

**2012 National Hydraulics Engineering Conference –  
Flow Near, Under, and Over Roads: Optimizing Highway Hydraulics  
Agenda**

<b>Tuesday, August 28, 2012</b>		
8:00am – 1:00pm	Registration	
1:00pm – 3:00pm	General Session	<p><b>WELCOME</b></p> <p>Introductions Wayne Seger, Tennessee DOT Structures Director</p> <p>Plenary Speaker Roger Lindsey, City of Nashville</p> <p>Presentation of Mark Miles Award Andrea Hendrickson, AASHTO TCHH Chair</p>
3:00pm	Break 1	
3:30pm – 5:30pm	General Session	<p><b>WHAT'S HAPPENING?</b></p> <p>TRB Subcommittee AFB60 Hydrology, Hydraulics, and Water Quality Jon Zirkle, Committee Chair</p> <p>AASHTO Technical Committee on Hydrology and Hydraulics Andrea Hendrickson, Committee Chair</p> <p>FHWA Hydraulics Program Joe Krolak, Principal Hydraulic Engineer, Team Leader Brian Beucler, Senior Hydraulics Engineer (HDS 5 Update) Larry Arneson, Senior Hydraulics Engineer (HEC 18 and 20 and HDS 7 Update) Kornel Kerenyi, Turner Fairbanks Hydraulics Lab</p> <p>NCHRP Updates David Reynaud, NCHRP</p>
6:00 pm – 8:00 pm	Reception	<b>WELCOME TO ALL ATTENDEES</b>

<b>Wednesday, August 29, 2012</b>		<b>Track A</b>	<b>Track B</b>
8:00am – 10:00am	Session 1	<p><b>STREAM STABILITY AND COUNTERMEASURES I</b> (Moderator: Karuna Pujara)</p> <p>Overtopping Countermeasures JT Anderson, MNDOT</p> <p>Sentinel Slide at NF Virgin River, Zion National Park Bart Bergendahl, FLH</p> <p>An Analysis Method for Determining Stability of Articulated Concrete Block Systems for Embankment Overtopping Flow Amanda Cox, Chris Thornton, Steven Abt, CSU</p> <p>Stream Restoration and Stormwater Treatment Approaches in an Urban Watershed William Barry, S&amp;ME</p>	<p><b>HYDRAULIC TOOLS</b> (Moderator: Abhi Kapoor )</p> <p>FHWA Hydraulic Engineering Toolbox V.4.0 Eric Jones, Aquaveo</p> <p>HY-12 Storm Water Model Interface Eric Jones, Aquaveo, and Dan Ghere, FHWA</p> <p>HY-8 v7.3 with Hydraulic Jumps, Broken-back Culverts and Adverse Slopes Eric Jones, Aquaveo</p> <p>WMS with HY-12 and HY-8 Eric Jones, Aquaveo</p>
10:00am – 10:30am	Break 2		
10:30am – 12:00pm	Session 2	<p><b>STREAM STABILITY AND COUNTERMEASURES II</b> (Moderator: Karuna Pujara)</p> <p>US 51 Hatchie River 10 Years Later Wesley Peck, TDOT</p> <p>Long Term Monitoring of Flow Deflection Structures Casey Kramer, WSDOT</p> <p>Wolf River Migration at US-51 in Memphis Wesley Peck, TDOT</p>	<p><b>HYDROLOGY</b> (Moderator: Scott Taylor)</p> <p>Bulletin 17B Update Will Thomas, Baker</p> <p>Development of Runoff Regression Equations for Arkansas Using L-Moments Findlay G. Edwards, UARK</p> <p>Variability in Frequent Floods and Channel Area Tim Diehl, USGS</p>
12:00pm	Lunch Session	<p><b>FIELD TRIP PRESENTATION</b></p> <p>West Piney River Stream Restoration Joey Woodard and Rob Bailey, TSMP</p>	
1:30pm – 5:00pm	Field Trip	West Piney River Stream Restoration Project, Dickson, TN	

Thursday, August 30, 2012		Track A	Track B
8:00am – 10:00am	Session 3	<p><b>SURGES AND WAVES</b> (Moderator: Joe Krolak)</p> <p>The Importance of Local Wind Setup/Set Down and Wind Driven Currents Mark Gosselin, OEA</p> <p>Level III Wave Loading on Bridge Superstructures Phil Dompe, OEA</p> <p>The Effects of Climate Change on Storm Surge and Waves in Coastal Alabama and their Impact on Transportation Infrastructure Bret Webb, USA</p> <p>Modeling of the Canal Wave and Surge Oscillations from the I-84 Bridge Expansion in Boise, Idaho William Rahmeyer, USU</p>	<p><b>CULVERT INSPECTION AND DESIGN</b> (Moderator: Andrea Hendrickson)</p> <p>ODOT Culvert Management Program Jeff Syar, ODOT</p> <p>Culvert Assessment and Decision Making Bart Bergendahl, FHWA FLH</p> <p>CFD Evaluation of Hydraulic Outlet Diffusers for Increasing Culvert Capacity Alexander Mann, Maine DOT</p> <p>Ultrasonic Culvert Inspection System Frank Jalinoos, FHWA Turner Fairbanks</p>
10:00am – 10:30am	Break 3		
10:30am - 12:30pm	Session 4	<p><b>RIVER MODELING</b> (Moderator: Veronica Ghelardi)</p> <p>CSVT Susquehanna River Bridge: Using a Calibrated Two-Dimensional Hydraulic Model to Assess Impacts in a Floodway Donna Newell and Francisco Aguirre, NTM Engineering</p> <p>Application of the Multi-Dimensional Surface Water Modeling System in the Lower Copper River Alaska Jeff Stutzke and Hiram Henry, Alaska DOTPF</p> <p>Comparison FESWMS and HECRAS for Trunk Highway JT Anderson, MNDOT</p> <p>Current Applications of Three Dimensional Computational Fluid Dynamics Analysis to Hydraulic Problems in FHWA R&amp;D at Argonne's Transportation Research and Analysis Computing Center Steven Lottes and Cezary Bojanowski, ANL</p>	<p><b>STORMWATER TREATMENT</b> (Moderator: Andrea Hendrickson)</p> <p>Emerging BMPs for Highway Runoff Scott Taylor, RBF Consulting</p> <p>Floating Wetland Field Assessment for Nutrient Removal in a Stormwater Wet Pond Martin P. Wanielista, UCF</p> <p>Strategies for Total Maximum Daily Loads (TMDLs) Compliance Anna Lantin, RBF Consulting</p> <p>Implementation Strategies for TMDL Compliance - Two Coasts; Four Approaches Chin Lien, Parson Brinckerhoff</p>

Thursday, August 30, 2012		Track A	Track B
12:30pm	Lunch		
1:30pm – 3:00pm	Session 5	<p><b>BRIDGE AND ROADWAY HYDRAULICS</b> (Moderator: Dave Henderson)</p> <p>Hydroplaning Potential and Driver Visibility: Design and Cost Savings Measures Jennifer Green, Florida DOT</p> <p>The New HDS 7 – Hydraulic Design of Safe Bridges Lyle Zevenbergen, Ayres Associates</p> <p>Advanced Hydraulic Modeling Discussions Lyle Zevenbergen, Ayers Associates; Larry Arneson, FHWA, Scott Hogan, FHWA</p>	<p><b>ENVIRONMENTAL UPDATE &amp; CLIMATE CHANGE I</b> (Moderator: Brian Beucler)</p> <p>FHWA Environmental Updates Marcel Tchaou, FHWA HEP</p> <p>High-resolution Climate Projections: Can We Trust the Models? Katharine Hayhoe, Texas Tech</p> <p>FHWA Climate Change Adaptation Activities Rob Kafalenos, FHWA</p>
3:00pm – 3:30pm	Break 4		
3:30pm – 5:00pm	Session 6	<p><b>FLOODS</b> (Moderator: Bart Bergendahl)</p> <p>2011 Flooding in Pennsylvania: Preparation, Response and Recovery Donna Newell, NTM Engineering</p> <p>Missouri River Flooding of 2011 – Iowa DOT Perspective Linda Narigon, Iowa DOT</p> <p>Nashville Flood Recovery Efforts – Assessing Damage to Stormwater Infrastructure Cindy Popplewell, AMEC Earth and Environmental, Inc.</p>	<p><b>CLIMATE CHANGE II</b> (Moderator: Brian Beucler)</p> <p>Translating Climate Data into Engineering Parameters in the Gulf Coast 2 Study Rob Kafalenos, FHWA</p> <p>Climate Change and the Highway System: A Report on NCHRP 20-83(05) Justin Lennon, Parson Brinckerhoff</p> <p>Panel Discussion</p>

<b>Friday, August 31, 2012</b>		
8:00am – 10:00am	General Session	<p><b>BRIDGE SCOUR I</b>  (Moderator: Len Zabilansky)</p> <p>Unknown Foundation Testing and Scour Assessments for LA DOTD  Darrin Holt, FDH</p> <p>Feather River Bridge Scour the Importance of Time Considerations in the Scouring Process  Kevin Flora, CalTrans</p> <p>Implementation of a Scour Evaluation Program in British Columbia Evaluations and Plans of Action  Des Goold, Northwest Hydraulic Consultants, LTD., and Mike Feduk, BC Ministry of Transportation</p> <p>Hydraulic Innovation at MnDOT  Petra Dewall, MNDOT</p>
10:00am-10:15am	Break 5	
10:15am – 12:00pm	General Session	<p><b>BRIDGE SCOUR II</b>  (Moderator: Len Zabilansky)</p> <p>Update HEC 18  Larry Arneson, FHWA</p> <p>Updating the Pier Scour Equation with Coarse Bed Material and the Pressure Flow Scour Equations in HEC-18  Oscar Suaznabar, Jerry Shen, FHWA Turner Fairbanks</p> <p>Risk Based and Data Driven Approach to Managing Your Bridge Scour Program  Dave Henderson, FHWA</p> <p>Conference Wrap Up  Cynthia Nurmi, FHWA</p>