



# 2018 NHEC

# NATIONAL HYDRAULIC ENGINEERING CONFERENCE

# AGENDA

**Hyatt Regency Columbus**  
**350 North High Street, Columbus, Ohio 43215**

## Monday, August 27, 2018

8:00am – 5:00pm

*TRB AFB-65 Summer Meeting* – Open to Public – **Delaware Room A**

*TRB AFB-60 Summer Meeting* – Open to Public – **Delaware Room B**

*AASHTO TCHH Annual Committee Meeting* – *Invitation only* – **Delaware Room C**

*FHWA Meeting* – *Invitation only* – **Delaware Room D**

## Day 1: Tuesday, August 28, 2018

8:00am-11:30am

Conference Registration/Sponsor Set Up – **Delaware Foyer**

Workshop A – *Two-dimensional Modeling Best Practices for Transportation Hydraulics* – Scott Hogan, Alan Zundel, and Yong Lai – **Delaware Room A-B**

Workshop B – *NCHRP 14-26 Culvert and Storm Drain System Inspection Manual* – Jesse Beaver – **Delaware Room C-D**

1:00pm-4:40pm – Conference Begins – **Delaware Room A-D**

1:00pm-1:20pm – Opening Remarks – Shad Sargand, Russ Professor and Associate Director of ORITE (time 16:20)

Video URL: <https://www.youtube.com/watch?v=isPWWhWNES0c>

1:20pm-1:30pm – Welcome – Dr. M. Duane Nellis, President of Ohio University (time 4:49)

Video URL: <https://www.youtube.com/watch?v=b97CJ3CwqeY>

1:30pm-2:20pm – Keynote Speech – Dave Slatzer, Deputy Director, Division of Engineering, Ohio DOT (time 22:41)

Video URL: <https://www.youtube.com/watch?v=L2Uhcl0DNF4>

2:20pm-3:00pm – Stan Davis Tribute/Mark Miles Award (time 16:07)

Video URL: <https://www.youtube.com/watch?v=ZGMWQM-Hs4s>

3:00pm-3:20pm – Break – **Delaware Foyer**

3:20pm-3:40pm – FHWA Update – Joe Krolak, HIBS-20 Team Leader and Principal Bridge Engineer – Hydraulics (time 18:14)

Video URL: [https://www.youtube.com/watch?v=LK4J\\_YEyB8c](https://www.youtube.com/watch?v=LK4J_YEyB8c)

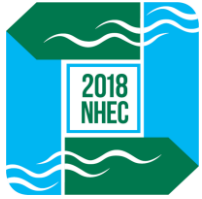
3:40pm-4:00pm – AASHTO Update – Nick Wark, Vermont Agency of Transportation (time 12:24)

Video URL: <https://www.youtube.com/watch?v=LoxYCIpTfbk>

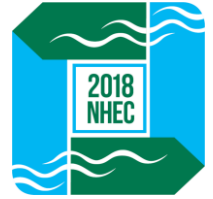
4:00pm-4:40pm – Transportation Research Board Committee Updates – Bea Hunt (AFB-60 and AFB-65) (time 4:31)

Video URL: <https://www.youtube.com/watch?v=Sv9UPeNkPDK>

5:30pm-7:00pm – Ice Breaker/Poster Session – **Peppercorn Room (First floor)**



# AGENDA



## Day 2: Wednesday, August 29, 2018

6:45am-7:45am – Breakfast (provided) – **Hayes Room, first floor**

8:00am-10:05am

**Delaware Room A-B**

**Session Topic: Culvert Hydraulics – The Practical and Innovative**

**Moderated by: Mike Hogan**

Title	Presenter
<i>Why Bigger is Not Always Better: Culvert Hydraulics</i> (time 20:27) Video URL: <a href="https://www.youtube.com/watch?v=5O5y0E2TTSQ">https://www.youtube.com/watch?v=5O5y0E2TTSQ</a>	Matthew Johnson
<i>Diffuser Outlet Efficiency: Methods for Demonstrating Increased Capacity</i> (time 18:13) Video URL: <a href="https://www.youtube.com/watch?v=57iGmoYM4pU">https://www.youtube.com/watch?v=57iGmoYM4pU</a>	Alex Mann
<i>Web-based Tool for Evaluating Sedimentation at Multi-Box Culverts</i> (time 31:21) Video URL: <a href="https://www.youtube.com/watch?v=tFaAeTZ_PJY">https://www.youtube.com/watch?v=tFaAeTZ_PJY</a>	Dave Claman
<i>Fish Passage Barrier Correction at Washington State Highways</i> (time 25:27) Video URL: <a href="https://www.youtube.com/watch?v=uVZzGLaWABo">https://www.youtube.com/watch?v=uVZzGLaWABo</a>	Julie Heilman and Dave Minner
<i>Million Dollar Culvert Rehabilitation</i> (time 23:22) Video URL: <a href="https://www.youtube.com/watch?v=dthEdk0tiDI">https://www.youtube.com/watch?v=dthEdk0tiDI</a>	Timothy Mallette

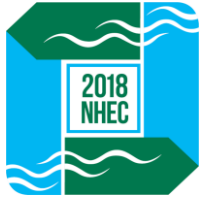
**Delaware Room C-D**

**Session Topic: Coastal Hydraulics – Resiliency for Extreme Events and Changing Seas**

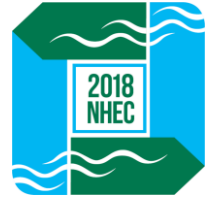
**Moderated by: Brian Beucler**

Title	Presenter
<i>An Assessment of Hydraulic Damages in Northeast Florida from Hurricane Irma</i> (time 19:50) Video URL: <a href="https://www.youtube.com/watch?v=-DA2De-9qno">https://www.youtube.com/watch?v=-DA2De-9qno</a>	Raphael Crowley
<i>Fast Tracked Shore Protection along Lake Michigan – A Case Study</i> (time 21:54) Video URL: <a href="https://www.youtube.com/watch?v=Ty7YHedXiyU">https://www.youtube.com/watch?v=Ty7YHedXiyU</a>	Saied Saiedi
<i>NCDOT Bridge Superstructure Level III Wave Vulnerability Study Report and GIS Database</i> (time 20:48) Video URL: <a href="https://www.youtube.com/watch?v=S14t9ejXmws">https://www.youtube.com/watch?v=S14t9ejXmws</a>	Jerry Snead and Ken Ashe
<i>Development of a Physics-Based Model for Predicting Loading on Bridges During Water Wave Attack</i> (time 19:13) Video URL: <a href="https://www.youtube.com/watch?v=Mv-Rynlqgfg">https://www.youtube.com/watch?v=Mv-Rynlqgfg</a>	Christian Matemu
<i>New Coastal Guidance Development</i> (time 30:34) Video URL: <a href="https://www.youtube.com/watch?v=cNe3Ae3mHxw">https://www.youtube.com/watch?v=cNe3Ae3mHxw</a>	Scott Douglass

10:05am-10:25am – Break – **Delaware Foyer**



# AGENDA



## Day 2: Wednesday, August 29, 2018

10:25am-12:05pm

**Delaware Room A-B**

**Session Topic: *Improving Roadway Hydraulic Design Through Innovation and Advanced Tools***

**Moderated by: Brian Campbell**

Title	Presenter
<i>Assessment of HEC-22 Equations for the Design of Curb-opening Inlets</i> (time 23:39) Video URL: <a href="https://www.youtube.com/watch?v=8Gqy_Npc0gY">https://www.youtube.com/watch?v=8Gqy_Npc0gY</a>	Muhammad Ashraf
<i>Errors in HEC-22 for Long Curb Inlets and the Challenges for Implementation of Revised Designs</i> (time 21:35) Video URL: <a href="https://www.youtube.com/watch?v=gRhJguDR7O8">https://www.youtube.com/watch?v=gRhJguDR7O8</a>	Saul Nuccitelli
<i>Computation of Hydraulic Jump's Sequent Depth in Sloped Circular Water Pipe</i> (time 23:51) Video URL: <a href="https://www.youtube.com/watch?v=0k6RJyqSA1I">https://www.youtube.com/watch?v=0k6RJyqSA1I</a>	Kenneth Edwards
<i>3D CFD Analysis of Hydroplaning Risk and Grate Hydraulic Efficiency</i> (time 29:10) Video URL: <a href="https://www.youtube.com/watch?v=Mudev4CLCgE">https://www.youtube.com/watch?v=Mudev4CLCgE</a>	Marta Sitek

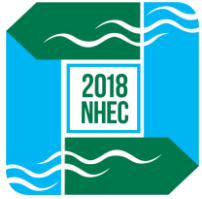
**Delaware Room C-D**

**Session Topic: *Streamlining, Adaptation, and State of the Art Tools for Floodplains***

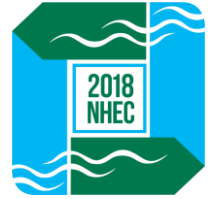
**Moderated by: Cynthia Nurmi**

Title	Presenter
<i>NCDOT's Partnership With NC Floodplain Mapping Program: Streamlining NFIP Compliance</i> (time 21:09) Video URL: <a href="https://www.youtube.com/watch?v=4byHlbaFtKg">https://www.youtube.com/watch?v=4byHlbaFtKg</a>	Jerry Snead
<i>The Cannon Drive Levee: Coupling Roadway Improvements and Flood Protection at The Ohio State University</i> (time 23:44) Video URL: <a href="https://www.youtube.com/watch?v=B1vopHO4I4I">https://www.youtube.com/watch?v=B1vopHO4I4I</a>	Miles Hebert
<i>State-of-the-art FEMA Map Update With a HEC-RAS 1D/2D Hybrid Model and Validated With TUFLOW</i> (time 21:28) Video URL: <a href="https://www.youtube.com/watch?v=incVh6JMS9A">https://www.youtube.com/watch?v=incVh6JMS9A</a>	Rachel L. Tereska
<i>New Methods for Floodplain and Floodways Determination Using 2D Models</i> (time 27:08) Video URL: <a href="https://www.youtube.com/watch?v=Uqg2n7ttDa8">https://www.youtube.com/watch?v=Uqg2n7ttDa8</a>	Scott Hogan

**12:05pm-1:05pm – Lunch (provided) – Hayes Room, first floor**



# AGENDA



## Day 2: Wednesday, August 29, 2018

1:05pm-2:45pm

**Delaware Room A-B**

**Session Topic: *Innovation Through New Scour Methodology***

**Moderated by: Paul Sharp**

<b>Title</b>	<b>Presenter</b>
<i>Revised Clear-Water and Live-Bed Contraction Scour Analysis</i> (time 25:50) Video URL: <a href="https://www.youtube.com/watch?v=yydM7_jtk8w">https://www.youtube.com/watch?v=yydM7_jtk8w</a>	Paul Clopper
<i>Observation Method: A New Tool for the Bridge Scour Engineer</i> (time 22:22) Video URL: <a href="https://www.youtube.com/watch?v=uSsioS6eitg">https://www.youtube.com/watch?v=uSsioS6eitg</a>	Jean-Louis Briaud
<i>Implementation of the Scour Evaluation Model (SEM)</i> (time 23:10) Video URL: <a href="https://www.youtube.com/watch?v=YHnMMr3D7EM">https://www.youtube.com/watch?v=YHnMMr3D7EM</a>	John Schuring
<i>Scour Depth Equilibrium State Design Approach</i> (time 15:22) Video URL: <a href="https://www.youtube.com/watch?v=oFB1KtmxYr0">https://www.youtube.com/watch?v=oFB1KtmxYr0</a>	Kornel Kerenyi

**Delaware Room C-D**

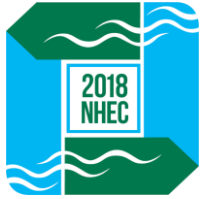
**Session Topic: *Advancing Resilient Design With Improved Data and Tools***

**Moderated by: Abhi Kapoor**

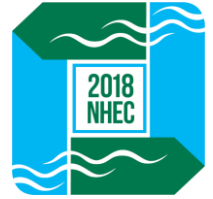
<b>Title</b>	<b>Presenter</b>
<i>HY8 and Toolbox Updates</i> (time 20:12) Video URL: <a href="https://www.youtube.com/watch?v=asKix30c6U8">https://www.youtube.com/watch?v=asKix30c6U8</a>	Eric Jones
<i>USGS Streamgage Data and Their Applications</i> (time 23:54) Video URL: <a href="https://www.youtube.com/watch?v=zDa_3zSykMA">https://www.youtube.com/watch?v=zDa_3zSykMA</a>	Thomas Harris
<i>Web Service Resources for Hydrologic and Hydraulic Modeling</i> (time 16:20) Video URL: <a href="https://www.youtube.com/watch?v=DcfucHRXnpQ">https://www.youtube.com/watch?v=DcfucHRXnpQ</a>	Eric Jones
<i>ESRI Culvert Collector: Asset Management for Mobile Devices</i> (time 24:24) Video URL: <a href="https://www.youtube.com/watch?v=wZqCrXCA-Bw">https://www.youtube.com/watch?v=wZqCrXCA-Bw</a>	Matt Retta

**1:05pm-5:10pm – *Field Trip A – OSU Cannon Drive Floodwall Project***

**2:45pm-3:05pm – Break – **Delaware Foyer****



# AGENDA



## Day 2: Wednesday, August 29, 2018

3:05pm-5:10pm

**Delaware Room A-B**

**Session Topic: Bridge Resiliency Through Scour Countermeasures**

**Moderated by: Laura Girard**

Title	Presenter
<i>Utilizing BridgeWatch® for Real-Time Flood Forecasting and Monitoring of Highway Overtopping Sites in Iowa</i> (time 26:08) Video URL: <a href="https://www.youtube.com/watch?v=QesH1_IU3Mk">https://www.youtube.com/watch?v=QesH1_IU3Mk</a>	Joe Scannell, Dave Claman, Mike Hogan, Wesley Peck
<i>Drone Based Riprap Imaging and Gradation Measurement</i> (time 17:08) Video URL: <a href="https://www.youtube.com/watch?v=21KywcFt7Ps">https://www.youtube.com/watch?v=21KywcFt7Ps</a>	LeAndra Nelson
<i>An Icebreaker Under Troubled Waters (and Ice Bergs)</i> (time 23:46) Video URL: <a href="https://www.youtube.com/watch?v=-egunieWMIQ">https://www.youtube.com/watch?v=-egunieWMIQ</a>	Michael Knapp
<i>Low-Cost Scour-Preventing Fairings for Bridges – Permanent Solution for Foundation Rock Scour</i> (time 19:20) Video URL: <a href="https://www.youtube.com/watch?v=W7Ht3eWNI_8">https://www.youtube.com/watch?v=W7Ht3eWNI_8</a>	Roger Simpson
<i>Underwater Installation of Filter Systems for Scour and Other Erosion Control Measures</i> (time 26:46) Video URL: <a href="https://www.youtube.com/watch?v=ZQptfrXznrw">https://www.youtube.com/watch?v=ZQptfrXznrw</a>	Pete Lagasse

**Delaware Room C-D**

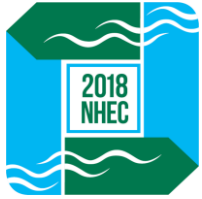
**Session Topic: Consideration of Extreme Weather Events in Resilient Design**

**Moderated by: Brian Beucler**

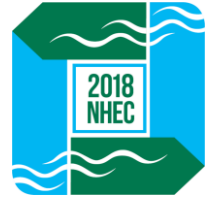
Title	Presenter
<i>Detection and attribution of inland flood change across the United States</i> (time 25:30) Video URL: <a href="https://www.youtube.com/watch?v=Qm_LTeUFPRw">https://www.youtube.com/watch?v=Qm_LTeUFPRw</a>	Stacey Archfield
<i>Confidence Bounds on Freeboard at Stream Crossings for Evaluating Overtopping Risk</i> (time 17:09) Video URL: <a href="https://www.youtube.com/watch?v=IPR5UvNCCUk">https://www.youtube.com/watch?v=IPR5UvNCCUk</a>	Tim Stephens
<i>Discussing the Known and Unknown of Anthropogenic Climate Change and Precipitation Extremes from Resilient Design</i> (time 25:30) Video URL: <a href="https://www.youtube.com/watch?v=xAaU3_nYsf4">https://www.youtube.com/watch?v=xAaU3_nYsf4</a>	Jared Bowden
<i>Adapting Global Climate Model Precipitation Projections to Hydrologic Design</i> (time 27:16) Video URL: <a href="https://www.youtube.com/watch?v=gCcOE9atnpE">https://www.youtube.com/watch?v=gCcOE9atnpE</a>	Roger Kilgore
<i>Panel Discussion</i> (time 34:58) Video URL: <a href="https://www.youtube.com/watch?v=wnUUL5vwNk8">https://www.youtube.com/watch?v=wnUUL5vwNk8</a> (Participants (left to right): 1. Roger Kilgore, 2. Jared Bowden, 3. Stacey Archfield, 4. Tim Stephens, 5. Rob Kafelanos, 6. Scott Douglass, 7. Brian Beucler (Moderator).)	Presenters and moderator with Rob Kafelanos and Scott Douglass

5:30pm-7:30pm

**TRB AFB-65, TRB AFB-60, and AASHTO TCHH Combined Meeting** – Open to Public – **Delaware Room A-B**



# AGENDA



## Day 3: Thursday, August 30, 2018

6:45am-7:45am – Breakfast (provided) – **Hayes Room, first floor**

8:00am-10:05am

**Delaware Room A-B**

**Session Topic: *Rethinking the Methodology for Stream Stability***

**Moderated by: Bea Hunt**

Title	Presenter
<i>Right Sizing Stream Stability Analysis</i> (time 27:51) Video URL: <a href="https://www.youtube.com/watch?v=s0N879ZN2Qk">https://www.youtube.com/watch?v=s0N879ZN2Qk</a>	Brinton Swift
<i>Stream Stability: Practical Approaches to Sediment Transport at Stream Crossings</i> (time 22:49) Video URL: <a href="https://www.youtube.com/watch?v=oFlaA8y2sjk">https://www.youtube.com/watch?v=oFlaA8y2sjk</a>	Holly Yaryan Hall
<i>Advances in 3D CFD Modeling of Scour with Sediment Transport and Analysis of Stream Instability and Channel Migration</i> (time 27:49) Video URL: <a href="https://www.youtube.com/watch?v=B7_kkx3WzmE">https://www.youtube.com/watch?v=B7_kkx3WzmE</a>	Steven Lottes
<i>Applying Temporal Bed Shear and Flow Duration Data to Determine Bankfull Width and Stream Stability</i> (time 16:56) Video URL: <a href="https://www.youtube.com/watch?v=RmARGCIWDoE">https://www.youtube.com/watch?v=RmARGCIWDoE</a>	Kornel Kerenyi

**Delaware Room C-D**

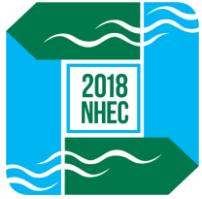
**Session Topic: *Workshop C – Flood Frequency Analysis Using Bulletin 17C, Updated Federal Guidelines***

**Wilbert Thomas**

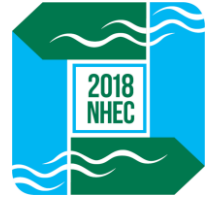
**Description:**

Bulletin 17C, *Guidelines for Determining Flood Flow Frequency*, was recently published by the U.S. Geological Survey (USGS), as an update to Bulletin 17B. Bulletin 17C uses the Log Pearson Type III frequency distribution applied to stream gage data. Enhancements include the ability to use flow intervals for flood events, better utilization of historical information for events outside the gage record (historic floods), an improved method for determining confidence limits, and improved identification of multiple low flood events. The USGS PeakFQ program includes the new methods in 17C and will be demonstrated in the workshop.

10:05am-10:25am – Break – **Delaware Foyer**



# AGENDA



## Day 3: Thursday, August 30, 2018

10:25am-12:05pm

**Delaware Room A-B**

**Session Topic: *Ensuring Resiliency Through Stream Stability Countermeasures***

**Moderated by: Bea Hunt**

Title	Presenter
<i>Rockerries in the River Environment</i> (time 23:06) Video URL: <a href="https://www.youtube.com/watch?v=1k-FmoJiTTy">https://www.youtube.com/watch?v=1k-FmoJiTTy</a>	Veronica Ghelardi
<i>Engineered Log-Jams and Dolosse for Streambank Protection</i> (time 24:12) Video URL: <a href="https://www.youtube.com/watch?v=IGR8Qp_V_HA">https://www.youtube.com/watch?v=IGR8Qp_V_HA</a>	Oscar Suaznabar
<i>Implementation of Bankfull Channels, Vanes, and Weir Structures at Bridge Openings as Alternatives to Traditional Maintenance Practices</i> (time 22:28) Video URL: <a href="https://www.youtube.com/watch?v=tLtJOSbEaDQ">https://www.youtube.com/watch?v=tLtJOSbEaDQ</a>	Jon Witter
<i>Integrating Nature-Based Resilience for Levee Wave Wash Protection</i> (time 19:05) Video URL: <a href="https://www.youtube.com/watch?v=2TQcPjCb2w">https://www.youtube.com/watch?v=2TQcPjCb2w</a>	Sachin Mandavkar

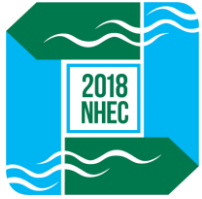
**Delaware Room C-D**

**Session Topic: *Stormwater Management 1***

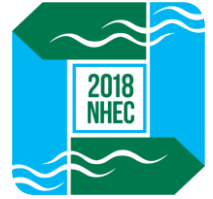
**Moderated by: Scott Taylor**

Title	Presenter
<i>NCHRP 20-68A Domestic SCAN: Effective Management of Roadside Water – SCAN 16-02</i> (time 27:41) Video URL: <a href="https://www.youtube.com/watch?v=Jay4x5ZqjZM">https://www.youtube.com/watch?v=Jay4x5ZqjZM</a>	Charles Hebson
<i>If You Can Fit a Ditch, You Can Fit Bioretention!</i> (time 25:22) Video URL: <a href="https://www.youtube.com/watch?v=NeKtXe8Aw">https://www.youtube.com/watch?v=NeKtXe8Aw</a>	Jon Prier
<i>Water Quality Treatment With Biofiltration Conveyance and Articulating Concrete Blocks</i> (time 24:19) Video URL: <a href="https://www.youtube.com/watch?v=h-eB1gmjRe4">https://www.youtube.com/watch?v=h-eB1gmjRe4</a>	Everett Gupton
<i>Early Returns on SCM Inspections: PennDOT Statewide Stormwater Control Measure Program</i> (time 24:27) Video URL: <a href="https://www.youtube.com/watch?v=D_XjCKZDTFk">https://www.youtube.com/watch?v=D_XjCKZDTFk</a>	Jeffrey S. MacKay

**12:05pm-1:05pm – Lunch (provided) – Hayes Room, first floor**



# AGENDA



## Day 3: Thursday, August 30, 2018

1:05pm-2:45pm

**Delaware Room A-B**

**Session Topic: *Using Innovative Tools and Methods for Improved Design***

**Moderated By: Veronica Ghelardi**

Title	Presenter
<i>Truckee River Bridge Scour – Doing It By The Book</i> (time 23:30) Video URL: <a href="https://www.youtube.com/watch?v=vmioUZPg4FM">https://www.youtube.com/watch?v=vmioUZPg4FM</a>	Brad Hartman
<i>Using Computational Fluid Dynamics (CFD) as a Tool to Gain Insights Into Challenging Scour Situations</i> (time 23:03) Video URL: <a href="https://www.youtube.com/watch?v=5vu_T6p1IVl">https://www.youtube.com/watch?v=5vu_T6p1IVl</a>	Kevin Flora
<i>In-Situ Scour Testing Device</i> (time 19:17) Video URL: <a href="https://www.youtube.com/watch?v=x0Mh1Ji4kNM">https://www.youtube.com/watch?v=x0Mh1Ji4kNM</a>	Haoyin Shan
<i>Advancements in Bridge Hydraulic and Scour Analyses with Two-Dimensional Hydraulic Modeling</i> (time 20:41) Video URL: <a href="https://www.youtube.com/watch?v=GrzIFWAbW38">https://www.youtube.com/watch?v=GrzIFWAbW38</a>	Scott Hogan

**Delaware Room C-D**

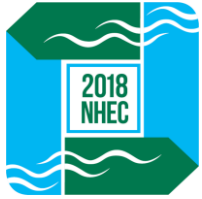
**Session Topic: *Stormwater Management 2***

**Moderated By: Steve Sisson**

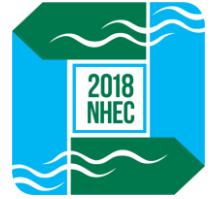
Title	Presenter
<i>Benefits of 2-Dimensional Hydraulic Modeling for Enhanced Collaboration: Streamlining Environmental and Engineering Activities</i> (time 22:37) Video URL: <a href="https://www.youtube.com/watch?v=Qmo_RtAVbKl">https://www.youtube.com/watch?v=Qmo_RtAVbKl</a>	Megan Frye
<i>Integrated Watershed Management Planning: FDOT's Perspective and Vision</i> (time 28:53) Video URL: <a href="https://www.youtube.com/watch?v=oy0DFnEIZP4">https://www.youtube.com/watch?v=oy0DFnEIZP4</a>	Carlton D. Spirio
<i>NCDOT's Stormwater Research Program</i> (time 23:51) Video URL: <a href="https://www.youtube.com/watch?v=AEQ0o7rvyF4">https://www.youtube.com/watch?v=AEQ0o7rvyF4</a>	Andrew McDaniel
<i>TMDL Alternatives: A Non-regulatory Approach Success Story in North Carolina – Little Alamance Creek</i> (time 31:03) Video URL: <a href="https://www.youtube.com/watch?v=c4ZkPpgv-3Y">https://www.youtube.com/watch?v=c4ZkPpgv-3Y</a>	Andrew McDaniel

2:45pm-3:05pm – Break – **Delaware Foyer**





# AGENDA



## Day 3: Thursday, August 30, 2018

3:05pm-5:10pm

**Delaware Room A-B**

**Session Topic: Culvert Durability and Rehabilitation for Resiliency**

**Moderated by: Jeff Syar**

Title	Presenter
<i>Basics of Culvert Durability</i> (time 23:37) Video URL: <a href="https://www.youtube.com/watch?v=RfThokvzFUQ">https://www.youtube.com/watch?v=RfThokvzFUQ</a>	Kevin White
<i>Re-rounding of Thermoplastic Conduit Under State Route 150 in Jefferson County, Ohio</i> (time 23:54) Video URL: <a href="https://www.youtube.com/watch?v=kQXGyCD6zEY">https://www.youtube.com/watch?v=kQXGyCD6zEY</a>	Shad Sargand
<i>Structural Rehabilitation of Invert-Deteriorated Metal Culverts Through Field Concrete Paving</i> (time 25:39) Video URL: <a href="https://www.youtube.com/watch?v=LzD-BWD_QgM">https://www.youtube.com/watch?v=LzD-BWD_QgM</a>	Teruhisa Masada
<i>Structural Design Methodology for Spray Applied Pipe Liners in Gravity Storm Water Conveyance Conduits</i> (time 27:38) Video URL: <a href="https://www.youtube.com/watch?v=w78He6LEpR0">https://www.youtube.com/watch?v=w78He6LEpR0</a>	Mohammad Najafi
<i>Laboratory Testing and Analysis of Geopolymer Pipe-lining Technology for Rehabilitation of Stormwater Culverts</i> (time 21:34) Video URL: <a href="https://www.youtube.com/watch?v=1SJxemTIWZM">https://www.youtube.com/watch?v=1SJxemTIWZM</a>	Joe Royer

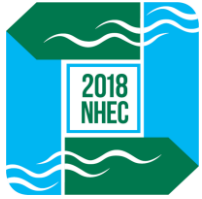
**Delaware Room C-D**

**Session Topic: Stormwater Management 3**

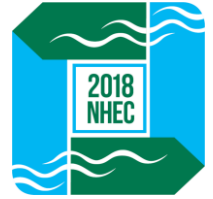
**Moderated by: Wesley Peck**

Title	Presenter
<i>Evaluating Stormwater Controls for Stormwater Pollution Prevention Plans</i> (time 22:54) Video URL: <a href="https://www.youtube.com/watch?v=eM7uC-jPS1k">https://www.youtube.com/watch?v=eM7uC-jPS1k</a>	Wesley Zech
<i>Evaluating Sediment Removal Efficiency of Catch Basin Inserts (CBIs) as a Post-Construction Water Quality Tool for Ohio Roadways</i> (time 21:09) Video URL: <a href="https://www.youtube.com/watch?v=WAc5y4pKilA">https://www.youtube.com/watch?v=WAc5y4pKilA</a>	Wesley Zech
<i>Characterizing Particle Size Distribution and Trash in Stormwater Runoff from Ohio's Roads</i> (time 22:21) Video URL: <a href="https://www.youtube.com/watch?v=jdFoYvbE6V0">https://www.youtube.com/watch?v=jdFoYvbE6V0</a>	Ryan Winston
<i>Use of Two-Dimensional Hydraulic Modeling for Design of Erosion Countermeasures</i> (time 23:28) Video URL: <a href="https://www.youtube.com/watch?v=QT-qjin50LM">https://www.youtube.com/watch?v=QT-qjin50LM</a>	Daniel Hoffman
<i>Effects of Precipitation Patterns on Sediment, Nutrient, and Biofilm Dynamics in an Acid Mine Drainage Stream</i> (time 18:38) Video URL: <a href="https://www.youtube.com/watch?v=4eggIDw2nMY">https://www.youtube.com/watch?v=4eggIDw2nMY</a>	Jennie Brancho

3:05pm-5:10pm – **Field Trip B – FHWA ISTD Soil Erosion Resistance Demonstration**



# AGENDA



## Day 4: Friday, August 31, 2018

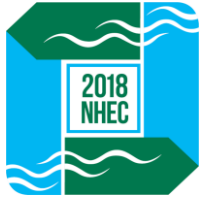
6:45am-7:45am – Breakfast (provided) – **Hayes Room, first floor**

**Delaware Room A-D**

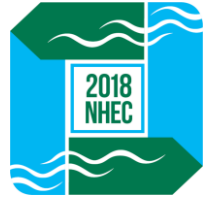
8:00am-10:00 am – **Advanced Hydraulic Modelling**

**Moderated by: Scott Hogan**

<i>Two-Dimensional Hydraulic Modelling with Tidal Boundary Conditions</i> (time 23:01) Video URL: <a href="https://www.youtube.com/watch?v=w0j9SJGNNjA">https://www.youtube.com/watch?v=w0j9SJGNNjA</a>	Jeff DeGraff
<i>Right Sizing The I-69 Bridge over the Ohio River at Evansville, Indiana</i> (time 21:00) Video URL: <a href="https://www.youtube.com/watch?v=5ac3mz4XJh8">https://www.youtube.com/watch?v=5ac3mz4XJh8</a>	Corinna Goodwin
<i>Hydraulic Design &amp; Permitting of a 5,000-ft Long Crossing of the Illinois River Utilizing 1D (HEC-RAS) and 2D (SRH-2D) Modelling</i> (time 31:54) Video URL: <a href="https://www.youtube.com/watch?v=Y927tSQWskk">https://www.youtube.com/watch?v=Y927tSQWskk</a>	Tony Comerio
<i>Scour Evaluation Comparison of SRH-2D &amp; HEC-RAS</i> (time 22:29) Video URL: <a href="https://www.youtube.com/watch?v=4xZZUMu42fU">https://www.youtube.com/watch?v=4xZZUMu42fU</a>	Don Hendon
<b>10:00am-10:20am – Break – Delaware Foyer</b>	
<b>Delaware Room A-D</b>	
<b>10:20am-12:00 noon – Advanced Hydraulic Modelling (continued)</b>	
<b>Moderated by: Scott Hogan</b>	
<i>NCDOT Realizing the Benefits and Challenges of Adopting 2D Modelling</i> (time 23:34) Video URL: <a href="https://www.youtube.com/watch?v=Pb14OvoYjQE">https://www.youtube.com/watch?v=Pb14OvoYjQE</a>	Matthew Lauffer and Ken Ashe
<i>Utilizing SRH-2D to Improve Cost Efficiencies and Design Process for the Colorado Department of Transportation</i> (time 34:41) Video URL: <a href="https://www.youtube.com/watch?v=HddSMnsSJQ0">https://www.youtube.com/watch?v=HddSMnsSJQ0</a>	Steven Griffin
<i>Importance of Large Scale Roughness in 2D Model Development</i> (time 24:14) Video URL: <a href="https://www.youtube.com/watch?v=nFz3_jjTi3l">https://www.youtube.com/watch?v=nFz3_jjTi3l</a>	Brice Stafne
<i>SAMPLE: A 3D Flow Modeling Procedure for Hydraulic Engineers</i> (time 30:00) Video URL: <a href="https://www.youtube.com/watch?v=0Fc_r7q7dU0">https://www.youtube.com/watch?v=0Fc_r7q7dU0</a>	Yong Lai
<b>Closing Remarks</b> (time 2:34) Video URL: <a href="https://www.youtube.com/watch?v=XFRI_vHePfc">https://www.youtube.com/watch?v=XFRI_vHePfc</a>	Jeff Syar and Cynthia Nurmi



# AGENDA



## FIRST FLOOR



## SECOND FLOOR

