognize utility engineering as a vital core aspect of civil practice and education.
- UESI allows opportunities for all those interested to collaborate in advancing the technical and professional practices of utility engineering and surveying.
- A focus on utility infrastructure to recruit and retain younger members
Three Year Plan

- A “One-Stop-Shop” for Utility Infrastructure Systems information
- An expanded Continuing Education and Certificate program
- Products – Annual Conference, UESI Magazine*, Journals, MOPs, Standards and Webinars
- A Leader to bring together other utility-related organizations reducing industry fragmentation
- A Leader for Utility Infrastructure Report Card and education for politicians and policy-makers

* - New, starting October 2018, printed magazine
Utility Engineering

Definition

“Utility Engineering is a branch of Civil Engineering that focuses on the planning, position, design, construction, operation, maintenance, and asset management of any and all utility systems, as well as the interaction between utility infrastructure and other civil infrastructure.”
Civil Engineering

- The Institute focuses on two separate, but related aspects of civil engineering practice: Utility Engineering, and Surveying
- The collection and description of utility location data is an integral and important component of the practice of Utility Engineering
- The Survey aspect of the Institute is not limited to utilities. It is focused on all aspects of Engineering Survey and Geomatics practice.
How UESI fits within ASCE

- Architectural Engineering Institute;
- Coasts, Oceans, Ports, and Rivers Institute;
- Construction Institute;
- Environmental & Water Resources Institute;
- Geo-Institute;
- Structural Engineering Institute;
- Transportation & Development Institute.

*(note: not included is the Engineering Mechanics Institute)*
UESI DIVISIONS

Structure

- Each Technical Division has an Executive Committee (EXCOM) consisting of up to 5 members
- Divisions may have Standing Committees (permanent technical functions)
- Divisions may have Task Committees (specific task, disbanded after completion)
- Divisions may have other non-technical organizational entities as desired
  - Student Scholarship Committee
  - Public Sector Professionals Scholarship Committee
  - Younger Member Engagement Committee
  - Marketing & Membership Committee
Pipeline Division

Standing Committees:

- Pipeline Infrastructure
- Pipeline Location & Installation Committee
- Pipeline Planning and Design

Task Committees: (12)
On-Going Activities Projects

- Pressure Pipelines Design for Water & Wastewater
- Rehabilitation of Sanitary Sewer Laterals
- Update of Manual of Practice 92 – Manhole Hole Inspection and Rehabilitation
- Thrust Restraint Manual of Practice
- Design of Close-Fit Liners for Gravity Pipe Applications
- Inspecting Pipelines Installation MOP 117
- Sustainability Evaluation of Pipelines
- Seismic Design of Pipelines
- Pipe Bedding & Trench Shoring Systems - Guidelines
- Direct Pipe Manual of Practice
- Pipe Bursting Projects MOP 112
- Pipe Ramming Projects MOP 115
Global Outreach & Collaboration

- Ongoing MOU with Zhengzhou University, Henan Province, China to attend Annual Int’l. Symposium
- Recently, attended a Symposium in Chongqing, China
## Pipelines Conferences

<table>
<thead>
<tr>
<th>YEAR</th>
<th># OF ATTENDEES</th>
<th># OF EXHIBITORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 (Miami, FL)</td>
<td>666</td>
<td>73</td>
</tr>
<tr>
<td>2013 (Fort Worth, TX)</td>
<td>806</td>
<td>57</td>
</tr>
<tr>
<td>2014 (Portland, OR)</td>
<td>951</td>
<td>78</td>
</tr>
<tr>
<td>2015 (Baltimore, MD)</td>
<td>832</td>
<td>83</td>
</tr>
<tr>
<td>2016 (Kansas City, MO)</td>
<td>846</td>
<td>76</td>
</tr>
<tr>
<td>2017 (Phoenix, AZ)</td>
<td>859</td>
<td>103</td>
</tr>
<tr>
<td>2018 (Toronto, Canada)</td>
<td>939</td>
<td>91 (sold out)</td>
</tr>
</tbody>
</table>

### 2018 Pipelines Conference

**Total Attendees:** 939  
United States: 519  
Canada: 298  
Other Nations: 122

**Other Nations Represented:** 38  
Australia, Austria, China, Germany, Greece, Hong Kong, Israel, Italy, Japan, Republic of Korea, Nigeria, Romania, Saudi Arabia, Sri Lanka, United Kingdom
Publications

- 30+ Manuals of Practice (MOP) developed (1997 to 2018)
- 92,000 On-line Abstract Views (6 months)
- 11,000 Full-text downloads (6 months)
UESI Pipeline Division

Newest Publications

- Pilot Tube and Other Guided Boring Methods
- Water Pipeline Condition Assessment
SUE Technical Track at Conferences + SUE Workshops

Pipelines Conferences
- Phoenix, AZ | August 6-9, 2017
- Toronto, ON | July 15-18, 2018
- Nashville, TN | July 21-24, 2019
- San Antonio, TX | August 7-12, 2020

Surveying & Geomatics Conferences
- Cal Poly – Pomona, CA | April 23-24, 2018
- Cincinnati State | 2020

TEXAS UESI Chapter Conference
- March 11-12, 2019
Standing Committees

- Publications
- Education Committee
- Geo-ref & Spatial Data Accuracy
- Spatial Data Applications Committee
- Engineering Survey Practice Committee
- Underwater Survey Technology Committee
On-Going Activities Projects

- Development of the Surveying Engineering Manual of Practice
- Development of the on-line guide course on Surveying Engineering
- Webinar of Surveying Engineering MOP
- Develop of a Underwater Surveying Manual of Practice
- Development of the 2020 Surveying & Geomatics Conference
- Support on the ASCE Surveying Competition
- Future of Surveying – NSPS
- Evaluation of Surveying Education for undergraduate CE Programs
2018 Surveying & Geomatics Conference

- First ASCE Surveying Conference in 25 years
  - Over 150 registered attendees
  - 13 Exhibitors and one Sponsor
  - Two workshops
Standing Committees

- Subsurface Utility Engineering and Investigations
- Utility Coordination
- Data Management and Security
- Aerial and Underground Cable and Conduit Infrastructure
- Utility Risk Research Council
On-Going Activities Projects

- White Paper/Webinar: Effective Utility Records Research
- Webinar and 40 Hour Short Course: Effective Utility Coordination
- MOP: Utility Risk Management for Design-Build Projects
- MOP: Subsurface Utility Engineering
- Collaboration with FHWA/NHI: Effective Utility Investigations (underway)
- Collaboration with IRWA: Plans Reading and Understanding
Guide for Municipalities

ASCE UESI | American Public Works Association

In Publications now

Companion Document to ASCE 38

Contains:
SUE Prequalification Guide
SUE Scope of Work
2018 Update

New Items:

- PE Sealed Utility Report or similar required
- Vaults are dimensioned
- Lots of Commentary for context
- Overhead Utility details
- Precision on QL - B
2018 Update

Committee Ballot this Fall
New Colorado LAW -
In conjunction with ACEC / ASCE / APWA

• All public project owners must have their engineer perform a comprehensive QLB search for all utilities on the project in strict accordance with ASCE 38. QLA at conflict points

• $50 M per year instant SUE market in a state that never had a SUE project before!

• Other interested states: CA, WA so far
Certification

• 100+ students through Louisiana Tech’s 40 hour “Geophysics for SUE Professionals” course. Next schools are Dec 2018 and February 2019

• Advocated with several state boards to recognize SUE or utility experience for PE licensing experience

• Begun ASCE Board Certification process for:
  • Certified Subsurface Utility Engineering Professional
  • Certified Subsurface Utility Engineering Designator
  • Certified Utility Engineer
  • Certified Engineering Surveyor
  • Certified Utility Coordinator

• Task Committee on One-Call Locator Training and Certification with CGA/NTSB/DOL/VA/PHMSA and others
American Academy of Water Resources Engineers (AAWRE)

AAWRE was the first professional certification program launched by ASCE in 2004. AAWRE offers the Diplomate, Water Resources Engineer (D.WRE) certification for professional engineers practicing in the broad field of water resources engineering.

Academy of Coastal, Ocean, Port & Navigation Engineers

ACOPNE was launched in 2009, ACOPNE has recognizes sub-specialty fields of expertise consistent with the sub-disciplines contained in COPRI: coastal, ocean, port, and navigation engineering.

Academy of Geo-Professionals (AGP)

AGP was launched in 2008, and offers the Diplomate, Geotechnical Engineering (D.GE), the first voluntary, post-license credential to provide professional engineers an opportunity to gain further recognition in the field of geotechnical engineering.
Purpose
The Asset Management Division provides leadership for infrastructure systems owners and stakeholders and enhances the efficiency of operations and maintenance through asset management of infrastructure systems with a focus on collaboration of effective tools, practices, processes and policies.
Utility Asset Management Division

On-Going Activities Projects

- Data & Tools Committee – Capturing the data standard model specification and data visualization
- Water Pipe Conditioning Assessment Manual of Practice – 134 - Revision
- Task Committee - White Paper on Asset Management Needs
- Task Committee – Performance Matrix
- Joint Workshop with ASCE Infrastructure Resilience Committee – ASCE HQ -2019
- ASCE – India Section Conference – December 8-11, 2019
Purpose

The Standards Division coordinates activities of UESI related to the development, revision or discontinuance of standards in the areas of surveying, geomatics and utility engineering and ensures compliance with the ASCE Rules for Standards Committees. The leadership of the Division is responsible for identifying new topics for standards development and growing the overall UESI standards program.
ASCE Standards under UESI Direction

- ASCE 15: Standard Design of Low Head Pressure Pipe
- ASCE 26: Direct Design of Buried Precast Concrete Box Sections
- ASCE 27: Standard Practice for Direct Design of Precast Concrete Pipe for Jacking in Trenchless Construction
- ASCE 28: Standard Practice for Direct Design of Precast Concrete Box Sections for Jacking in Trenchless Construction
- ASCE 38: Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data
- ASCE XX: Standard Guideline for the Collection and Exchange of Utility Infrastructure Data
- ASCE YY: Standard for Post-Disaster Evaluation of Lifelines (pending proposal approval)

ASCE 38 and ASCE XX will be co-branded upon (re)publication as ANS Standards / CI / UESI
Current Chapters

- Broward Branch Chapter, FL
- Central Ohio Section Chapter, OH
- East Central Florida, FL
- Illinois Section, IL
- Miami-Dade Branch Chapter, FL
- Orange County Branch Chapter, CA
- Texas Section, TX
- Arizona Branch
- LA Section, CA
- Michigan Section, MI

Pending

- Toronto, Canada
- Bogota, Columbia
- Edmonton, Canada
- Maryland Chapter
- Philadelphia Section
UESI Organizational Members

Place for Organizations to have their input in addition to individuals

CURRENT ORGANIZATIONAL MEMBERS

- Cardno
- SAM, Inc.
- UMSI
- Cobb Fendley
- American Ductile Iron Pipe
- Pure Technologies
- IT pipes
- Plastic Pipe Institute
- Cartegraph
- Innovyze

- Structural Technologies
- NASTT
- Underground Construction
- NASSCO
- CityWorks
- Arcadis
- AECOM
- HDR
- Accumark

Represents over XXX professionals and direct staff
UESI Magazine

• Launch Date – October 2018
• Published Quarterly
• Publisher – Gulf Energy (Underground Construction)
• Creating the Magazine Editorial Board
• Content will include:
  • Technical Articles
  • President and Editor Column
  • Member Spotlight
  • UESI Division Reports
  • Calendar of Events
  • Review of Past Events
  • Meet the UESI BOG and ExCom Members
  • Organization Member Highlights
  • UESI Chapter Activities
  • Interviews for UESI National Award Winners
UESI Agreements

- Infrastructure Resources (Common Ground Alliance Conference)
- National Association of Sewer Service Companies (NASSCO)
- North American Society for Trenchless Technology (NASTT)
- Underground Construction Technology (UCT)
- xyHt (Publication)
- Gulf Energy (Publication - UESI Magazine)
- California Polytechnic University at Pomona
- Louisiana Tech University – Trenchless Technology Center
- Zhengzhou University, China

Under Discussion
- SPAR 3D sensing, 3D processing and 3D visualization tools
Who Should Join?

- Water and Wastewater Pipeline Engineers, Technicians, and Suppliers
- Oil & Gas Pipeline Engineers
- Electrical and Communications System Engineers / Designers
- Subsurface Utility Engineers
- CAD Technicians
- Utility Coordinators
- Surveyors
- Party Chiefs
- Field Technicians
- Utility Asset Managers
- Pipeline Construction Contractors
UESI Website

Go to [www.asce.org/uesi](http://www.asce.org/uesi)

Join a Technical Committee

Go to “UESI Committee”

Interest in other aspects of Utility Engineering?

If so, please contact the UESI staff for …

- Training needs
- Technical Reports.
- Expert Advise and Support
How To Join UESI

■ Current Member of ASCE
  ➢ Go to www.asce.org/renewal - Primary Institute - free; Secondary - $30

■ New Member of ASCE ($240/year)
  ➢ Go to www.asce.org/join - Choose UESI as free Institute

■ UESI-Member Only ($135USD/year)
  ➢ Go to www.asce.org/uesi - Select “Join UESI Member-only Online”

■ Student Member (Free)
  ➢ Go to www.asce.org/uesi - Select “Join UESI student member

■ Corporate Member ($2,000/year)
  ➢ Go to www.asce.org/uesi - Select “Corporate member”
Questions?