FUSS & O'NEILL

MEETING SUMMARY NOTES
EVALUATION OF STORMWATER GENERAL PERMIT AND LID
WORKSHOP 1—MAY 26, 2010; PHOENIX AUDITORIUM

DISTRIBUTION: Attendees and Other Project Partners
DATE: June 9, 2010

The following discussion summarizes the May 26, 2010 Workshop for the Evaluation of Stormwater General Permit and Low-Impact Development held at the Department of Environmental Protection Offices (79 Elm Street, Hartford, CT) in the Phoenix Auditorium.

A list of **workshop attendees** is provided at the end of this summary.

INTRODUCTIONS

Opening Remarks
MaryAnn Nusom Haverstock and Paul Stacey opened the meeting. Paul discussed the nature of the need for improved stormwater management and low-impact development (LID). He then turned the agenda over to Fuss & O'Neill.

Introductions around the Table
Jim Riordan of Fuss & O'Neill gave a PowerPoint Presentation, entitled "Introductions, Meetings, and the Web Page." A PDF copy is provided as **Attachment 1**.

Jim led the group in introductions. Each attendee gave their name, affiliation and a few words describing what they hoped for as a result of the project. At the conclusion, Jim asked that participants keep in mind the hoped-for result they had just described. A list of partners invited to participate in the project, which includes attendees and others invited, has been included as an attachment to this summary.

Future Meeting Dates and Locations
Jim recommended week timeframes for the next four meetings and meeting dates were selected as follows:

Project Meeting Dates

Workshop Title	**Date to be Held**
Partner Workshop 2	Thursday, July 1, 2010
Partner Workshop 3	Tuesday, August 31, 2010
Partner Workshop 4	Wednesday, October 20, 2010
Partner Workshop 5	Wednesday, December 15, 2010

Note:
All meetings will be held from 9:15 a.m. – 11:45 a.m. in the Phoenix Auditorium at the Hartford, CT DEP Offices.

Web Page
Jim introduced the project web page on DEP's website:

http://www.ct.gov/dep/cwp/view.asp?a=2719&q=459488&depNav_GID=1654

The web page will be used to provide project partners and other interested parties with general project information, schedules, and deliverables.

During the presentation, the following questions were raised:

- A question was asked about which general permits are being considered for revision under this project. Jim explained that four general permits are being reviewed—municipal separate storm sewer system (MS4), construction, industrial, and commercial. The MS4 permit and construction permit are the highest priority for examination.

- A follow-up question was asked regarding how these were chosen as priorities (i.e., was there a scientific reason behind this decision). Jim explained that the MS4 and construction general permits lend themselves to the use of LID because of the nature of the activities that they regulate including new development, operation and maintenance of management practices, and potential retrofit opportunities.

PROJECT OVERVIEW

Jim gave a PowerPoint presentation entitled "Project Overview," a copy of which is attached as a PDF (**Attachment 2**).

OVERVIEW OF LOW IMPACT DEVELOPMENT (LID) AND STORMWATER GENERAL PERMITS (SGP)

What's LID?
Jim gave a PowerPoint presentation entitled "Overview of LID," a copy of which is attached as a PDF (**Attachment 3**).

Summary of Other States
Phil Moreschi gave a PowerPoint presentation entitled "Summary of US State General Permitting Programs," a copy of which is attached as a PDF (**Attachment 4**).

Several issues and questions arose during this presentation:

- The states of Virginia and Maryland should be included in the summary. Larry Coffman (subcontractor to Fuss & O'Neill on the project) may be able to assist in this regard as he is from Maryland.

- Questions about the specific incentives and the reasoning behind them were raised. Phil and Jim pointed out that two types of incentive are commonly used. One type having to do with water quality treatment "credit" for the use of LID on a specific project. The other type of incentive involves grants to municipalities and project proponents that wish to implement LID. Some regulatory agencies also fast-track permitting of projects that implement LID.

- Does Connecticut have statutory authority to require the implementation of LID within the general permits through the Federal Clean Water Act? It was pointed out by one participant that the Connecticut Attorney General's Office had researched a very similar issue previously and determined that authority exists at the state level under title 22A, chapter 40-30; therefore, the question of federal authority appears not critical for Connecticut.

Summary of Interviews with Partners
Jim gave a PowerPoint presentation entitled "Summary of Partner Interviews," a copy of which is attached as a PDF (**Attachment 5**).

IDENTIFYING ALTERNATIVES AND CRITERIA AND PARTNER INVOLVEMENT IN IMPLEMENTATION

Jim facilitated a card storming and consensus-building session. The session was initiated with the following aims:

Rational aim:	"*Identify criteria*" for selection of approaches to incorporate LID into state stormwater policy.
Experiential aim:	"*Identify similarities*" in the approaches recommended by different partners in the group.

Card storming was initiated with the following question to the partners: "What are the features of good LID policy?" The card storming question and aim were posted on blue cards for the group of participants to consider during the session.

The card storming process worked as follows:

- Participants spent five minutes individually identifying five 3 to 5 word answers to the card storming question (What are the features of good LID policy?). Each answer was written on a 5" x 8" half-sheet of paper (card).

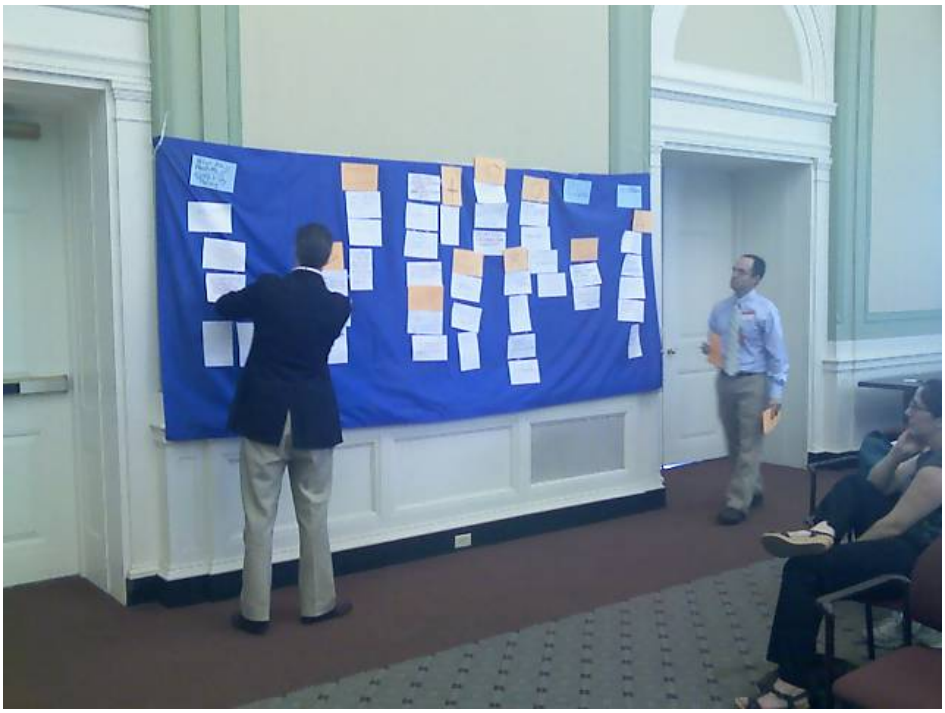
- Participants were asked to pair up with one other person to review their cards and select the clearest answer from the 10 reviewed. The card with that answer was then posted on an adhesive clothe (sticky wall) hung on the wall of the auditorium.

- The group was then asked to identify pairs of answers (e.g., if one pair of participants posted "flexibility" and another posted "flexible implementation" the group might identify these two postings as a pair). The **Photograph 1** (below) shows the sticky wall after the first round of postings and pairing exercise. During this exercise the group identified two pairs and two triplets. Triplets are not typical; however, in this particular case there were two natural groups of three.

Photograph 1—Sticky Wall after first round of postings and pairing. The card storming question and aims are posted on blue half-sheets of paper in the upper right and left corners of the Sticky Wall.

- Participant pairs were then asked to revisit their answers to the card storming question and identify two more ideas which had not been posted during the first round.

- Participants were then asked to review the posting to identify and group like answers to the card storming question. This part of the exercise is referred to as "clustering." Once clusters were developed a shape card (i.e., orange half-sheet of paper with a shape (e.g., star, square, circle, etc.) drawn on it) was assigned to each group (see **Photograph 2**, below). Participants also began a process of assigning names to each cluster.



Photograph 2—Groups or "clusters" of card storming answers being assigned shapes.

- Participants were asked to review their card storming answers one final time and to identify any answers, which were not yet represented on the Sticky Wall.

At this point, the exercise was suspended due to time constraints. **Attachment 6** provides a summary of the sticky wall layout of the card storming exercise to this point. At the next workshop, participants will be asked to review the results of the card storming and clustering. Next steps will involve completion of assigning one- to two-word names in place of the shape cards and continued identification of similarities amongst the answers to the card storming question (what are the features of good LID policy?). Participants will also be asked to discuss their observations about the results of the exercise. We intend to use these results and observations to help to develop consensus during the next workshop about our continued approach to the project.

NEXT STEPS

The next workshop will be held on **July 1 in the Phoenix Auditorium from 9:15 to 11:45 a.m.** This meeting will involve continued development of consensus on "what are good features of LID policy?" as well as alternatives for implementation. The meeting will also be used to explore the potential role of stormwater utility districts in implementation of LID policy and the stormwater general permits. In preparation for the meeting Fuss & O'Neill will continue to conduct partner interviews and will develop a summary of the potential role of stormwater utility districts based on literature and research.

ATTENDEES

Attendees of the May 26 workshop are listed below in alphabetical order by affiliation.

Attendee	Affiliation
John Stelmokas	Advanced Drainage Systems
Rob Lemire	Advanced Drainage Systems
Brian Roach	Aquarion Water Co.
Eric Brown	CBIA
John Pagini	CCAPA
Melon Wedick	CCRPA
Virginia Mason	Council of Governments Central Naugatuck Valley
Faith Gavin Kuhn	Connecticut Associated Builders & Contractors
Jim Langlois	Connecticut Concrete
Matthew Hallssey	Connecticut Construction Industries
Jessica Morgan	Connecticut Department of Environmental Protection
Paul Stacey	Connecticut Department of Environmental Protection
Mary-Beth Hart	Connecticut Department of Environmental Protection OLISP
Chris Malik	Connecticut Department of Environmental Protection/NPS Program
MaryAnn Nusom Haverstock	Connecticut Department of Environmental Protection/NPS Program
Rob Hust	Connecticut Department of Environmental Protection-Water & Permitting
Chris Stone	Connecticut Department of Environmental Protection-Water Permitting
Nisha Patel	Connecticut Department of Environmental Protection-Water Permitting
Kimberly Lesay	Connecticut Department of Transportation
Roger Reynolds	Connecticut Fund for the Environment
Judy Rondeau	ECCD
Beth Edwards	EPA Region 1
Johanna Hunter	EPA Region 1

Steve Winnett	EPA Region 1
Anne Leiby	EPA Region 1 Boston
William Hurley	Fairfield Engineering
Erik Mas	Fuss & O'Neill
Jim Riordan	Fuss & O'Neill
Phil Moreschi	Fuss & O'Neill
Bill Ethier	Home Builders Association of Connecticut
Craig Scott	MDC
Becky Meyer	Milone & MacBroom Inc.
Greg Sharp	Murtha Cullina, LLP
Sean Hayden	Northwest Conservation District
Paul Balavender	O & G Industries, Inc.
John Hudak	Regional Water Authority
Kenneth Wieland	Rivers Alliance
Martin Mador	Rivers Alliance, Sierra
Leah Schmalz	Save The Sound/CPE
Nicole Davis	South Western Regional Planning Agency
Shelley Green	The Nature Conservancy
Denise Savageau	Town of Greenwich

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RESULTS OF CARD STORMING FROM WORKSHOP 1 AND NEXT STEPS

Current Status:

- We have used card storming to identify a range of answers to the following question—"What are the features of good LID policy?"
- The ideas have been grouped in clusters to show similarities.
- Participants have tagged each cluster with a one- to two-word name; however, two of the clusters remain unnamed.
- The results to this point are provided below for further consideration before the next workshop.

Next Steps:

- At the next workshop, participants will review results to this point and will be asked to tag the last two clusters with one- to two-word tags. This may, but will not necessarily, involve combining or otherwise adjusting some clusters.
- Participants will be asked as a group to use each tag to give a three- to five-word answer to the question "what are the features of good LID policy?"
- Participants will be asked as a group to review results and discuss insights and next steps from the process. This is intended to include development of criteria for selection of an alternative for implementation of LID through state policy and development of an implementation approach that includes partner participation.

Card Storming Question:
What are the features of good LID policy?

Objective Card Storming Aim:
Identify criteria [for determining alternatives]

Experiential Card Storming Aim:
Identify similarities [in participants ideas of good LID policy]

Economic Viability

- Enough incentive to achieve success
- Market/demand sensitivity
- Cost effective options, not regulations
- Recognize market demands for different development types (LID may not be for all
- Funding for implementation
- Effectiveness can be verified and maintenance is not cost prohibitive

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- Clarity
- Uniform statewide (standardized)
- Make any guidance and/or standards simple. Make process certain.
- Should be expected and standard operating procedure not as the exception
- LID policy at the local level to adopt, enforce, implement

Legal Administrable

- Easy to administer
- Aligning municipal zoning subdivision regulations (with LID)
- Encouragement TPZ, cons[ervation] subdivision regulations
- Available support structure mechanism for contractors/homeowners implementing LID
- Compatible with other regulations and goals that are necessary i.e., ADA, mosquito control, public safety, public health
- Legal

Flexibility

- Flexible
  - Consider site constraints
  - Consider project type
- Flexible
- Room for innovation
- Performance based (about objective, not technique)
- Bottom-up site specific approach, <u>not</u> top down.

Conservation

- Resource based design (e.g., soils)
- Allow soil microorganisms to work
- Shift focus from engineering to conservation

- Practical to implement and maintain
- Not burdensome to individuals, easy to comply with
- Maintenance required

Education

- Education component
- Knowledgeable design engineers training, <u>train</u>
- Use good science and knowledgeable people to make decisions
- Public acceptance—meaning willingness to act a local/residential scale
- <u>Greatest behavior change</u> Promote policies (regulatory and/or voluntary) that result in greatest behavior change

Environmental Benefit

- Manages soil erosion
- Reduction of impervious materials
- Remediates already built areas
- Promotes GW recharge
- Water quality & water quantity (groundwater (instream recharge) flow techniques)
- Reduces runoff
- Minimize impervious cover
- Fix impairment

Regulatory

- Oversight from local and state agencies
- Enforceability
- Treats stormwater runoff with the same strict criteria that are required of on-site septic systems