

# **NCHRP Domestic Scan 08-03 Addressing NPDES and Other Water Quality Issues in Highway Systems Management**

## **Webinar on Six-Month Survey Results**

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**CTC & Associates LLC**

**November 19, 2010**

# Facilitators

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- ❑ Patrick Casey, Investigator  
CEO of CTC & Associates
  
- ❑ Dylan Casey, Co-Investigator  
CTC Associate  
Faculty, St. John's College, Annapolis

# Scan Participants

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- ❑ Scott McGowen, CALTRANS, co-chair
- ❑ Brian Smith, FHWA, co-chair
- ❑ Vincent Davis, Delaware DOT
- ❑ Frances Brindle, Oregon DOT
- ❑ Matt Lauffer, North Carolina DOT
- ❑ Mark Hemmerlein, New Hampshire DOT
- ❑ Patricia Cazena, FHWA
- ❑ Jeff Lewis, FHWA
- ❑ Rachel Herbert, EPA
- ❑ Tom Ripka, Illinois DOT
- ❑ Scott Taylor, SME

# Accelerating Innovation–Tracing Domestic Scan Impacts NCHRP 20-68B(02)

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- ❑ Review of the effectiveness of the Domestic Scan Program in fostering the implementation of innovative technologies and practices
- ❑ Special interest in evidence of technology transfer beyond original core participants
- ❑ Continuation of a more in-depth review completed for two pilot scans

# NCHRP Domestic Scan Project Panel

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- ❑ Harold R. Paul, Director LTRC (chair)
- ❑ Andrew Lemer, TRB
- ❑ Shane Brown, Washington State University
- ❑ David M. Burk, FHWA
- ❑ Nancy L. Chinlund, CALTRANS
- ❑ Marsha Fiol, Virginia DOT
- ❑ Rick Kreider, Kansas DOT
- ❑ Jim McDonnell, AASHTO
- ❑ Mark R. Norman, TRB
- ❑ Keith M. Platte, AASHTO
- ❑ Glenn Roberts, New Hampshire DOT
- ❑ Amy Schutzbach, Illinois DOT
- ❑ Mark Van Port Fleet, Michigan DOT

# Survey Goals

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## Identify:

- Progress toward implementation of technologies and practices identified in each scan's implementation plan
- Benefits of the Domestic Scan Program to you, your agency, and industry as a whole
- Completed or planned dissemination activities
- Names of individuals (beyond participants) who have heard about scan findings

# Webinar Goals

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- ❑ Review and discuss survey results
- ❑ Share successes and challenges in implementing scan technologies and practices
- ❑ Reconnect with fellow scan team members
- ❑ Discuss role of scan participation once the final report is complete

# Survey: Conduct of Scan

**Conduct of Scan. Please rank each of the following scan program features in terms of its contribution to the overall value of this particular scan tour, where 1 is “not important” and 5 is “extremely important.” If it did not apply to your scan, please pick N/A (Not Applicable).**

Answer Options	Not Important				Extremely Important		N/A	Response Count
Preparatory materials and meetings in advance of the scan tour	0	0	0	2	7	0	9	
On-site visits to view the subject technology or practice	0	0	0	1	8	0	9	
Face-to-face technical exchange with host state personnel and other scan participants	0	0	0	0	9	0	9	
Final report of scan findings	0	0	0	3	6	0	9	
Post-scan consultation with host state personnel and other scan participants	0	0	2	2	3	2	9	



# Survey Results: Scan Outcomes

**Scan Outcomes. Please rank each of the following scan program outcomes in terms of its contribution to the overall value of this particular scan tour, where 1 is “not important” and 5 is “extremely important.”**

Answer Options	Not Important		Extremely Important			Response Count
Introduction to a new technology or practice	0	0	1	1	7	9
Clearer understanding of a new technology or practice	0	0	1	4	5	9
Identification of one or more individuals at a host state to call on as a future resource	0	0	0	3	6	9
Identification of one or more scan participants to call on as a future resource	0	0	1	1	7	9
Information with which to <u>begin</u> implementation of a technology or practice at your agency	0	1	0	3	5	9
Information with which to <u>continue</u> implementation of a technology or practice at your agency	0	0	2	3	4	9

# Scan Results: Value of Scan

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*The scan program provided an excellent forum to exchange information, ideas, and to meet other people who are in the same job situation.*

*Research into storm-water practices is being carried out at several institutions around the Country. Distribution of the findings seems slow and inefficient. DOTs are continuously developing programs that could be of benefit to other DOTs, again dissemination of the information is slow. Scan acts as a vehicle to efficiently distribute information.*

*I think the mission of the NCHRP Domestic Scan Program is extremely important. For our particular SCAN, many DOTs have said how valuable identifying unique or innovative techniques and aspects of storm-water programs has been to them.*

# Scan Results: Value of Scan

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*Most important is our understanding of resources available so as not to repeat the same costly mistakes as those on the cutting edge of implementing practices. Technical literature rarely highlights the flaws of a strategy, even when it ultimately fails. Face to face meetings allows those of us who follow to avoid their costly learning curve.*

*I don't think this scan included Post-scan consultation with host state personnel and other scan participants -- However, host state did review the scan report.*

*Extremely valuable experience. It changed the way we do business at NHDOT.*

*Identified contacts and provided additional networking opportunities to learn and exchange ideas and state of the practice knowledge in the area of storm-water management, maintenance, construction and design.*

# Survey Results: Implementation

**Did your participation in the scan facilitate the implementation of any new practices or technologies?**

Yes – 5    No – 4

## **Completed Implementations:**

*Other than 'getting the word out' on the Scan results. The Scan implementation plan has been well executed, with papers presented at five conferences by year's end.*

*While I do not work at a DOT, this experience has enabled me to explain to headquarters and regional EPA storm-water staff and managers the various issues and solutions that DOTs have developed to implement their storm-water programs.*

*We are implementing a storm water retrofit program that is using the asset management efforts from Maryland and N. Carolina DOT.*

*DOTs partnering with Universities and regulatory agencies on implementing applied studies on various technologies in the field. Research programs can improve program delivery.*

# Survey Results: Implementation

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## Completed Implementations:

*Flocculents - Better ESC.*

*Assistance with State DOT storm-water program assessment*

*NPDES Planning - Better assessment of requirements*

*Agency maintenance and operations tracking programs that help to improve water quality. The ability to ensure performance of storm-water measures through effective tracking. Helps to identify which measures are working and providing the greatest benefit for the money expended.*

*Assistance with State's training course*

*Regular coordination and communication with local and federal regulators was an important aspect to improve the working relationship. Options such as funding staff positions at the regulatory agency improved the resources available for storm-water programs.*

# Survey Results: Implementation

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**Are any implementations planned within the next year?**

Yes – 2    No – 4

**Planned Implementations:**

*Passive PAM application - NCSU is working on this technology and it will have important implications for complying with Construction NPDES permit requirements in the future.*

*Assistance with State DOT stormwater program assessment*

*Adding flocculent systems to projects*

*The Green Streets and Highway Conference, November 14-17. We will be doing a presentation on the Scan.*

*University of Texas is working on the water quality benefits of permeable friction course overlays. This technology could have very important benefits for reducing pollutant discharge from freeways and highways. The technology is easily retrofit and affordable.*

*Development of a storm-water management plan for the Oregon DOT that integrates CWA Section 404 and 402 requirements.*

# Survey Results: Implementation

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**Are any implementations planned within the next year?**

Yes – 2    No – 4

**Planned Implementations:**

*Presentations at conferences*

*Update information to National Highway Institute course 142054 Design and Implementation of Erosion and Sediment Control*

*University of Texas is working on 'batch' detention. This technology is easily retrofit and affordable, and dramatically improves the performance of dry detention basins.*

*Exploration of evaluation of NPDES compliance for construction projects that includes incentives and disincentives.*

*State training workshops*

*University of Florida continues to be a leader, along with University of New Hampshire, in the assessment and research into previous pavement, this will be an important technology in the future for DOTs*

*Assistance with National Highway Institute training course revisions*

# Survey Results: Implementation

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- ❑ Number of respondents who attempted an implementation without success: 2 -- *Institutional Resistance*
- ❑ Number of contacts provided regarding current or planned implementation activities: 13
- ❑ Number of contacts outside the agency provided: 4

*Non team-member contacts regarding implementation (and even dissemination) are essential to tracing the extent of technology transfer attributable to the scan.*



# Survey Results: Dissemination

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Eight respondents listed a large variety of talks and publications:

- DeIDOT “Brown Bag” meeting
- TRB Annual Conference and mid-year meeting
- Center for Transportation and Environment at NC State
- AASHTO National Environmental Practitioners Meeting
- FHA Resource Agency Meeting
- TRB Committee on Construction
- TRB Committee on Hydraulics, Hydrology, and Water Quality
- Stormcon
- TRB Environment and Energy Research Conference
- AASHTO National DOT Stormwater Practitioners Conference
- AASHTO Water Quality Meeting
- FHWA 2010 National Hydraulics Engineering Conference
- USEPA regional teleconferences and peer exchanges
- ASCE/FHWA/EPA/AASHTO Green Streets and Highways Conference
- ASCE Transportation and Development Institute Conference

# Discussion

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- ❑ Survey results
- ❑ What have been the successes and challenges in implementing scan technologies and practices?
- ❑ How does the scan fit in with the way you obtain and transmit knowledge about practices and technologies in your work?

## Next Steps

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- ❑ Final participant survey in six months
- ❑ Survey of accumulated contacts in six months – tracing impact of scan beyond initial participants

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