# 2022 National Stormwater Practitioners Forum

### **Reconnecting the DOTs**

STORMWATER COMPLIANCE AND OTHER SURFACE WATER REQUIREMENTS



### **Forum Materials**

**April 11 – 14th, 2022** 

Marriott City Center, 500 Fayetteville Street, Raleigh, North Carolina





# Table of Contents

| Welcome letter from Sponsor and Host State                         | 3  |
|--|----|
| Facilities Map   | 4  |
| Meeting Agenda   | 4  |
| Session Compendiums  | 8  |
| Biographies of Forum Presenters, Moderators and Steering Committee | 15 |
| List of Attendees  | 24 |
| Travel Reimbursement Request Procedures                            | 25 |
| Payment Request Form   | 26 |
| Important Web Links  | 27 |
| Table to Table Breakout Sessions                                   | 28 |
| Notes  | 30 |





### **Dear Colleagues:**

On behalf of FHWA, NCDOT, and the Forum Planning Committee welcome to Raleigh and the 2022 National Stormwater Practitioners Forum! We are excited to be "reconnecting" the DOT Stormwater Practitioners since our last gathering in Washington DC in 2014 and are looking forward to a great week together.

DOT Stormwater Practitioners are tasked with addressing an ever-evolving set of challenges and opportunities. Our Planning Committee has designed a Forum agenda targeting some of today's most pressing issues faced by Practitioners. One of the most important aspects of our Forum is providing the opportunity for Practitioners to network and discuss state-of-the-art practices, emerging technologies, barriers to stormwater permit compliance and other associated regulatory challenges. We have built into the agenda many opportunities for peer-to-peer discussions on stormwater topics affecting Project Planning and Design, Construction, Maintenance and Operations of DOT Highway and Non-Highway facilities.

We'd like to thank each of you for attending the Forum and bringing your expertise to our gathering. Enjoy downtown Raleigh and its diverse array of restaurants and entertainment options. We encourage you to spend this time in collaboration, building working relationships, and learning from each other. If there is anything we can do for you, please do not hesitate to reach out to us.

Sincerely,

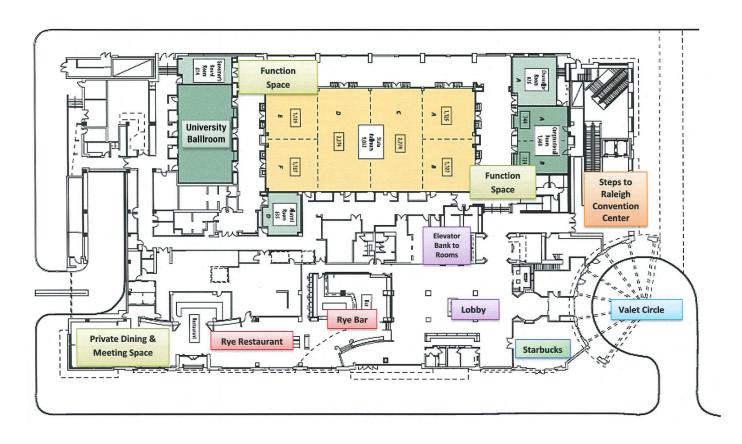
Susan Jones, PE

Federal Highway Administration

Andy McDaniel, PE

andrew McDamil

North Carolina Department of Transportation



| <b>Monday, April 11th</b> Registration and Reception – Rye Bar and Southern Kitchen. On-site, private dining area. |  |  |
|--|--|--|
| 3:00 PM - 5:00 PM  | Registration                                     |  |
| 5:30 PM - 7:30 PM  | Reception with heavy Hors d'oeuvres and cash bar |  |

| Tuesday, April 12th - University Ballroom |   |  |
|---|---|--|
| 7:00 AM – 5:00 PM                         | Registration  |  |
| 7:00 AM - 8:00 AM                         | Breakfast   |  |
| 8:00 AM - 8:30 AM                         | Welcome / Opening Remarks  Opening Remarks by Scott McGowen, Michael Baker International  Stephen Morgan, PE - State Hydraulics Engineer, NC DOT  David Harris, PE - State Roadside Environmental Engineer, NC DOT  Edward Parker - FHWA Deputy Administrator NC Division |  |
| 8:30 AM - 9:30 AM                         | Introductions of Practitioners  |  |

| Tuesday, April 12th - | University Ballroom (continued)   |
|-----------------------|---|
| 9:30 AM – 10:15 AM    | Session 1 EPA and FHWA Updates  Moderator: Scott McGowen, Michael Baker International Speakers:  Heather Goss, US EPA Susan Jones, Federal Highway Administration Q&A   |
| 10:15 AM -10:45 AM    | Break   |
| 10:45 AM – 12:00 PM   | Session 2 Total Maximum Daily Loads and Impaired Waters Program  Moderator: Nick Tiedeken, Minnesota DOT  Speakers: Laura Larsen, Michael Baker International Jean Cordova, Colorado DOT Henry Barbaro, Massachusetts DOT  Q&A            |
| 12:00 PM – 1:00 PM    | LUNCH NCHRP 25-25 Task 119/120 Portal database Speaker: • Eric Strecker, Terraphase Engineering Inc.  |
| 1:00 PM - 2:00 PM     | Session 3 Collaborative agreements with local MS4s / joint treatment facilities / off site treatment  Moderator: Alissa Salmore, Idaho Transportation Department  Speakers: - Sara Esposito, Delaware DOT - Eileen Dunn, Arizona DOT  Q&A |
| 2:30 PM - 3:30 PM     | Table to Table Break Outs Collaboration Table Reporting/Sharing and Group discussion  |
| 3:30 PM - 4:00 PM     | Break   |
| 4:00 PM - 5:30 PM     | Team Building Exercise - Stormwater Jeopardy  |

| Wednesday, April 13th - L | Jniversity Ballroom  |
|---------------------------|--|
| 7:00 AM – 8:00 AM         | Breakfast  |
| 8:00 AM - 10:00 AM        | Session 4 Innovative and Emerging Stormwater Management Practices  Moderator: Barry Fagan, Volkert, Inc.  Speakers:  Mike Perez, Auburn University  Ronald Poe, Nebraska DOT  Bill Hunt, North Carolina State  Q&A |
| 10:00 AM- 10:30 AM        | Break  |
| 10:30 AM - 12:00 PM       | Table to Table Break Outs Collaboration Table Reporting/Sharing and Group discussion Permit Negotiations NPDES Permit Reporting Compliance Talking Trash Construction - Maintenance                                |
| 12:00 PM - 12:45 PM       | Lunch and Introduction of Field Tour  Speaker:  Dr. McLaughlin, North Carolina State University  |
| 12:45 PM – 5:00 PM        | Classroom and Field Site Tour North Carolina State University Sediment and Erosion Control Research and Education Facility   |



Photo by North Carolina State University

| Thursday , April 14th | - University Ballroom  |
|-----------------------|--|
| 7:00 AM – 8:00 AM     | Breakfast  |
| 8:00 AM - 9:30 AM     | Session 5 Asset Management  Moderator: Andy McDaniel, North Carolina DOT  Speakers: - Andy McDaniel, North Carolina DOT  - James Murphy, Nevada DOT - Case Study  Q&A  |
| 9:30 AM - 10:00 AM    | Break  |
| 10:00 AM – 11:00 PM   | Session 6 Emerging Contaminates - Scott Taylor, Michael Baker International Overview and Group Discussion  |
| 11:00 AM – 12:00 PM   | SELDM: Stochastic Empirical Loading and Dilution Model  Speaker: Greg Granato, U.S. Geological Survey  |
| 12:00 PM – 1:00 PM    | Lunch  |
| 1:00 PM - 2:30 PM     | Session 7 Winter Best Management Practices  Moderator - William Fletcher, Oregon DOT, Retired  Speakers:  Mark Hemmerlein, New Hampshire DOT  Tracey Harmon Scott, Virginia DOT  Henry Barbaro, Massachusetts DOT  Q&A |
| 2:30 PM - 3:00 PM     | Closing  Scott McGowen, Michael Baker International Andy McDaniel, North Carolina DOT  DOT Input Highlights Future Needs   |

## **Compendium of Sessions**

### Day 1 Monday, April 11, 2022 | Marriott City Center - Raleigh, NC

**Registration and Reception** – Rye Bar and Southern Kitchen. On-site, private dining area.

### Agenda:

3:00 pm – 5:00 pm Registration 5:30 pm – 7:30 pm Reception

### Day 2 Tuesday, April 12, 2022 | Marriott City Center - Raleigh, NC

### Plenary Session | 8:00 am - 9:30 am

This session will welcome the practitioners and provide them with a vision of the future of the stormwater program from the national and state level. DOTs are challenged with meeting the requirements of their NPDES Permits. This, against a backdrop of aging infrastructure, climate change and adaptation of infrastructure, change at the user level including ridesharing, electric vehicles, and intelligent highways.

Topics to be addressed include climate change, sustainability, resilience, funding, implementation, and clean water programs.

### Agenda:

8:00 am – 8:30 am Welcome and Opening Remarks

### Speakers:

- · Scott McGowen Michael Baker International, Moderator
- Stephen Morgan, PE State Hydraulics Engineer, North Carolina DOT
- David Harris, PE State Roadside Environmental Engineer, North Carolina DOT
- Edward Parker FHWA Deputy Administrator North Carolina Division

8:30 am – 9:30 am Scott McGowen – Introduction of Practitioners

### Session 1 – EPA and FHWA Updates | 9:30 am – 10:15 am

DOTs face the challenge of Permit Implementation at a time when general program revenues are static and spread over multiple priorities, while permit requirements and TMDLs are increasing. The federal government can provide support and consistency to DOTs to implement their programs.

#### Panel members:

- Scott McGowen Michael Baker International, Moderator
- Heather Goss, U.S. EPA National Transportation Liaison to DOT-FHWA (Virtual)
- Susan Jones, Office of Project Delivery and Environmental Review Federal Highway Administration (FHWA) | U.S. Department of Transportation

The panel session will discuss the current and future resources available to DOTs by USEPA and FHWA as partners in stormwater development and implementation. Each speaker will provide an overview of the resources and programs that state DOTs can take advantage of to implement their stormwater programs.

### Agenda:

9:30 am – 9:45 am Heather Goss – Overview of EPA current and future resources available to state DOT

stormwater practitioners and EPAs future "future directions".

9:45 am – 10:00 am Susan Jones – FHWA's stormwater support and involvement, regulation language

and specific sections in the latest infrastructure bill.

10:00 am – 10:15 am Facilitated Q & A session

10:15 am – 10:45 am Break

### Session 2 - Total Maximum Daily Loads and Impaired Waters Program | 10:45 am - 12:00 pm

TMDLs are a reality for most DOT stormwater programs. In most states, the number of TMDLs that a DOT must implement are increasing yearly. There is no additional funding stream for DOTs to implement TMDL programs. These challenges are prompting DOTs to identify innovative solutions.

#### Panel members:

- Nick Tiedeken, Minnesota DOT, Moderator
- Laura Larsen, Michael Baker International
- · Henry Barbaro, Massachusetts DOT
- · Jean Cordova, Colorado DOT

The topic of the panel session will be TMDL implementation and how TMDL requirements can be implemented synergistically with the DOT stormwater program to reduce implementation costs while remaining in compliance. Case studies will be presented from DOTs across the country.

### Agenda:

| 10:45 am – 10:50 am | Nick Tiedeken – Welcome and introduction/overview   |
|---------------------|---|
| 10:50 am – 11:05 am | Laura Larsen – California utilizing "Compliance Units" for TMDLs.                           |
| 11:05 am – 11:20 am | Henry Barbaro – SCM implementation and tracking using the MassDOT Water Quality Data Form.  |
| 11:20 am – 11:35 am | Jean Cordova – Permanent water program and the use of the mitigation pool fund in Colorado. |
| 11:35 am – 12:00 pm | Facilitated Q & A session   |

### Day 2 Lunch Presentation | 12:00 pm - 1:00 pm

The International BMP Database serves as an excellent reference for stormwater practitioners, including DOTs. It was recently enhanced during under NCHRP projects to include filters that allow only DOT related records to be accessed and analyzed as well as added additional DOT requested parameters and information including new DOT BMP Monitoring Study sites.

### Speaker:

• Eric Strecker, Terraphase Engineering, Inc

The topic of the presentation will be an overview of the International BMP Database, the new Transportation Portal, and how it can be used specifically to access and analyzed DOT related monitoring and performance information. It will also summarize a national summary of DOT BMP performance that was conducted and reported on.

### Agenda:

| 12:00 pm – 12:45 pm | NCHRP 25-25 Tasks 119 & 120 - Enhancing the International Stormwater BMP Database |
|---------------------|---|
|---------------------|---|

to Serve as a Highway Specific BMP Database.

12:45 pm – 1:00 pm Facilitated Q & A session

### Session 3 – Collaborative Agreements with Local MS4s / Joint Treatment Facilities / Off Site Treatment | 1:00 pm – 2:00 pm

Right-of-way is limited for DOTs for the construction, operation and maintenance of treatment BMPs. In addition, outfalls are small and spatially varied, making maintenance of treatment BMPS expensive and hazardous. Local agreements with adjacent MS4 programs can move treatment responsibilities off-site, where economies of scale can be realized in the design, operation and maintenance of stormwater systems.

#### Panel members:

- Alissa Salmore, Idaho Transportation Department, Moderator
- Sara Esposito, Delaware DOT
- Eileen Dunn, Arizona DOT

The topic of the panel session will be case studies of cooperative agreements between DOTs and MS4 programs in various states. The case studies will analyze the costs and benefits of cooperative implementation programs for meeting MS4 Permit requirements, including agreement types, potential partners, cost/billing mechanisms, maintenance plans, and ownership/operation for post-construction BMPs.

### Agenda:

| 1:00 pm – 1:05 pm | Alissa Salmore - | - Welcome and introduction/overview of panel. |
|-------------------|------------------|---|
|                   |                  |   |

1:05 pm – 1:20 pm Sara Esposito – Case study from Delaware. 1:20 pm – 1:35 pm Eileen Dunn – Case study from Arizona.

1:35 pm – 2:00 pm Facilitated Q & A session

**Additional Activities** 

2:30 pm – 4:00 pm Table to Table Break Outs Collaboration

4:00 pm – 5:30 pm Team Building Exercise – Stormwater Jeopardy

### Day 3 Wednesday, April 13, 2022 | Marriott City Center - Raleigh, NC

### Session 4 - Innovative and Emerging Stormwater Management Practices | 8:00 am - 9:30 am

This session will highlight advancements in understanding and application of the state of practice for managing stormwater. Topics will include construction stormwater management, post-construction stormwater management, and innovative tools for stormwater program management. Applied research and advancements based on experience will be areas of focus.

#### **Panel members:**

- Barry Fagan, Volkert, Inc., Moderator
- Mike Perez, Auburn University
- · Ronald Poe, Nebraska DOT
- Bill Hunt, N. Carolina State (pre-recorded presentation)

The topic of the panel session will be to discuss the current and developing state of practice for stormwater management in three general areas of stormwater management. These will include emerging and innovative BMPs such as low impact development and green infrastructure, PFC, real-time control, enhanced construction site controls, and environmental commitment tracking and programmatic guidance resources.

Agenda:

8:00 am – 8:05 am

Barry Fagan – Welcome and introduction/overview.

8:05 am – 8:25 am

Mike Perez – Overview of research and application of construction stormwater management BMPs.

8:25 am – 8:45 am Ronald Poe – Overview of the accountability, transparency, and management of

Nebraska's environmental compliance oversight database.

8:45 am – 9:05 am Bill Hunt – Overview of emerging post-construction practices including those

that utilize natural materials and process in the transportation environment.

9:05 am – 9:30 am Facilitated Q & A session

9:30 am – 10:00 am Break

10:00 am – 12:00 pm Table to Table Break Outs Collaboration

Table Reporting/Sharing and Group discussion

### Day 3 Lunch Presentation and Introduction of Field Tour | 12:00 pm – 12:45 pm

### Speaker:

• Dr. Richard McLaughlin, N. Carolina State University

12:45 pm – 5:00 pm Classroom and Field Site Tour – North Carolina State University,

Sediment and Erosion Control Research and Education Facility.

### Day 4 Thursday, April 14, 2022 | Marriott City Center - Raleigh, NC

### Session 5 – Asset Management | 8:00 am – 9:30 am

DOTs have an extensive stormwater system as a part of their transportation network. The stormwater system generally has been constructed of various materials with varying lifespans. The system age can vary greatly within a state. Asset management programs help a DOT plan effectively for identifying systems that must be replaced, facilitating retrofit of stormwater controls, and ensuring public safety. There are a variety of asset management systems currently in use. This panel will provide an overview of several systems.

### Panel members:

- Andy McDaniel, North Carolina DOT, Overview and Moderator
- James Murphy, Nevada DOT

The topic of the panel session will be to provide case studies of asset management systems used by DOTs across the country, followed by a Q&A to discuss the benefits and drawbacks of such systems for a stormwater application.

#### Agenda:

8:00 am – 8:05 am Andy McDaniel – Welcome and introduction/overview.

8:05 am – 8:20 am James Murphy – Overview of the Nevada's recent asset management system.

8:45 am – 9:30 am Facilitated O & A session

9:30 am – 10:00 am Break

### Session 6 – Emerging Contaminates | 10:00 am – 12:00 pm

Emerging contaminants are an important issue for the MS4 Stormwater Program. Such contaminants are defined as chemicals not previously known in the environment or acting in new ways such as synergistically or having new pathways to stormwater. Emerging contaminants can reduce the certainty of permit compliance as well as the certainty of program implementation costs. Accordingly, they represent a substantial unquantified risk to MS4 program managers. Proactive efforts can reduce the risk and uncertainty as well as future program costs. This session will discuss various approaches for addressing emerging contaminants that can be used by DOT stormwater professionals

### Speaker:

- Scott Taylor, Michael Baker International
- · Interactive group discussion

### Overview and group discussion

This session will discuss the concept of Emerging Contaminants, such contaminants in the DOT environment, and methods for DOTs to lessen or mitigate their impact. The short presentation will be followed by a discussion with the audience to brainstorm approaches to addressing emerging contaminants of significance to DOTs.

### Agenda:

10:00 am – 10:20 am Emerging contaminants in the DOT environment.

10:30 am – 12:00 pm Facilitated Q & A session

### Day 4 Lunch Presentation - SELDM: Stochastic Empirical Loading and Dilution Model | 12:00 pm - 1:00 pm

The Stochastic Empirical Loading and Dilution Model has been developed by the USGS to facilitate analysis of MS4 discharges on receiving waters. The model is well suited for use by DOT practitioners to assess the impacts of runoff from highways on the water quality of state receiving waters. The model can be especially useful in assessing DOT contributions to TMDL load allocations.

#### Speaker:

Gregory E. Granato, Hydrologist – U.S. Geological Survey, New England Science Center

The overall topic of the presentation will be an overview of the use of the SELDM model. The presentation will be geared to the stormwater program manager, to facilitate understanding of how the model can be used to improve stormwater program implementation and performance at a DOT.

### Agenda:

12:00 pm – 12:45 pm SELDM: Stochastic Empirical Loading and Dilution Model.

12:45 pm – 1:00 pm Facilitated Q & A session

### Session 7 - Winter Best Management Practices | 1:00 pm - 2:30 pm

DOTs must ensure the safety of the traveling public during winter by controlling snow and ice. The most common method of control is through the use of salt. Salt application to roadways has been shown to negatively affect receiving waters. Use of other deicer agents, such as beet juice and proprietary formulations may also be problematic, by adding BOD or other pollutants to meltwater. The panel will discuss permitting strategies for authorizing the use of salt on highway, experience with methods of managing and reducing salt use, and practical and regulatory issues with salt and alternative deicers.

### Panel members:

- William Fletcher, Moderator, Oregon DOT, Retired
- Mark Hemmerlein, New Hampshire DOT
- · Henry Barbaro, Massachusetts DOT
- Tracey Harmon Scott, Virginia DOT

The overall topic will be a discussion of current deicers used by DOTs, their pros and cons, and a discussion of methods to reduce environmental impact of deicers while maintaining the safety of the traveling public. Emerging deicer products will be discussed.

### Agenda:

| 3                 |   |
|-------------------|---|
| 1:00 pm – 1:05 pm | William Fletcher – Welcome and introduction/overview.   |
| 1:05 pm – 1:20 pm | Mark Hemmerlein – Regulatory framework for state snow and ice control operations.   |
| 1:20 pm – 1:35 pm | Tracey Harmon Scott– Environmental considerations for anti-icers and deicers.   |
| 1:45 pm – 2:05 pm | Henry Barbaro – MassDOT's snow and ice control operations, reporting and its implementation of various salt-reduction measures. |
| 2:05 pm – 2:30 pm | Facilitated Q & A session   |
|                   |   |

### Closing:

2:30 pm – 3:00 pm Scott McGowen and Andy McDaniel

DOT InputHighlightsFuture Needs

### **2022 National Stormwater Practitioners Forum**



### A special thank you to the Planning/Steering Committee

Susan Jones, Federal Highway Administration
Brian Smith, Federal Highway Administration
Andy McDaniel, North Carolina DOT
Ryan Mullins, North Carolina DOT
Chris Swanson, Virginia DOT
Tracey Janus, Texas DOT
Nick Tiedeken, Minnesota DOT
Henry Barbaro, Massachusetts DOT
Barry Fagen, Volkert, Inc.
William Fletcher, Oregon DOT (retired)
Wendy Terlizzi, Idaho Transportation Department

Matt Carlson, Idaho Transportation Department

Brian Currier, Office of Water Programs - California State University - Sacramento

Thank you to each of the stormwater practitioners named above who eagerly volunteered to be part of the planning and steering of the 2022 National Stormwater Practitioners Forum. As the Planning Committee started this journey in 2020, we had some hiccups, but this team stayed focused and continued to move forward with a Virtual Practitioners Forum in October 2021, continuing to now hold our first National DOT Stormwater Practitioners Meeting since 2014! Thank you all for your input and efforts in "Reconnecting the DOTs" at this 2022 National Practitioners Forum!

#### COORDINATION AND FACILITATION BY MICHAEL BAKER INTERNATIONAL:

Scott McGowen, Scott Taylor, Andrea Taylor, Laura Larsen, Cathleen Pitassi and Faye Stroud

| Moderators       | Presenters          |                 |                     |
|------------------|---------------------|-----------------|---------------------|
| Barry Fagen      | Henry Barbaro       | Bill Hunt       | James Murphy        |
| William Fletcher | Jean Cordova        | Susan Jones     | Mike Perez          |
| Andy McDaniel    | Eileen Dunn         | Laura Larsen    | Ronald Poe          |
| Scott McGowen    | Sara Esposito       | Andy McDaniel   | Tracey Harmon Scott |
| Ryan Mullins     | <b>Heather Goss</b> | Scott McGowen   | Eric Strecker       |
| Alissa Salmore   | Greg Granato        | Rich McLaughlin | Scott Taylor        |
| Scott Taylor     | Mark Hemmerlein     |                 |                     |

### **Henry Barbaro**

Nick Tiedeken

Since 1993, Henry Barbaro has served as the Supervisor of the Wetlands & Water Resources Unit, as well as the Stormwater Program, for the Environmental Services Section of the Massachusetts Department of Transportation's Highway Division. Henry's experience includes developing the MassDOT Stormwater Design Guide and the NPDES Stormwater Management Plan, as well as strategies for compliance with State and Federal stormwater regulations. Henry has an M.S. in Natural Resources Planning from the University of Vermont, and a B.S. in Environmental Science from the University of Massachusetts in Amherst.

### **Henry Barbaro**

Stormwater Program Supervisor, Highway Division, Massachusetts Department of Transportation henry.barbaro@state.ma.us

### Jean M. Cordova, CPMSM

Jean M. Cordova, CPMSM, is a stormwater professional with 16-plus years of experience. She has an M.S. in stream ecology from the University of Notre Dame. Her stormwater career started with inspecting batch plants and recycling facilities, then on to roadway construction sites and maintenance yards and is now managing an MS4 program. Cordova currently works for the Colorado Department of Transportation as a water quality section manager.

### Jean M. Cordova, CPMSM

HQ - Water Quality Section Manager CDOT, Floor 4, EPB 2829 W. Howard Place Denver CO, 80204 303.512.4053 (office) jean.cordova@state.co.us

### **Matt Carlson**

Matt joined ITD in 2018. He is a University of Idaho graduate and holds a Master of Public Administration with a focus in Natural Resource Policy. He previously worked in Eastern Washington and has a decade of combined experience at the city, county, and federal levels of government. Prior to joining ITD, Matt most recently managed a regional stormwater utility program and oversaw permitting, design review, site development, construction inspection, operation and maintenance, and project management of stormwater infrastructure capital improvements. At ITD, he is a Senior Environmental Planner and the stormwater coordinator for HQ Environmental Services and is responsible for ITD's stormwater program and is a resource for the Districts on construction stormwater and municipal stormwater compliance.

#### **Matt Carlson**

Senior Environmental Planner, Stormwater HQ Environmental Services Idaho Transportation Department 208.334.8631 Matt.Carlson@itd.idaho.gov

### **Brian Currier, P.E.**

Brian is a research engineer with the Office of Water Programs at California State University, Sacramento. He holds B.S. and M.S. degrees in Environmental Engineering from the University of California, Davis, and is a licensed Professional Engineer. Brian has been involved in stormwater research since 1997 and has performed numerous BMP evaluations.

### Eileen E. Dunn, M.S., CPMSM

Eileen is the Water Resources Manager at the Arizona DOT in the Environmental Planning Group. She is responsible for the regulatory groundwater and surface water water quality compliance programs that ADOT is subject to in the normal course of business. She also aids in the development and implementation of environmental policy at ADOT.

She received a Master of Science Degree in Water and Natural Resources Management, and a Bachelor's Degree in Geological Sciences with a minor in Sustainability from Arizona State University. She is a Certified Professional in Municipal Stormwater Management (CPMSM) through EnviroCert International.

Prior to her tenure at ADOT, Eileen spent time managing a Municipal Water Conservation Program, and Industrial Pretreatment Permit Projects and spent seven years as a state water quality regulator at the Arizona Department of Environmental Quality.

### Eileen E. Dunn, M.S., CPMSM

Water Resources Manager ADOT Environmental Planning 205 S. 17th Ave., EM02 Phoenix, AZ 85007 602.245.0725 EDUNN@AZDOT.GOV

### Sara Esposito, P.E.

Sara Esposito, P.E., has been with the Delaware Department of Transportation's NPDES Program since 2016, and the manager since 2020. The program is responsible for the maintenance of DelDOT's 600+ stormwater management facilities, MS4 Phase I and Phase II permit compliance, development and implementation of watershed restoration plans, and the compliance of DelDOT's 17 maintenance yards' industrial NPDES permits (among others). Prior to joining DelDOT, Sara worked for the Delaware Department of Natural Resources and Environmental Control for 5 years in the Drainage and Sediment & Stormwater Programs and started her career as an engineer with a small land development consulting firm. She is a 2005 graduate from the University of Delaware with a bachelor's in environmental engineering. Though originally from New England with a brief time in North Carolina she now calls Milton, Delaware home with husband, 5-year-old daughter, dog, and soon to be horses if the barn is ever finished!

### **Barry Fagen**

Barry Fagen leads a team of environmental planners, environmental designers, and environmental permitting and compliance professionals at Volkert, Inc. Under Barry's leadership, Volkert's Environment & Infrastructure group supports the delivery of infrastructure at the intersection of built and natural environments, and promotes our common community objectives of livability, sustainability, and resilience.

Barry retired from the Alabama DOT in 2016 where he helped to build ALDOT's current stormwater and environmental programs. Barry has been a contributing friend of the AASHTO Stormwater Community of Practice since near its inception.

16 RECONNECTING THE DOTS

#### William Fletcher

William Fletcher is the retired Water Resources Program Leader for the Oregon Department of Transportation, where he worked for about 30 years. Along with stormwater management and erosion control, he was involved with wetlands, environmentally sensitive stream bank protection, and the development of a fluvial performance standard for stream crossing structures. He is interested in watershed and system level approached to addressing stormwater impacts to natural resources. William received his BSc in Geology from the University of Oregon, and his graduate degree, a Cand. Real., from the University of Oslo. He is a member of the TRB Standing Committee on Hydraulics, Hydrology and Stormwater, and has served on several NCHRP Research Panels. While living in Norway, William gained extensive experience in pig farming.

#### **Heather Goss**

Heather Goss has served as US EPA's National Transportation Liaison to the Federal Highway Administration since 2020. Transportation liaisons help facilitate the environmental and permitting review process for transportation projects by providing technical assistance and coordinating the response of resource and regulatory agencies to State DOTs. Liaisons help to improve communication and coordination among state DOTs and resource and regulatory agencies, facilitate environmental protection while streamlining review processes, and increase access to environmental and regulatory expertise for state DOTs. EPA's Transportation Liaison position is housed within the agency's NPDES stormwater program, so Heather focuses on stormwater issues. She is particularly interested in source control, emerging contaminants, off-site stormwater management, innovative practices, and green infrastructure. Heather has worked at the EPA since 2006, mostly in the realm of water quality standards and the nexus of NPDES permits and water quality standards. She also has some experience in Underground Injection Control, TMDLs, and voluntary methane reduction programs. Heather's academic background is in earth sciences, with a master's degree from the University of Maine and a bachelor's degree from Haverford College. She spends her "free" time encouraging her curious 4 and 6 year olds' interest in science. They would tell you that in their neighborhood, "when it rains, the water goes into the storm drains and zooms down down down to Sligo Creek, so no one should put any trash into the storm drains!"

### Heather Goss (she / her)

EPA National Transportation Liaison to DOT-FHWA U.S. EPA | Office of Water | Office of Wastewater Management 202.566.1198 goss.heather@epa.gov

### **Gregory Granato**

Gregory Granato works for the U.S. Geological Survey. He has worked with the Federal Highway Administration on deicing chemical issues, streamflow statistics, runoff quality, BMP performance, the highway runoff database, and the FHWA Stochastic Empirical Loading and Dilution Model known as SELDM. Gregory has worked with seven State DOTs on stormwater issues including California, Connecticut, Massachusetts, Nevada, and Oregon, and has provided information and training to many more State DOTs. He has also served on 5 NCHRP research panels and is serving on the TRB committee on hydrology, hydraulics and stormwater. He thinks he can make great 30-minute brownies in 10 minutes, but in truth, they just don't taste that good.

#### **Gregory E. Granato**

Hydrologist U.S. Geological Survey, New England Science Center 508.490.5055 ggranato@usgs.gov

### **Tracey Harmon Scott**

Tracey Harmon has a BA in Environmental Science from the University of Virginia and a Masters Certificate in Project Management from the University of George Washington. She began her environmental career running bioassays for the State Water Control Board's Aquatic Toxicity Program, followed by permit and regulation writing in the Virginia Department of Environmental Quality's (DEQ) Virginia Water Protection Permit (VWPP) Program. After nearly 10 years at DEQ, Tracey joined the Virginia Department of Transportation's Environmental Division in 2000 as the Water Quality Permits Program Manager coordinating the acquisition of 401, 404, VWPP and state bottomland permits for construction and maintenance projects statewide. Since 2016, Tracey has served as the TMDL Program Manager providing guidance, support, contract management and project management for BMP projects primarily focused on meeting the MS4 Permit requirements for the Chesapeake Bay TMDL. Tracey has led site search, screening, prioritization, selection, design, construction, monitoring and budgeting efforts for BMPs including stream restoration, riparian buffers, shoreline stabilization, tree planting, BMP retrofits, dry swales, bioretention facilities, and outfall stabilization.

### **Tracey (Harmon) Scott**

TMDL Program Manager Environmental Division Virginia Department of Transportation 804.356.2332 tracey.harmon@VDOT.Virginia.gov

### **Mark Hemmerlein**

Mark Hemmerlein serves as the Water Quality Program Manager in the Bureau of Environment at the New Hampshire Department of Transportation. He has 27 years of experience with the Department. His duties presently involve managing many aspects of stormwater runoff from State Highways during design, construction, and operations. Mark obtained his Bachelor of Science degree in Forestry from the University of Vermont and a Master of Science in Botany from the University of Wyoming. Mark also has been closely involved in the developing strategies for implement many of the NPDES and State Stormwater programs at the Department

#### **Mark Hemmerlein**

Water Quality Program Manager NH Department of Transportation Bureau of Environment 603.271.1550 mark.t.hemmerlein@dot.nh.gov

### William F. Hunt III, Ph.D.

Dr. William F. Hunt III is a William Neal Reynolds
Distinguished University Professor and Extension
Specialist in North Carolina State University's
Department of Biological and Agricultural Engineering.
Hunt holds degrees in Civil Engineering (NCSU,
B.S., 1994), Economics (NCSU, B.S., 1995), Biological
& Agricultural Engineering (NCSU, M.S., 1997) and
Agricultural & Biological Engineering, (Penn State,
Ph.D., 2003).

Since 2000, Hunt has assisted with the design, installation, and/or monitoring of over 150 stormwater control measures (SCMs), including bioretention, stormwater wetlands, innovative wet ponds, green roofs, permeable pavement, water harvesting/cistern systems and level spreaders. He teaches 20-25 short courses and workshops each year on stormwater design, function, and maintenance throughout North Carolina and the United States.

### Dr. William F. Hunt III

North Carolina State University Department of Biological and Agricultural Engineering

18 RECONNECTING THE DOTS

### Tracey Janus, P.G.

Tracey is the environmental program manager for the Operations Compliance/Stormwater Team in TxDOT's Environmental Affairs Division. Her team is responsible for managing TxDOT's MS4 and Construction Stormwater Program, EMS Program, EPIC Monitoring Program, and the Facilities Compliance Program. Tracey is a Texas licensed Professional Geologist.

### Tracey Janus, P.G.

Environmental Program Manager Environmental Affairs Division 118 E Riverside Dr., Austin, Texas 78704 512.416.2649 (o) Tracey.Janus@TxDOT.gov

### Susan C. Jones, P.E.

Susan C. Jones, P.E. is a Highway Engineer and has been FHWA's technical lead on stormwater and water quality for the last 12 years. She earned her MS in Civil and Infrastructure Engineering and BS in Civil Engineering from George Mason University and the University of Virginia. Susan has been FHWA's liaison on the former Transportation Research Board Standing Committee on Stormwater (AFB65) and now Committee on Hydrology, Hydraulics and Stormwater (AKD50), and the former Committee on Environmental Analysis in Transportation (ADC10). She is married with 3 young children and resides in the suburbs of Fairfax County, never really escaping far from her hometown of Alexandria, VA.

### Susan C. Jones, P.E.

Civil Engineer
Office of Project Delivery and Environmental Review
Federal Highway Administration (FHWA)
U.S. Department of Transportation
1200 New Jersey Avenue, SE, E76-207
Washington, DC 20590
202.493.2139
susan.jones@dot.gov

### Laura Larsen, P.E.

Laura Larsen is a professional engineer in the State of California with an emphasis on stormwater management projects including Best Management Practice (BMP) design, National Pollutant Discharge Elimination System (NPDES) permit implementation, and water quality analysis. She has extensive experience in transportation and municipal NPDES stormwater permit compliance assistance, BMP research, design and implementation including water quality monitoring, Total Maximum Daily Load (TMDL) development and implementation, BMP design and implementation, BMP operation and maintenance, and BMP performance data analysis. She has worked with the State of California Department of Transportation (Caltrans) for over two decades, assisting in permit negotiations, permit implementation assistance, BMP planning, design, operation and maintenance auidance.

#### Laura Larsen, P.E.

Michael Baker International 5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707 949.472.3479 (office) Ilarsen@mbakerintl.com

### Andrew McDaniel, P.E.

Andy McDaniel is the manager of NCDOT's Highway Stormwater Program which was created in 1998 to coordinate compliance activities for the Department's statewide NPDES Phase I permit. Andy oversees the work of the program's staff and consultants who implement a diverse array of management measures ranging from BMP retrofits, stormwater research, TMDL compliance, and post-construction stormwater management policy. Andy participates on a number of national and state advisory committees including serving as chair of the Stormwater Subcommittee within the Transportation Research Board's standing committee on Hydraulics, Hydrology, and Stormwater (AKD50), and he represents the Department on the NC Nutrient Scientific Advisory Board and Nutrient Criteria Implementation Committee. Before joining the NCDOT in 2004 Andy worked in private consulting specializing in watershed-based planning, and prior to that with the NC Division of Water Quality in the Modeling and TMDL Unit. Andy is a registered professional engineer in NC.

### Andrew McDaniel, P.E.

Highway Stormwater Program
Engineering Supervisor
North Carolina Department of Transportation
Hydraulics Unit
919.707.6737 (office)
919.520.7175 (mobile)
ahmcdaniel@ncdot.gov

### Scott McGowen, P.E.

Scott McGowen is a Civil Engineer with Michael Baker International and is a Technical Advisor for Surface Water management. Scott has a bachelor's degree from Cal Poly, San Luis Obispo. Scott worked for the California Department of Transportation (Caltrans) for 33 years in all facets of the Caltrans project development process, from the planning phase (need and purpose and project initiation), through construction completion. At the management level, Scott worked in the capacities of Program Coordinator, Division Liaison, Office Chief, and Single Focal Point for the Department and Chief of Staff for the Director (which included 13 years and the Chief Environmental Engineer). In this role, Scott successfully negotiated with external resource agencies and non-governmental organizations, developing, and implementing efficiencies to improve DOT programs, while maintaining or improving stormwater compliance.

Scott has participated and chaired multiple NCHRP project panels for stormwater, participated on the AASHTO Standing Committee on Environment, Natural Resources Subcommittee, and was the Chair of the AASHTO Stormwater Working Group for over eight years. This working group included AASHTO's Communities of Practice, which produced multiple white papers, guidance documents, and webinar presentations for state DOT stormwater practitioners. Scott was responsible for spearheading the first national AASHTO Stormwater practitioners meeting in June 2008, and chairing subsequent events in 2010, 2012 and 2014, which brought together Departments of Transportation nationwide to collaborate on current and future stormwater perspectives and challenges.

### Scott McGowen, P.E.

Technical Manager - Surface Water Management Michael Baker International 2729 Prospect Park Drive, Suite 220 Rancho Cordova, CA 95670 916.231.2227 (office) | 916.718.0900 (mobile) scott.mcgowen@mbakerintl.com

20 RECONNECTING THE DOTS

### Dr. Richard A. McLaughlin

Dr. Richard A. McLaughlin is a Professor and Extension Specialist in the Department of Crop and Soil Sciences at North Carolina State University where he has 28 years of experience in research and education on all aspects of erosion, sediment, and turbidity control on constructions sites. His research has led to the adoption of numerous innovations which have been adopted in many states to increase sediment capture efficiency. He served on the International Erosion Control Association Southeast Chapter board for many years, and continues on the IECA Standards and Practices Committee. He is also serving on the Sedimentation Control Commission for the state of North Carolina. He was the recipient of the 2010 Training Program Award and the 2020 Environmental **Excellence Award from the International Erosion** Control Association, the 2010 Applied Research Award from the Soil Science Society of America, and the 2020 Achievement Award from the Soil Science Society of North Carolina.

#### Richard A. McLaughlin, Ph.D.

Professor and Extension Specialist Department of Crop and Soil Sciences 100 Derieux Street, Box 7620 North Carolina State University Raleigh, NC 27695-7620 919-515-7306 http://mclaughlin.soil.ncsu.edu

### Ryan M. Mullins, P.E.

Ryan Mullins is an Engineer with NCDOT's Highway Stormwater Program. The HSP manages the Department's NPDES permit and other water quality related programs. He has been with the Department for over 17 years. Ryan is currently the program manager for the HSP's Retrofit Program, Stormwater Research initiatives, and Field Inventory Program. Ryan also sits on the Department's New Products Review Committee, and the planning committee for the annual ACEC/NCDOT Joint Conference. Ryan is a 2004 graduate of NC State University and is a registered professional engineer in NC.

### Ryan M. Mullins, P.E.

Engineer III | NCDOT Highway Stormwater Program 1000 Birch Ridge Drive Raleigh, NC 27610 919.707.6740 (direct) | 919.559.8598 (mobile) rmullins@ncdot.gov

### **James Murphy**

James Murphy is currently a Program Manager within the Nevada Department of Transportation's (NDOT's) Environmental Division – Stormwater Program. He has overseen the administration and implementation of the NDOT's Stormwater Management Program (SWMP) since 2008. James has been at the forefront of various stormwater regulatory matters, including navigating the NDOT through a programmatic audit of its Stormwater Management Program directed by the Environmental Protection Agency, negotiating terms and conditions of the NDOT's current Municipal Separate Storm Sewer Systems Permit issued by the Nevada Division of Environmental Protection, and developing the NDOT's current SWMP.

### **James Murphy**

Program Manager Environmental Division Nevada Department of Transportation 775.888.7889 (office) jmurphy@dot.nv.gov

### Michael Perez, Ph.D., P.E., CPESC

Michael A. Perez, Ph.D., P.E., CPESC is an Assistant Professor in the Department of Civil and Environmental Engineering at Auburn University, where he specializes in the evaluation of construction, post-construction, and agricultural stormwater practices, methods, and technologies. He earned his Ph.D. (2016) and M.S. (2014) from Auburn University and B.S. from Florida State University (2012). He oversees the research, testing, and training programs at the Auburn University – Stormwater Research Facility, where he has been involved in investigating and improving stormwater management practices using full-scale testing techniques. Dr. Perez has been engaged in a variety of research and outreach projects through the USDA, NSF, State DOTs, and local cities and communities. He serves as the chair of the standards and practices committee for the International Erosion Control Association and as chair of the Transportation Research Board's Hydrology, Hydraulics, and Stormwater committee.

**Michael Perez, Ph.D., P.E., CPESC**Assistant Professor
Department of Civil Engineering

Auburn University mike.perez@auburn.edu

### **Ronald Poe, PLA, CPESC**

Ron is a Highway Environmental Program Manager in Nebraska Department of Transportation's Environmental Section. He received a Bachelor of Landscape Architecture from Iowa State University in May 1993.

Ron has been involved in erosion and sediment control design with NDOT since he was hired in October 1998. In November 2004, he achieved the Certified Professional of Erosion and Sediment Control (CPESC) Certification. In 2008, Ron completed the licensure process and is licensed as a Landscape Architect in the state of Nebraska.

Currently, Ron manages the NDOT's Roadside Development & Compliance Unit. Some of the Unit's responsibilities include MS4 program management, erosion and sediment control design, specifications, and seed mixtures for construction and maintenance projects. The Unit also manages the environmental compliance on construction sites and maintenance facilities, multiple water quality permits and NDOR's vegetation management program.

### Ronald Poe, PLA, CPESC

Nebraska Department of Transportation 402-479-4499 Ronald.Poe@nebraska.gov

### Alissa Salmore, MS, PLA

Alissa Salmore, MS, PLA, has served as a District environmental planner with Idaho Transportation Department since 2011. She started her career as an academic research ecologist studying chemical interactions between plants and insects, and later segued into investigating sources of microbial contamination in urban stormwater. After over a decade in research, Alissa retooled as a landscape architect prior to joining on with ITD and now supports highways design, construction and operations teams in environmental compliance.

### **Eric W. Strecker**

Eric W. Strecker's, P.E. (OR and CA), BCEE, over 35-year career has focused on the design, monitoring, and evaluation of stormwater BMPs for municipal, state, and federal, private and commercial, and industrial projects. Mr. Strecker provides technical direction and assistance to public and private sector clients in stormwater master planning; National Pollutant Discharge Elimination System (NPDES) municipal, industrial, and construction permitting; TMDLs; surface water pollution assessment and control; and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and

22 RECONNECTING THE DOTS

Resource Conservation and Recovery ACT (RCRA) surface water compliance orders.

Mr. Strecker has throughout his career to advance the state of stormwater practice by serving as a Principal or Co-Principal Investigator applying national and local research studies for the EPA, FHWA, WRF, NCHRP, and regional/local research efforts. He was recognized by the American Society of Civil Engineers for his work on BMP technology applications with the 2003 Civil Engineering State-of-the-Art Award. In addition to his work on guidance documents for urban stormwater management, Mr. Strecker has written more than 60 publications on stormwater planning, low impact development approaches, and the effectiveness of BMP technologies. He was a Principal Investigator for the BMP Database for more than 20 years, since its inception. He has also been the Principal Investigator or a key contributor on over 17 NCHRP applied research and guidance development projects. He is currently a member of the TRB Standing Committee on Hydrology, Hydraulics, and Stormwater -- AKD50.

### Eric W. Strecker, P.E. (OR and CA), BCEE

Terraphase Engineering Inc. 610 SW Broadway, Suite 405 Portland, OR 97205 503.889.0367 ext. 66 (office) 503.805.0479 (mobile) eric.strecker@terraphase.com

### **Chris Swanson**

Chris Swanson is an Assistant State Location & Design (L&D) Engineer at the Virginia Department of Transportation with responsibility for administration of the Water Resources, Geospatial, and CADD Support programs within L&D. Chris joined the VDOT Team in 2015, since that time he has been involved in the implementation of its MS4 program, enhancement of stormwater management standards and specifications, and advancement of resiliency initiatives.

#### Chris Swanson, P.E.

Assistant State L&D Engineer Virginia Department of Transportation 804.786.6839 chris.swanson@VDOT.Virginia.gov

### Scott Taylor, P.E., D.WRE, FASCE

Scott Taylor is a civil engineer with Michael Baker International, Inc., in their Carlsbad, CA office. Mr. Taylor received his BSCE from Cal Poly Pomona, and his MSCE from Cal State Long Beach. He is an ASCE Fellow, and a Diplomate in Water Resources Engineering. Mr. Taylor is a registered professional engineer in ten states. Mr. Taylor is the Chair of the National Municipal Stormwater Alliance, a 501(c)3 entity dedicated to clean water for the nation. He is a past Chairman of the Board of the California Stormwater Quality Association (CASQA), and past Chair of the TRB Standing Committee on Stormwater, AFB65. Mr. Taylor has 36 years of experience in stormwater management, water quality and flood management.

Mr. Taylor has developed been the engineer in charge for flood control infrastructure projects included lined open channels and drainage infrastructure supporting freeways, highways and tollways. Mr. Taylor has developed handbooks for Transportation and municipal agencies for drainage design, water quality, NPDES compliance, alluvial channel design, construction site water quality and environmental compliance. He has completed watershed management plans, flood management infrastructure plans, and designed and implemented water quality monitoring plans for municipal and transportation projects and infrastructure.

Mr. Taylor has developed and implemented compliance plans for TMDLs and monitoring and reporting programs to track compliance. He has developed and implemented stormwater reuse plans that included groundwater recharge and non-potable surfaces uses such as for irrigation.

Mr. Taylor has served as an instructor for a variety of academic and professional courses. He served as a lecturer and course coordinator for a P.E. License review course from 1992 to 2018. He developed and delivered Best Management Practice design courses for post-construction and implementing BMPs during construction for the American Society of Civil Engineers, the San Francisco Public Utilities Commission, the Government of Hong Kong, and several municipalities in California, Nevada, Arizona and Tennessee. He served as adjunct faculty at California State University at Long Beach and the University of California at Irvine teaching courses in hydraulic design and hydrology.

Mr. Taylor has published over 100 professional papers and written articles for ASCE magazine, Stormwater Magazine and Infrastructure Magazine.

# Scott Taylor, P.E., D.WRE, FASCE Michael Baker International, Inc. staylor@mbakerintl.com

### **Wendy Terlizzi**

Wendy Terlizzi has served as the ITD Environmental Services Manager since 2018 where She oversee all aspects of environmental starting with NEPA documentation needed for projects all the way up to program level.

Wendy has over 20 years of experience working for various government agencies both in California, Arizona, and Idaho as well as the private sector in the fields of fisheries biology and water quality. She has a bachelor's degree is Fish, Wildlife, Conservation Biology from the University of California at Davis and is currently working on her Masters in Organization Leadership, Project Management at Northern Arizona University.

### Wendy Terlizzi, CPMSM

Environmental Services Manager Wendy.Terlizzi@itd.idaho.gov

### **Nicklas Tiedeken**

Nick Tiedeken is a hydrologist within MnDOT"s Office of Environmental Stewardship. He has facilitated MnDOT compliance with water and wetland requirements from planning through maintenance. He represents MnDOT on numerous policy and stakeholder groups, including development of streamlined approval processes. Nick worked to establish MnDOT's compliance programs for the NPDES Construction Stormwater (CSW) and MS4 Permits. Nick has represented MnDOT in the development of the NPDES permits, and during the many stages of TDML related activities. This includes participation in the development of State Water Quality Rules, impaired waters listing process, TMDL and Wasteload Allocation development, and compliance implementation through the MS4 and CSW permits. Nick has served on 6 NCHRP project panels, and is involved in numerous MnDOT research projects. He has been a member of the AASHTO Natural Resources Subcommittee, Stormwater Workgroups, and the Waterway Permit Working Group. He has been with MnDOT for over 30 years and was employed by the Minnesota Department of Natural Resources 4 years prior to that. Nick received his engineering degree from the University of Minnesota.

### **Nick Tiedeken**

Hydrologist, Minnesota Department of Transportation (MnDOT) nick.tiedeken@state.mn.us

24 RECONNECTING THE DOTS

### **Attendees**

Henry Barbaro Massachusetts DOT

Jacob Bauckman Virginia DOT

Korey Boe North Dakota DOT

Christopher Branstetter Idaho Transportation

Department

David Cordova Guest

Jean Cordova Colorado DOT
Richard Darden Federal Highway
Administration

Vince Davis

Eileen Dunn

Arizona DOT

Robert Edwards

Utah OT

Sara Esposito Delaware DOT
Barry Fagan Volkert, Inc.

William Fletcher Oregon DOT - Retired

Greg Granato U.S. Geological Survey

Hans Hallanger Wisconsin DOT

Tracey Harmon-Scott Virginia DOT

**David Harris** North Carolina DOT

**Charles Hebson** *Maine DOT* 

Richard HeinemanPennsylvania DOTMark HemmerleinNew Hampshire DOT

Rebecca Humphreys Ohio DOT

William Hunt North Carolina State

Daniel Imig Connecticut DOT

Tracey Janus
Texas DOT
Victoria Jeffery
Nevada DOT
Susan Jones
Federal Highway
Administration

Rose Marie Klee Texas DOT

Mervin Lare Kansas DOT

Laura Larsen Michael Baker
International

Kiona Leah Maryland DOT

Brian Lipscomb North Carolina DOT

**Ryan Lizewski** Federal Highway Administration

David Mack Arizona DOT

Andy McDaniel North Carolina DOT

Scott McGowen Michael Baker International

Richard McLaughlin North Carolina State

Brad McManus Georgia DOT

Stephen MorganNorth Carolina DOTRyan MullinsNorth Carolina DOT

James MurphyNevada DOTLaura NordanArizona DOTEdward ParkerFederal Highway<br/>Administration

Mike PerezAuburn UniversityRonald PoeNebraska DOT

Alissa Salmore Idaho Transportation

Department

Shane SiselNebraska DOTShawn SlaymonIndiana DOTBrian SmithFederal Highway

Administration

Matthew SperryNorth Dakota DOTClifford SpoonemoreWyoming DOTWayne (Wes) StaffordMississippi DOTAmanda StevensDelaware DOT

**Eric Strecker** Terraphase Engineering, Inc.

Steve Sykes North Carolina DOT

Andrea Taylor Michael Baker International
Scott Taylor Michael Baker International

Rhonda Thiele Utah DOT

Nicklas Tiedeken Minnesota DOT
Paul Wirfs Oregon DOT
Stephen Wright Delaware DOT

Joseph Yoo Massachusetts DOT Lindsay Zweifel Arkansas DOT

## **Travel Reimbursement Request Procedures**

Reimbursement of out-of-pocket expenses will be made by Michael Baker International to each state DOT participant (two persons allowed) following the meeting. The procedure for out-of-pocket expense reimbursement will be discussed at the Practitioners meeting. *All expenses must be claimed within 30 days of completion of the meeting.* 

Please submit copies of all receipts with the Payment Request Form to:

Andrea Taylor Michael Baker International 5050 Avenida Encinas, Suite 260 Carlsbad, CA 92008

Or submit pdf documents to: andrea.taylor@mbakerintl.com

### **Receipts required:**

- Mileage to and from your home airport is covered, as is parking in a long-term lot at your home airport.
- Cost of Uber/Lyft to and from your home airport.
- Cost of the first checked bag for both inbound and outbound flights will be covered.
- · Meals (outside of Forum)

### **Car Travel:**

- Travel by car for trips less than 150 miles is reimbursed at the GSA mileage rate of \$0.545/mile.
- For a trip in excess of 150 miles, costs associated with the use of privately-owned autos will be reimbursed if the cost of the automobile expenses claimed in addition to related subsistence expenses do not exceed the cost of travel by common carrier plus related subsistence expenses. *Any trip in excess of 150 miles requires prior approval from FHWA*.

### **Non-Reimbursable Items:**

- Costs that are incurred as a result of unnecessary stopovers, extended stays, or voluntary flight reservation changes will not be reimbursed.
- Local or long-distance telephone calls and access fees: fax fees, internet and computer access charges
- · Laundry charges
- · Gratuities to doormen, bellmen and housekeeping
- · Entertainment, health clubs, resort fees
- Alcoholic beverages
- · Flight insurance
- In-flight telephone calls
- Rental cars



### **Payment Requisition Form**

| Payment Method :                     |  | Check                                      | Date:                          |                 |
|--------------------------------------|--|--|--------------------------------|-----------------|
| Payable to:                          |  |  |                                |                 |
| Oracle Vendor #:0000                 |  | Phone:                                     |                                |                 |
| Vendor Email:                        |  |  |                                |                 |
| Address:                             |  |  |                                |                 |
| City                                 |  | State                                      | Zin:                           |                 |
| city.                                |  | State                                      |                                |                 |
| In Payment of: NCDO                  |  |  |                                |                 |
| In Payment of: NCDO                  |  |  |                                | ril 11-14, 2022 |
| In Payment of:  Project Or Number    | Γ - Stormw<br>rganization<br>Number              | vater Practition                           | ers Forum Ap<br>Task<br>Number |                 |
| In Payment of:  Project Or Number    | Γ - Stormw                                       | vater Practition                           | ers Forum Ap                   | ril 11-14, 2022 |
| In Payment of:  Project Or Number    | Γ - Stormw<br>rganization<br>Number              | vater Practition                           | ers Forum Ap<br>Task<br>Number | ril 11-14, 2022 |
| In Payment of:  Project Or Number    | Γ - Stormw<br>rganization<br>Number<br>425.51.CB | expenditure Type                           | ers Forum Ap  Task Number  900 | ril 11-14, 2022 |
| In Payment of:  Project Or Number    | Γ - Stormw<br>rganization<br>Number<br>425.51.CB | vater Practition                           | ers Forum Ap  Task Number  900 | ril 11-14, 2022 |
| Project Or Number 175390             | Γ - Stormw<br>rganization<br>Number<br>425.51.CB | Expenditure Type                           | ers Forum Ap  Task Number  900 | ril 11-14, 2022 |
| Project Or Number 175390  Requestor: | rganization Number 425.51.CB                     | Expenditure Type                           | ers Forum Ap  Task Number  900 | ril 11-14, 2022 |
| Project Or Number 175390             | rganization Number 425.51.CB                     | Expenditure Type  documentation must be at | ers Forum Ap  Task Number  900 | ril 11-14, 2022 |

Submit completed form and backup to <a href="mailto:andrea.taylor@mbakerintl.com">andrea.taylor@mbakerintl.com</a>

Modified: 03/10/20

## **Important Web Links**

### **N.C. State University**

Dr. Rich McLaughlin runs the Sediment and Erosion Control Research and Education Facility (SECREF).

(Site of the field trip)

https://mclaughlin.wordpress.ncsu.edu/

### Dr. Bill Hunt's Stormwater Engineering Group's website:

https://stormwater.bae.ncsu.edu/

### **North Carolina DOT**

**Stormwater Program** 

https://connect.ncdot.gov/resources/hydro/Pages/Highway-Stormwater-Program.aspx

#### **FHWA**

Stormwater

FHWA | Environmental Review Toolkit | Stormwater Management and Water Quality (dot.gov)

### What's happening in Raleigh

https://www.visitraleigh.com/

#### **US EPA**

https://www.epa.gov/npdes/stormwater-discharges-transportation-sources

### **Raleigh Durham Airport Transportation**

https://www.rdu.com/ground-transportation/

#### **Forum SharePoint website**

National Stormwater Practitioner's Meeting - Home (sharepoint.com)

### **Table to Table Breakout Session**

Tuesday 2:30 pm - 4:00 pm

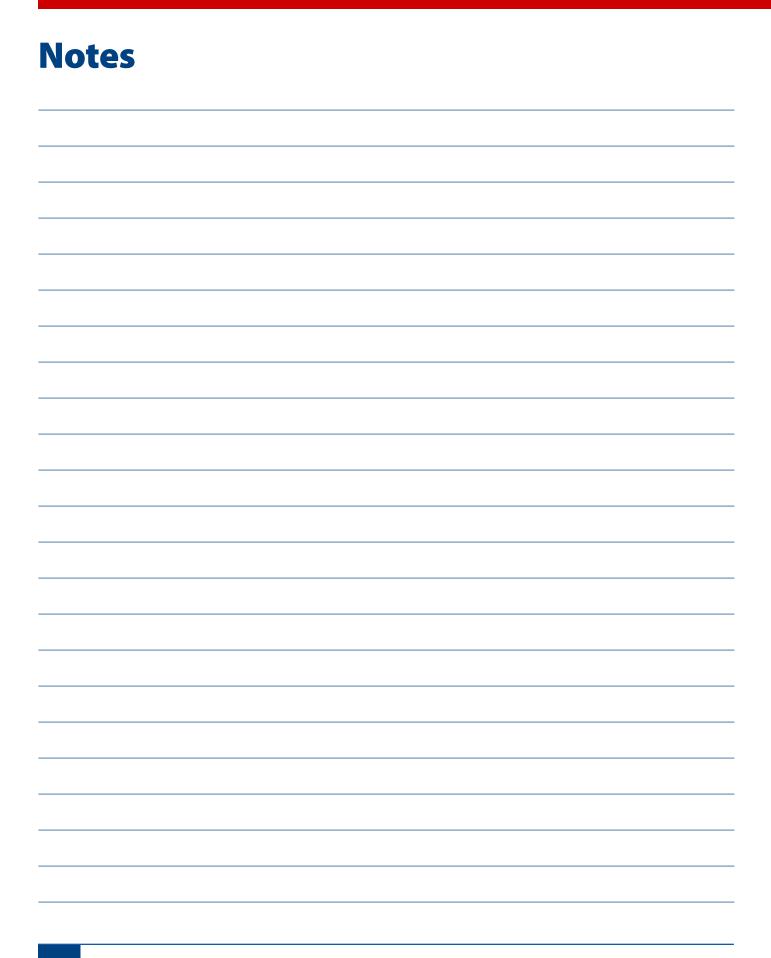
| 1. | Discuss current practices.         |
|----|------------------------------------|
|    |                                    |
|    |                                    |
|    |                                    |
|    |                                    |
|    |                                    |
| 2. | What are the challenges/successes? |
|    |                                    |
|    |                                    |
|    |                                    |
|    |                                    |
|    |                                    |
| 3. | Suggestions for moving forward.    |
|    |                                    |
|    |                                    |
|    |                                    |
|    |                                    |
|    |                                    |

# **Table to Table Breakout Session**

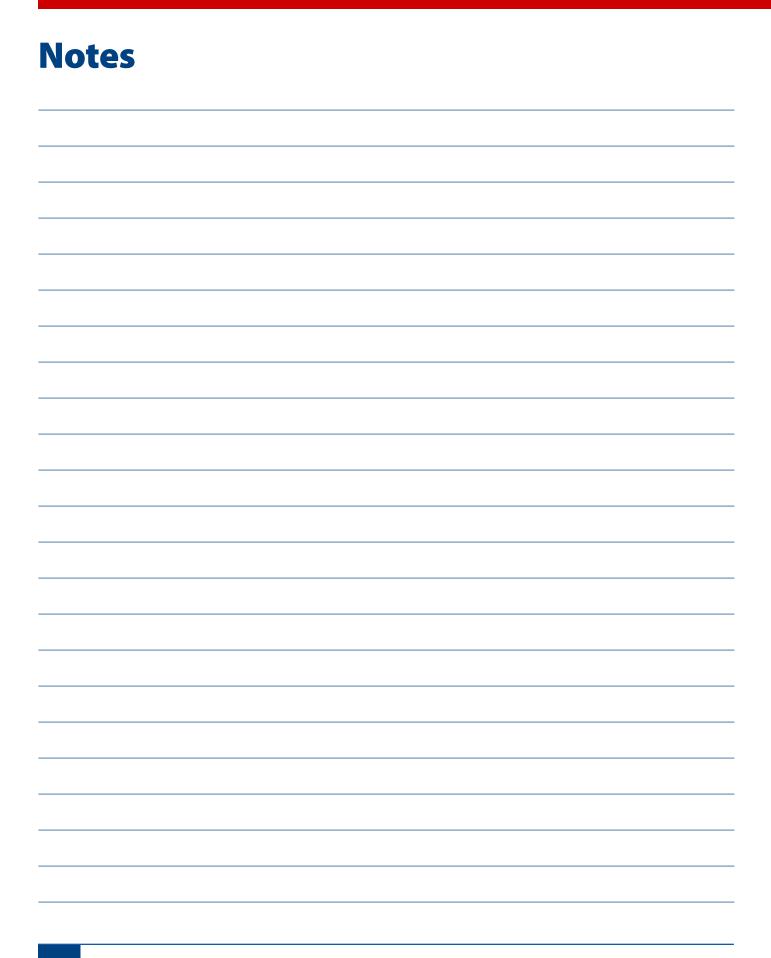
Wednesday 10:00 am - 12:00 pm

| 1. | Discuss current practices.         |
|----|------------------------------------|
|    |                                    |
|    |                                    |
|    |                                    |
|    |                                    |
|    |                                    |
| 2. | What are the challenges/successes? |
|    |                                    |
|    |                                    |
|    |                                    |
|    |                                    |
|    |                                    |
| 3. | Suggestions for moving forward.    |
|    |                                    |
|    |                                    |
|    |                                    |
|    |                                    |
|    |                                    |
|    |                                    |

| Notes |  |  |
|-------|--|--|
|       |  |  |
|       |  |  |
|       |  |  |
|       |  |  |
|       |  |  |
|       |  |  |
|       |  |  |
|       |  |  |
|       |  |  |
|       |  |  |
|       |  |  |
|       |  |  |
|       |  |  |
|       |  |  |
|       |  |  |
|       |  |  |
|       |  |  |



| Notes |  |  |  |
|-------|--|--|--|
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |



| Notes |  |  |  |
|-------|--|--|--|
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |
|       |  |  |  |

